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Statytojas/ Užsakovas	**LITGRID AB**
Projekto rengėjas	
Sutarties pavadinimas	
Statinio projekto pavadinimas	**ELEKTROS TINKLŲ VILNIAUS R. SAV., NEMENČINĖ, BAŽNYČIOS G. 25, REKONSTRAVIMO PROJEKTAS**
Statinio naudojimo paskirtis	**INŽINERINIAI STATINIAI – INŽINERINIAI TINKLAI – ELEKTROS TINKLAI**
Statinio adresas	**VILNIAUS R. SAV., NEMENČINĖ, BAŽNYČIOS G. 25**
Statinio projekto Nr.	**ED2201**
Investicinio projekto Nr.	Nr. PPRV19063
Statinio kategorija	**YPATINGASIS STATINYS**
Statybos rūšis	**REKONSTRAVIMAS (unikalus Nr. 4100-2081-1027)**
Statinio projekto etapas	**TECHNINIS PROJEKTAS**
Statinio pavadinimas	**110/10 KV NEMENČINĖS TP. 110 KV SKIRSTYKLA**
Statinio projekto dalis	**Statybinės konstrukcijos. Inžineriniai skaičiavimai**

Byla (knyga)	SK-IS
Bylos laida	0
Bylos išleidimo data	2022-10-10

Įmonė	Pareigos	Vardas, pavardė	Kvalifikacijos atestato Nr.	Parašas

KAUNAS

LITGRID AB, patvirtinta 2022.10.19 Nr. 22NU-377

TURINYS

SKAIČIAVIMAI ATLIKTI PAGAL ŽEMIAU SURAŠTYĄ PAGRINDINIŲ NORMATYVINIŲ DOKUMENTŲ SĄRAŠĄ

Projektas parengtas pagal šiuos privalomus dokumentus statinio projektui parengti ir pagrindinius normatyvinius statybos dokumentus:

Eil. Nr.	Dokumento žymuo	Dokumento pavadinimas	Pastabos
		LR įstatymai:	
1.	STR 1.04.02:2011	Inžineriniai geologiniai ir geotechniniai tyrimai	
2.	STR 1.04.04:2017	Statinio projektavimas, projekto ekspertizė	
3.	LST EN 1990	Eurokodas. Konstrukcijų projektavimo pagrindai	
4.	LST EN 1991	Eurokodas 1. Poveikiai konstrukcijoms	
5.	LST EN 1992	Eurokodas 2. Gelžbetoninių konstrukcijų projektavimas	
6.	LST EN 1993	Plieninių konstrukcijų projektavimas	
7.	LST EN 1997	Eurokodas 7. Geotechninis projektavimas	
8.	LST EN 50341-1:2013	Aukštesnės kaip 1 kV kintamosios įtampos oro linijos. 1 dalis. Bendrieji reikalavimai. Bendrieji techniniai reikalavimai	
		Kompiuterinės programinės įrangos sąrašas, pagal techninio projekto dalis	
1.	SK	Paketas – Microsoft Office Autodesk AutoCAD GEO5, Peikko Designer, Dlubal RFEM	

0	2022-10-10	Statybos leidimui, įrangos užsakymui ir darbo projekto rengimui.
Laida	Išleidimo data	Laidos statusas. Keitimo priežastis (jei taikoma)

ELEKTROS TINKLŲ VILNIAUS R. SAV., NEMENČINĖ, BAŽNYČIOS G. 25, REKONSTRAVIMO PROJEKTAS

XX; Inžineriniai skaičiavimai	LAIDA	
	0	
ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ
	1	236

AIŠKINAMASIS RAŠTAS

Techninis projektas „ELEKTROS TINKLŲ VILNIAUS R. SAV., NEMENČINĖ, BAŽNYČIOS G. 25, REKONSTRAVIMO PROJEKTAS“ parengtas vadovaujantis LITGRID AB projektavimo užduotimi (investicijų projekto Nr. PPRV19063), LITGRID AB projektavimo sąlygomis ir patvirtintais projektiniais pasiūlymais, kitų projekto dalių užduotimis, atliktus inžinerinius geologinius ir topografinius tyrimus, bei Lietuvos Respublikoje galiojančių dokumentų reikalavimus.

Statybinių konstrukcijų dalies projektas atliktas remiantis:

- Projektavimo skyriaus vadovo įsakymu, paskyrimu projekto dalies vadovo pareigoms.
- Elektrotechnikos užduotimis.
- LITGRID AB projektavimo užduotimi.
- Elektrotechninės dalies ED2201-XX-RTP-E projekto sprendimais.
- Topografiniais matavimais.
- Inžineriniais geologiniais tyrimais.
- Kitais Lietuvos Respublikoje galiojančių dokumentų reikalavimais.

Rekonstrukcija vykdoma pagal užsakovo pateiktą projektavimo užduotį, kurioje numatomas esamų plieno ir gelžbetoninių konstrukcijų demontavimas ir įrengiant naujas konstrukcijas.

1.1 Vietovės trumpa charakteristika

Klimatiniai duomenys pagal RSN 156-94 (stotis Nr. 47 – Vilnius, miestas)

1 pav. Stebėjimo punktų žemėlapis

- Vidutinė metinė oro temperatūra +6,7 °C; (2.1 lentelė)
- Absoliutus oro temperatūros maksimumas +35,4 °C; (2.2 lentelė)
- Absoliutus oro temperatūros minimumas -37,2 °C; (2.3 lentelė)
- Šalčiausio penktadienio vidutinė temperatūra -26,0 °C; (2.11 lentelė)
- Santykinis oro metinis drėgnumas – 80%; (3.2 lentelė)
- Absoliutus vėjo maksimumas 28 m/s; (5.2 lentelė)
- Apšalo rajonas – III-as, apšalo storis 11,2 mm; (8.6 lentelė)
- Maksimalus žemės įšalo gylis: 9.1 lenetlė)
    - galimas 1 kartą per 10 metų iki 134 cm;
    - galimas 1 kartą per 50 metų iki 170 cm.

1.2 Greta išdėstyti statiniai ir inžineriniai tinklai

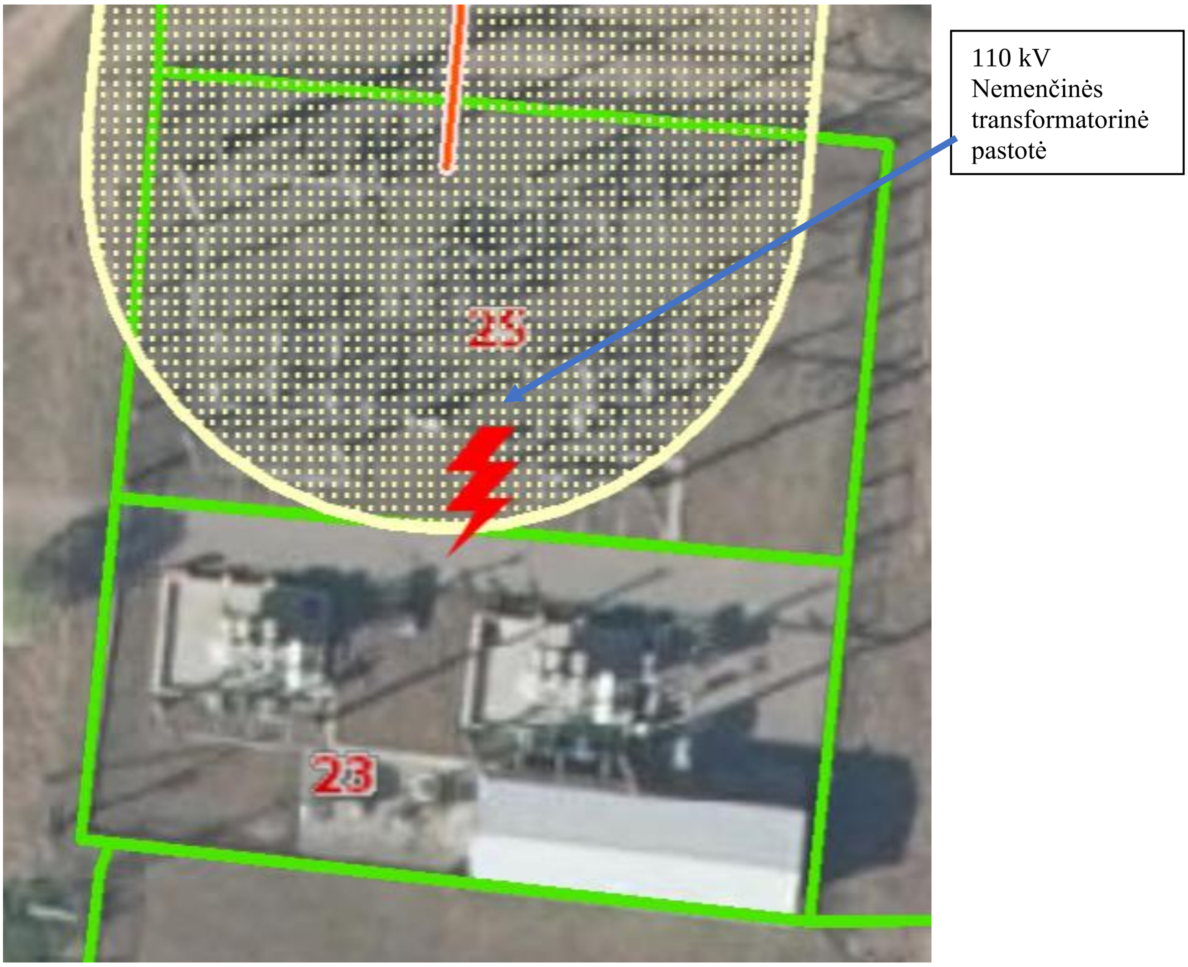
Elektros tinklų skirstykloje statybos darbai vykdomi tik aptvertoje teritorijoje. Vykdomi darbai aplinkiniams statiniams jokios įtakos neturės. Keliai, takai, tvoros ar kiti statiniai, kurie gali būti pažeisti ar išmontuoti statybos metu, privalo būti atstatyti ar sutvarkyti į neprastesnę būklę nei buvo prieš pradedant statybos darbus.

Skirstyklos suvestinių inžinerinių tinklų planas ir sklypo plano sprendiniai pateikiami Sklypo plano projekto dalyje.

Pilnai rekonstruojamoje 110kV Nemenčinės TP skirstykloje statybos eigoje bus sumontuota:

- nauja 110kV atvira skirstykla (AS) su 2 jungtuvais linijiniuose narveliuose;
- naujas 110kV valdymo pultas (110kV AS VP) su naujomis relinėmis spintomis, naujais kintamosios ir nuolatinės srovės skydais, nauja akumuliatorių baterija ir telekomunikacijų, TSPĮ spintomis.

Visi LITGRID AB turtinėje priklausomybėje esantys 110 kV elementai – skyrikliai, trumpikliai, viršįtampių ribotuvai, atraminiai izoliatoriai, jų statybinės konstrukcijos, gnybtynai, kabeliai, kabelių kanalai, portalai (taip pat ir transformatoriniai portalai) – išmontuojami ir utilizuojami, išskyrus įrenginius nurodytus bylos ED2201-XX-RTP-E-T1 3 Priede.



2 pav. Situacijos planas ir oro linijų fragmentas, duomenys iš www.regia.lt

1.3 Bendrieji pažintiniai duomenys apie statinį

Inžineriniai statiniai – inžineriniai tinklai – elektros tinklai (110 kV ir aukštesnės įtampos elektros perdavimo tinklai ir jų technologiniai priklausiniai) – ypatingasis statinys pagal STR 1.01.03:2017 „Statinių klasifikavimas“.

1.4 Apkrovos

Apkrovos į atvirosios skirstyklos (AS) įrenginių atramas priimamos pagal:

- LST EN 1991-1 „Eurokodas 1. Poveikiai konstrukcijoms“
- EĮĮBT – 2012 taisyklių reikalavimus;
- RSN 156 -94 „Statybinė klimatologija“;
- Elektrotechninės dalies išduotas užduotis.

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Lentelė 1. Apkrovų lentelė

Eil. Nr.	Apkrovos pavadinimas	F, kN	q, kN/m²	Pastaba
1.	**Nuolatinės apkrovos**			
1.1.	Konstrukcijų savasis svoris			
1.1.1.	Gelžbetonio savasis svoris	-	-	γ=25 kN/m³
1.1.2.	Plienas	-	-	γ=78,50 kN/m³
1.1.3.	Smėlis arba žvyras	-	-	γ=16,0-18,0 kN/m³
2.	**Kintamos apkrovos**			
2.1.	Naudinga apkrova	-	2,5	
2.2.	Sniegas II-as raj.	-	1,6	
2.3.	Vėjas I-as raj. 24 m/s,	-	0,36	
2.4.	Apledėjimas III-as raj. RSN 156-94 (8.6 lentelė)			Priimta t = 11,2 mm

Lentelė 2. 110 kV AS dalies apkrovos

Eil. Nr.	Apkrovos pavadinimas	F, kN	Pastaba
3.	**Nuolatinės apkrovos**		
3.1.	Konstrukcijų savasis svoris	-	Pagal faktą
3.2.	Plieno aliuminio srovėlaidis 149-AL1/24-ST1A	-	0.60 kg/m
3.3.	Plieno aliuminio srovėlaidis 243-AL1/39-ST1A	-	0,87 kg/m
3.4.	Vamzdinės šynos Al Ø100/88A1	-	4.80 g/m

1.4.1. Nuolatinės apkrovos

Nuolatinėms apkrovoms priskiriama:

- Metalo konstrukcijų savasis svoris ir kitų medžiagų savieji svoriai:
- Įrenginių svoriai bei tvirtinimo armatūra;
- Laidų nuosavas svoris.

1.4.2. Kintamos apkrovos

Vėjo apkrova

Vėjo apkrova priskiriama prie kintamųjų laisvųjų poveikių. Pagal teritorinį paskirstymą statinys yra I-ame vėjo greičio rajone, kur vėjo greičio pagrindinė atskaitinė reikšmė priimama v_{ref0}=24 m/s.

Lentelė 3. Vėjo greičio pagrindinės atskaitinės reikšmės $v_{ref,0}$

Vėjo greičio rajonas	$V_{ref,0}$ m/s
I	24

Lentelė 4. Atskaitinis vėjo slėgis q_{ref}

Vėjo greičio rajonas	q_{ref} , kN/m²
I	0,36

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	4	236	0

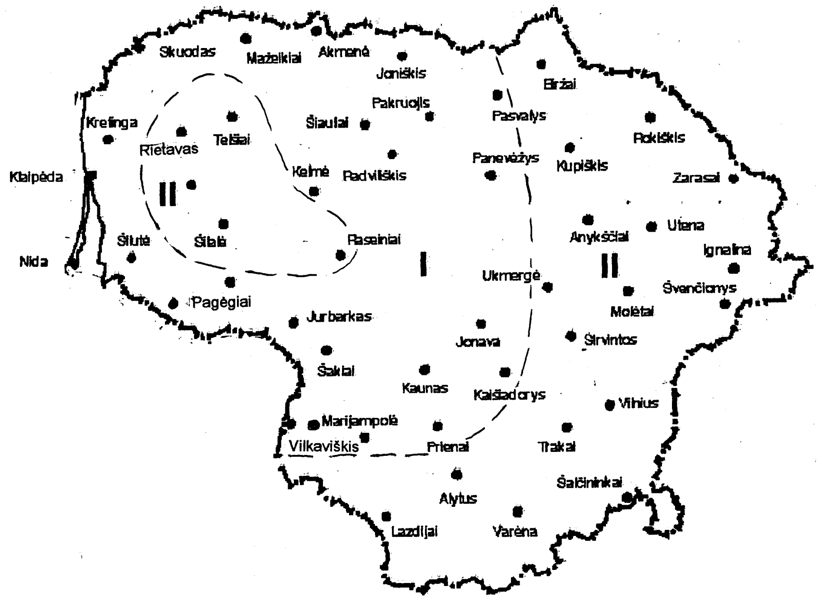
Pav. 1 Lietuvos vėjo apkrovos rajonai

Lentelė 5. Vėjo kategorijos ir vietovės parametrai pagal LST EN 1991-1-4:2005

Vietovės kategorija	**Vietovės charakteristika**	**z_0, m**	**z_{min}, m**
0	Atviri jūros ar jūros pakrančių ruožai	0,003	1,0
I	Ežerai ir plokšti horizontalūs ruožai su nežymia augalija ir be kliūčių	0,01	1,0
II	Mažai augmenijos; izoliuotos kliūtys atstumais bent 20 kartų didesniais už kliūčių aukštį	0,05	2,0
III	**Reguliari augmenija; priemiesčiai; kaimai;**	**0,3**	**5,0**
IV	Bent 15% paviršiaus užstatyta pastatais, kurių vidutinis aukštis bent 15 m	1,0	10,0

Sniego apkrova

Apkrova priskiriama prie kintamųjų laisvųjų poveikių. Pagal teritorinį paskirstymą statinys yra II-ame sniego rajone, kur sniego s_k antžeminės apkrovos charakteristinė reikšmė $s_k = 1{,}6$ kN/m^2.



Pav. 4 Lietuvos sniego apkrovos rajonai

1.5 Apkrovų deriniai ir patikimumo daliniai koeficientai

Lentelė 6. Daliniai patikimumo koeficientai

Eil. Nr.	Apkrovos pavadinimas	Daliniai patikimumo koeficientas, $\gamma \cdot K_{Fi}$	
		Saugos ribinis būvis - SRB	**Trinkamumo ribinis būvis - TRB**
1.	**Nuolatinės apkrovos** - G_{kj}	1,35·1,0 $\gamma_{G,j} \cdot K_{Fi}$	1,0·1,0 $\gamma_{G,j} \cdot K_{Fi}$
1.1.	Konstrukcijų savieji svoriai		
1.2.	Įrenginiai, laidai, kt prietaisai.		
2.	**Kintamos apkrovos** - $Q_{k,i}$	1,3·1,0 $\gamma_{Q,1} \cdot K_{Fi}$	1,0·1,0 $\gamma_{Q,1} \cdot K_{Fi}$
2.1.	Vėjas		
2.2.	Apledėjimas		
2.3.	Laidų tempimai		

Lentelė 7. Koeficientų ψ reikšmės naudojamos derinių sudarymui pagal STR 2.05.04:2003

Poveikis	ψ_0	ψ_1	ψ_2
Statinių naudojimo apkrovos kategorija :			
E kategorija: saugyklų plotai	1,0	0,9	0,8
Statinių sniego apkrovos	0,7	0,5	0,2
Statinių vėjo apkrova	0,6	0,2	0
Temperatūra (ne gaisro) statiniuose	0,6	0,5	0

Lentelė 8. Daliniai apkrovų koeficientai (SRB ir TRB)

Fundamental combination (STR/GEO...	EN 1990: Annex A1 Table A1.2(B)
Permanent action - unfavorable	
Value	1,35
Permanent action - favorable	
Value	1,00
Leading variable action	
Value	1,30
Accompanying variable action	
Value	1,30
Reduction factor ksi	
Value	0,85

Tikrinami šie saugos ribinius būvius, kai tinka:

EQU: konstrukcijos arba jos dalies, traktuojamų standžiu kūnu, statinės pusiausvyros netekimas, kai vieno šaltinio poveikių sklaidos erdvėje maži pakitimai yra reikšmingi, o konstrukcijos medžiagų ar grunto stiprumai nesvarbūs;

STR: konstrukcijos arba laikančiųjų elementų vidinis irimas arba pernelyg didelės deformacijos, kai lemia statybinių medžiagų arba konstrukcijos stiprumas;

GEO: grunto irimas arba pernelyg didelės deformacijos, kai grunto arba uolienos stiprumai yra reikšmingi atsparumui.

Lentelė 9. Derinių sudarymo principas BEM programoje – saugos ribiniam būviui ir tinkamumo ribiniam būviui

Skaičiuotinė poveikio reikšmė	Poveikio derinio išraiška
Saugos ribinis būvis - SRB	
EQU	$\sum_{j\ge1}\gamma_{G,j}G_{k,j}\,"+"\,\gamma_p P\,"+"\,\gamma_{Q,1}Q_{k,1}\,"+"\,\sum_{i>1}\gamma_{Q,i}\psi_{0,i}Q_{k,i}$
STR/GEO	$\sum_{j\ge1}\gamma_{G,j}G_{k,j}\,"+"\,\gamma_p P\,"+"\,\gamma_{Q,1}Q_{k,1}\,"+"\,\sum_{i>1}\gamma_{Q,i}\psi_{0,i}Q_{k,i}$
	$\begin{cases}\sum_{j\ge1}\gamma_{G,j}G_{k,j}\,"+"\,\gamma_p P\,"+"\,\gamma_{Q,1}\psi_{0,1}Q_{k,1}\,"+"\,\sum_{i>1}\gamma_{Q,i}\psi_{0,i}Q_{k,i}, \\ \sum_{j\ge1}\xi_j\gamma_{G,j}G_{k,j}\,"+"\,\gamma_p P\,"+"\,\gamma_{Q,1}Q_{k,1}\,"+"\,\sum_{i>1}\gamma_{Q,i}\psi_{0,i}Q_{k,i};\end{cases}$ (1*)
Tinkamumo ribinis būvis - TRB	
Charakteristinis - negrįžtamiems ribiniams būviams	$\sum_{j\ge1}G_{k,j}\,"+"\,P\,"+"\,Q_{k,1}\,"+"\,\sum_{i>1}\psi_{O,i}Q_{k,i}$.
Dažninis - grįžtamiesiems ribiniams būviams	$\sum_{j\ge1}G_{k,j}\,"+"\,P\,"+"\,\psi_{1,1}Q_{k1}\,"+"\,\sum_{i>1}\psi_{2,i}Q_{k,i}$.
Tariamai nuolatinis - ilgalaikiams efektams ir konstrukcijos išvaizdai	$\sum_{j\ge1}G_{k,j}\,"+"\,P\,"+"\sum_{i>1}\psi_{2,i}Q_{ki}$.

(1*) - alternatyviai, STR ir GEO ribiniams būviams viena iš dviejų toliau pateiktų išraiškų, kuria gaunamas nepalankesnis rezultatas.

1.6 Inžinerinių geologinių tyrimų gylio parinkimo sąlygos

Pagal STR 2.05.21:2016 „Geotechninis projektavimas. Bendrieji reikalavimai“ parinkti IGG (inžineriniai, geologiniai ir geotechniniai tyrimai) atsižvelgiant į šiuos punktus:

„155. IGG tyrimų gylio nuo statinio žemiausio taško (jo pamato dugno, iškasos dugno ir pan.) (za) minimalios vertės yra apskaičiuojamos atsižvelgiant į statomo statinio ypatumus ir inžinerines geologines sąlygas:

155.1. kai statinio pamatas bus seklusis pamatas, tuomet IGG tyrimų gylis po pamatu (za) turi būti trys pamato pločiai, bet nemažiau kaip 6 m;

155.2. kai statinio pamatas bus plokštė, tuomet IGG tyrimų gylis po pamatu (za) turi būti nemažiau kaip pusantro plokštės pločio;

155.3. kai statinio pamatas bus poliai, tuomet IGG tyrimų gylis po polio padu (za), kai gruntas su gyliu stiprėja, turi būti trys polio skersmenys (DF), jei stiprėjimo tendencijos nėra ar silpnėja, tuomet ne mažiau kaip 5 m.“

Darbo projekto (DP) metu įvertinus technologinės įrangos svorius, gabaritus ir kitus duomenis būtina perskaičiuoti pamatų laikomąją galią.

1.7 Geologinės ir hidrogeologinės sąlygos

Geologinė sandara

Geologiniu požiūriu aikštelėje sutikti technogeniniai (t IV), aliuviniai (a III bl), fliuvioglacialiniai (f III bl0 bei glacialiniai (g III bl) dariniai. Augalinis sluoksnis (dirvožemis) padengęs visą teritoriją 0,2 – 0,3 m storio sluoksniu.

Technogeninius (t IV) gruntus iki 0,8 – 1,0 m gylio sudaro mažai dulkingas molingas vidutinio rupumo smėlis. Po juo vietomis nuo 0,8 – 1,0 m gylio išskirti aliuviniai (a III bl) vidutinio rupumo smėliai. Giliau, o vietomis po piltinio grunto sluoksniu suklostyti fliuvioglacialiniai žvyringi smėliai, vietomis mažai dulkingi molingi gerai išrūšiuoti žvyringi smėliai, vidutinio rupumo smėliai, vietomis tolygiai išrūšiuoti, mažai dulkingi molingi vidutinio rupumo smėliai. Nuo 10,7 – 11,3 m suklostyti glacialiniai (g III bl) smėlingi mažo plastiškumo moliai ir dulkiai, moreniniai.

Gruntų slūgsojimas detaliau pavaizduotas gręžinių stulpeliuose ir inžineriniuose geologiniuose pjūviuose.

Gruntų sudėtis ir inžineriniai geologiniai sluoksniai

Techninį gruntą (t IV) sudaro:

IGS – 1 Purus – vidutinio tankumo, mažai dulkingas molingas vidutinio rupumo smėlis. Supiltas visuose gręžiniuose po 0,2 – 0,3 m storio dirvožemio sluoksniu, o sluoksnio padas pasiektas 0,8 – 1,0 m gylyje.

Aliuvinius (a III bl) darinius sudaro:

IGS – 2 Purus, vidutinio rupumo smėlis. Suklostytas tik gręžinių Gr. 1 ir 4 aplinkose nuo 0,8 – 1,0 m gylio, o sluoksnio padas pasiektas 1,5 -2,0 m gylyje.

Fliuvioglacialinius (f III bl) darinius sudaro:

IGS – 3 Vidutinio tankumo – tankus, vidutinio rupumo smėlis, mažai dulkingas molingas vidutinio rupumo smėlis, rečiau žvyringas smėlis. Suklostytas visame tirtame plote nuo 0,9 – 3,0 m gylio, o sluoksnio padas pasiektas 9,6 – 10,8 m gylyje.

IGS -4 Labai tankus – ypatingai tankus, žvyringas smėlis, mažai dulkingas molingas gerai išrūšiuotas žvyringas smėlis, rečiau vidutinio rupumo smėlis. Suklostytas visame tirtame plote nuo 2,5 – 3,5 m gylio, o sluoksnio padas pasiektas 10,7 – 11,3 m gylyje. Persisluoksniuoja su IGS – 3 smėliais.

Glacialinius (g III bl) darinius sudaro:

IGS – 5 Vidutinio stiprumo, smėlingas mažo plastiškumo molis ir dulkis, moreninis, tvirtas. Suklostytas visame tirtame plote nuo 10,7 – 11,3 m gylio, o sluoksnio padas gręžiniais iki 15,0 – 16,0 m nepasiektas.

Hidrogeologinės sąlygos

2022 metų balandžio mėnesį vykusių lauko darbų metu požeminis gruntinis vanduo sutiktas ištisai 7,80 – 8,0 m (109,91 – 110,46 m abs. a.) gylyje nuo esamo žemės paviršiaus. Vanduo talpinasi fliuvioglacialiniuose įvairiuose smėliuose. Vandeningo sluoksnio storis siekia 2,70 – 3,50 m. Vandenspara tarnauja moreninis smėlingas mažo plastiškumo molis ir dulkis. Vandenys maitinami kritulių vandenimis infiltraciniu būdu.

Lietingais laikotarpiais ir pavasarinio polaidžio metu gruntinio vandens lygis gali pakilti 0,5 - 1,0 m.

Vertinant vandens cheminės analizės rezultatus, vanduo yra kalcio hidrokarbonatinis. Vertinant laboratoriniais tyrimais nustatytas požeminio vandens rodiklių (SO_4, pH, CO_2, NH_4, Mg^{2+} ir t.t.) ribines vertes, nustatyta, kad vanduo neagresyvus betonui.

Statybos ir eksploatacijos metu reikia numatyti atitinkamas priemones pastato pamatų ir kąsinių apsaugai nuo paviršutinio vandens pritekėjimo.

Išvados ir rekomendacijos

1. Geomorfologiniu požiūriu tyrimų plotas yra paskutiniojo apledėjimo fliuvioglacialinių lygumų, Šiauryčių lygumos, Neries vidurupio slėnio terasuotoje atkarpoje.
2. Geologinį pjūvį sudaro technogeniniai (t IV), aliuviniai (a III bl), fliuvioglacialiniai (f III bl) bei glacialiniai (g III bl) dariniai. Augalinis sluoksnis (dirvožemis) padengęs visą teritroiją 0,2 – 0,3 m storio sluoksniu.
3. Atsižvelgiant į genetines formavimopsi sąlygas, litologinę sudėtį ir fizines mechanines savybes tyrimų plote išskirti 5 inžineriniai geologiniai sluoksniai. Viršutinėje dalyje, iki 0,8 -1,0 m supilti technogeniniai purūs – vidutinio tankumo (IGS – 1) mažai dulkingi molingi vidutinio rupumo smėliai. Giliau sutinkami purūs (IGS – 2) vidutinio rupumo smėliai, vidutinio tankumo – tankūs (IGS – 3) vidutinio rupumo smėliai, tolygiai išrūšiuoti vidutinio rupumo smėliai, mažai dulkingi molingi vidutinio rupumo smėliai, rečiau žvyringi smėliai, bei labai tankūs – ypatingai tankūs (IGS – 4) žvyringi smėliai, mažai dulkingi molingi gerai išrūšiuoti žvyringi smėliai, rečiau vidutinio rupumo smėliai. Po jais nuo 10,7 – 11,3 m gylio sutinkami vidutinio stiprumo (IGS – 5) smėlingi mažo plastiškumo moliai ir dulkiai, moreniniai.
4. Tyrimo metu tyrimų plote požeminis gruntinis vanduo sutiktas ištisai 7,80 – 8,0 m (109,91 – 110,46 m ab. A.) gylyje nuo esamo žemės paviršiaus.
5. Lietingais laikotarpiais ir pavasarinio polaidžio metu gruntinio vandens lygis gali pakilti 0,5 - 1,0 m.
6. Vertinant vandens cheminės analizės rezultatus, vanduo yra kalcio hidrokarbonatinis. Vertinant laboratoriniais tyrimais nustatytas požeminio vandens rodiklių (SO_4, pH, CO_2, NH_4, Mg^{2+} (detaliau LST EN 206-1)) ribines vertes, kad vanduo neagresyvus betonui.
7. Geotechniniu požiūriu pagal STR 1.04.02:2011 „Inžineriniai geologiniai ir geotechniniai

tyrimai“ 1 priedą inžinerinės geologinės sąlygos yra paprastos. Inžinerinės geologinės są… s yra palankios statinio statybai.

8. Pamatų pagrindais nereikėtų naudoti technogeninių ir purių gruntų (IGS – 1, 2).
9. Atliktos IGG tyrimų apimtys ir metodika leidžia detaliai įvertinti tyrimų ploto inžinerinės geologinės sąlygas ir pagrindo parinkimą statinio pamatų parinkimui.

Lentelė 10. Pamatų projektavimui daliniai patikimumo koeficientai pagal LST EN 1997-1:2006

Pavadinimas	**Žymuo**	**Rodiklių vertė**	
		A1+M1+R2	**A2+M2+R3**
A grupė taikoma poveikiams ir poveikių efektams			
Nuolatiniai -nepalankūs	γ_G	1,35	1,0
Nuolatiniai -palankūs		1,0	1,0
Kintamieji-nepalankūs	γ_Q	1,3	1,3
Kintamieji-palankūs		0	0
M grupė – grunto rodikliams			
Vidinės trinties kampo tangentas (a)	$\gamma_{(tg\varphi')}$	1,0	1,25
Efektyvioji sankiba	$\gamma_{c'}$	1,0	1,25
Kerpamasis stipris nedrenuojant	γ_{cu}	1,0	1,4
Nevaržomas gniuždomasis stipris	γ_{qu}	1,0	1,4
Savitasis sunkis	γ_{γ}	1,0	1,0
R grupė – laikomosios galios vertėms			
Poliniams pamatams taikomi koeficientai			
Polio pado pagrindo laikomoji galia	γ_b	1,1	1,0
Polio pagrindo prie polio kamieno kerpamoji laikomoji galia	γ_s	1,1	1,0
Polio pagrindo suminė laikomoji galia	γ_t	1,1	1,0
Tempiamo polio pagrindo laikomoji galia	$\gamma_{s;t}$	1,15	1,0
Polio pado pagrindo laikomoji galia	γ_b	1,1	1,0
Polio pagrindo prie polio kamieno kerpamoji laikomoji galia	γ_s	1,1	1,0
Polio pagrindo suminė laikomoji galia	γ_t	1,1	1,0
Tempiamo polio pagrindo laikomoji galia	$\gamma_{s;t}$	1,15	1,1
a Šis koeficientas taikomas kampo tangentui (tgφ‘).			

1.8 Medžiagų daliniai koeficientai

Nuolatinės ir laikinosios projektavimo situacijos: betonas γ_c=1,5 , armatūros γ_s=1,15.

1.9 Patikimumas ir ilgaamžiškumas

Projektuojami k-jos priskiriamos RC2 patikimumo klasei bei CC1 pasekmių klasei. Poveikių koeficientas K_{FI} = 1,0.

Pagal patikimumą ir ilgaamžiškumą statinys priskiriamas S4 kategorijai pagal LST EN 1992-1-1 „Eurokodas 2. Gelžbetoninių konstrukcijų projektavimas“. Skaičiuotinis eksploatacinis laikotarpis – 50 m.

Plieno konstrukcijų ilgaamžiškumas užtikrinamas numatant plieno k-jų apsaugą – cinkuojant.

Lentelė 11. Konstrukcijų ribiniai įlinkai ir poslinkiai

Konstrukcijų elementai	Keliamieji reikalavimai	Vertikalieji ribiniai įlinkiai, d_{lim}	Apkrovos vertikaliesiems įlinkiams apskaičiuoti
Sijos, santvaros, rėmo sijos, ilginiai, plokštės, paklotai (įskaitant plokščių ir paklotų skersines briaunas):			
denginių ir perdangų, atvirų apžvalgai, kai anga l, m: l = 3 l = 6	estetiniai-psichologiniai	l/150 l/200	
Perdangų plokštės, laiptotakiai ir laiptų aikštelės, kurių įlinkiams netrukdo gretimi elementai	fiziologiniai	0,7 mm	1 kN koncentruota apkrova tarpatramio viduryje
Sąramos ir kabamieji sienų paneliai virš durų ir langų angų (rėmo sijos ir įstiklinimo sijos)	konstrukciniai	l/200	Sumažinančios tarpą tarp laikančiųjų elementų ir langų bei durų angų užpildymo, esančio po elementais
	estetiniai ir psichologiniai	Kaip ir 2a pozicijoje	

Lentelė 12. Karkasinių pastatų horizontalieji ribiniai poslinkiai, ribojami konstrukciniais reikalavimais

Pastatai, sienos ir pertvaros	Sienų ir pertvarų tvirtinimas prie pastato karkaso	Ribiniai poslinkiai, u_{lim}
3. Vienaaukščiai pastatai (su save laikančiomis sienomis), kai aukštis h_s, m: h_s = 15	paslankusis	h_s/200

Lentelė 13. Konstrukcijų ribiniai poslinkiai ir įlinkiai

Konstrukcijos apibudinimas	Atramų santykinės nuokrypos
1. Oro linijų atramos	Nuo 1/100 iki 1/500
2. Įrangos atramos	1/100

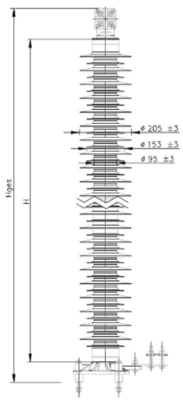
2. 110 KV AS ĮRENGINIŲ ATRAMŲ KONSTRUKCINIAI SPRENDINIAI

110 kV atvirosios skirstyklos plieninės konstrukcijos projektuojamos taip, kad jų pritaikomumas būtų galimas parinktiems vėjo ir sniego rajonams.

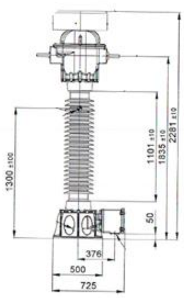
Lentelė 14. 110 kV AS naudojamų laidų vertikali apkrova

Įtampa, kV	Laido žymuo	Laido skersmuo, mm	Laido svoris, (kg/m); kN/m		G_{laid}, kN
110kV	149 AL1/24ST1A	17,1	(0,6)	~0,01	0,07
	243 AL1/39	21,8	(0,87)	~0,01	0,09
	Kieta al. šyna	Ø100x8	(4,784)	~0,05	0,45

Lentelė 15. 110 kV AS įrenginys – viršįtempių ribotuvas

Įrenginio pav.	Įrenginio eskizas	Techniniai parametrai		
Viršįtampis ribotuvas		Plotis,	m	≤ 0,24
		Aukštis,	m	≤ 1,65
		Plotas, b·h	m^2	0,396
		Svoris	kN	≤ 0,15
		Apledėjimas	kN	≤ 1,05
		Q_{lim}, kN	kN	3,0
		M_{lim}, kNm	kNm	4,5

Lentelė 16. 110 kV AS įrenginys – srovės transformatorius

Įrenginio pav.	Įrenginio eskizas	Techniniai parametrai		
Srovės transformatorius		Plotis, b	m	≤ 0,5
		Aukštis, h	m	≤ 2,11
		Plotas, b·h	m^2	≤ 1,25
		Svoris	kN	≤ 1,5
		Apledėjimas	kN	≤ 0,99
		Q_{lim}, kN	kN	3,0
		M_{lim}, kNm	kNm	6,0

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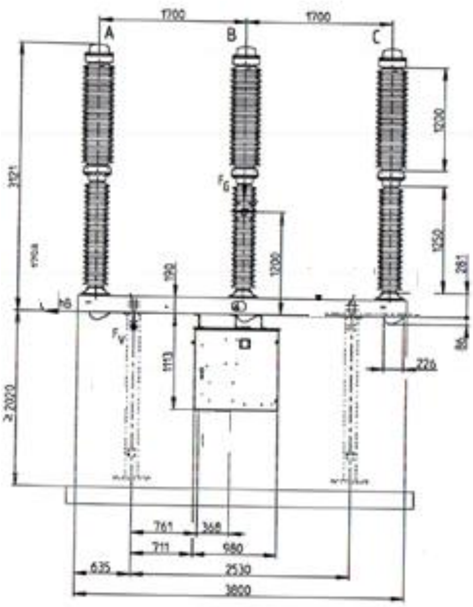
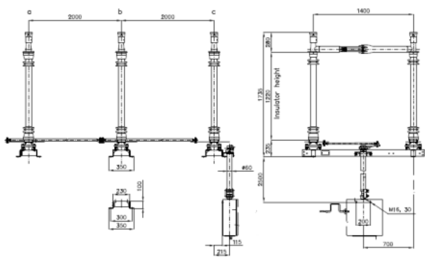
Lentelė 17. 110 kV AS įrenginys – jungtuvas

Įrenginio pav.	Įrenginio eskizas	Techniniai parametrai		
Jungtuvas		Plotis,	m	≤ 0,455
		Aukštis,	m	≤ 3,57
		Plotas, b·h	m^2	1,625
		Laidų pajungimo aukštis	m	2,1
		Svoris	kN	≤ 3·0,5=1,5
		Apledėjimas	kN	≤ 3,75
		Qlim	kN	3,5
		Mlim	kNm	5,5

Lentelė 18. 110 kV AS įrenginys – tripolis skyriklis

Įrenginio pav.	Įrenginio eskizas	Techniniai parametrai		
Tripolis skyriklis		Plotis,	m	≤ 0,24
		Aukštis,	m	≤ 1,68
		Plotas, b·h	m^2	≤ 1,92
		Svoris	kN	≤ 0,75
		Apledėjimas	kN	≤ 0,192
		Q_{lim}, kN	kN	2,5
		M_{lim}, kNm	kNm	5,0

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	12	236	0

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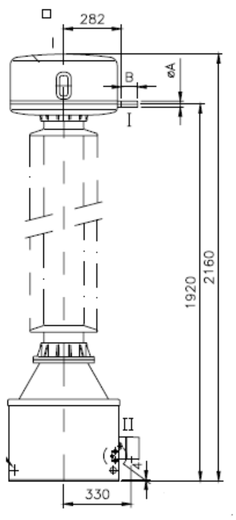
Lentelė 19. 110 kV AS įrenginys – įtampos transformatorius

Įrenginio pav.	Įrenginio eskizas	Techniniai parametrai		
Įtampos transformatorius		Plotis,	m	≤ 0,57
		Aukštis,	m	≤ 2,025
		Plotas, b·h	m^2	≤ 1,15
		Svoris	kN	≤ 1,5
		Apledėjimas	kN	≤ 1,05
		Q_{lim}, kN	kN	3,0
		M_{lim}, kNm	kNm	6,0

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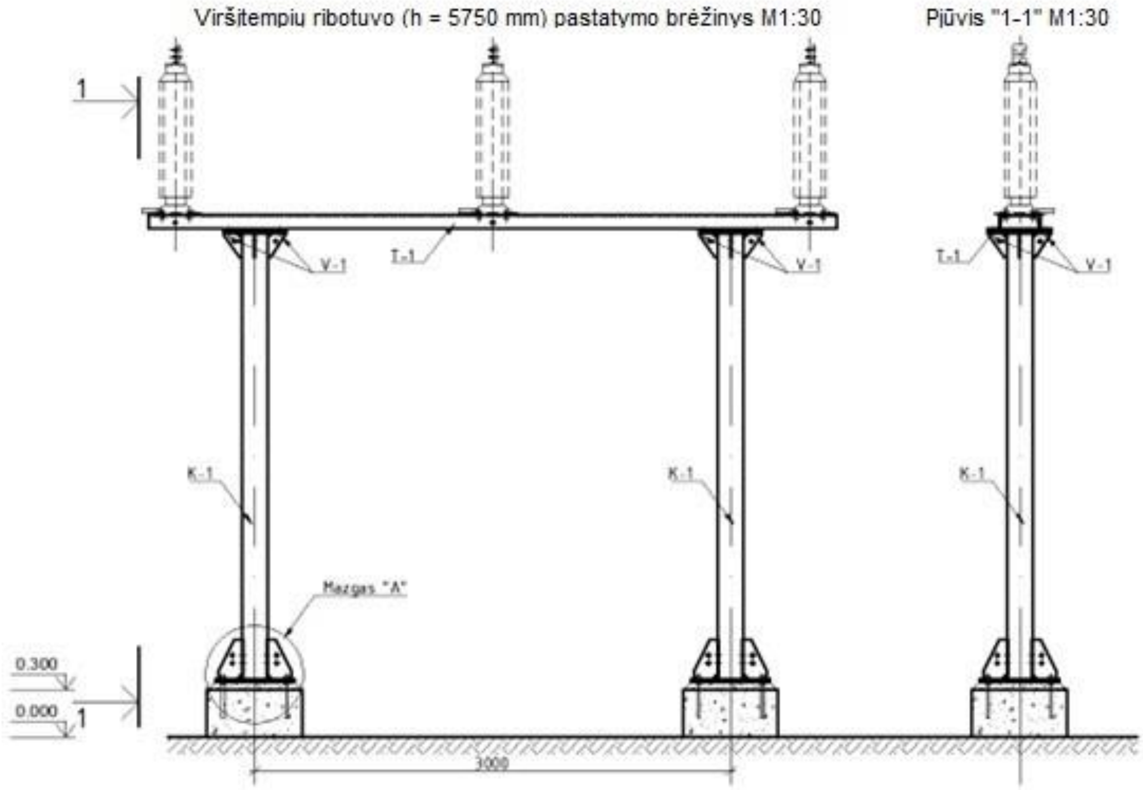
2.1. Viršįtempių ribotuvas (h = 5750 mm)



Pav. 5 Viršįtempių ribotuvo atrama

Viršįtempių ribotuvo atramą sudaro:

- Dvi vamzdinio profilio kolonos, rėmo plokštumoje standžiai sujungtos su pamatu per inkarinius varžtus;
- Sudvejinta traversa iš UPN profilių, kuri tarpusavyje sujungta standžiai IPE ar UPN tipo profiliais.
- Traversa su kolona, jungiama varžtais – standžiai.
- Laikančiųjų konstrukcijų plienas S275J2.

Lentelė 20. Atviros skirstomosios įrangos konstrukcijų ribiniai poslinkiai ir įlinkiai

Konstrukcijos apibudinimas ir nuokrypio kryptis	Atramų santykinės nuokrypos	Santykiniai traversų įlinkiai (tarpatramio -1 arba gembės ilgiui -2)			
		Vertikalieji		Horizontalieji	
		Tarpatramyje	Gembėje	Tarpatramyje	Gembėje
Atviros skirstomosios įrangos atramos išilgai laidų	1/100 5,75/100=0,06m	1/200 3/200=0,015	1/70 0,50/70=0,01	1/200 3/200=0,015	1/70 0,5/70=0,010
Atviros skirstomosios įrangos atramos skersai laidų	1/70 5,75/70=0,08m	n/a	n/a	n/a	n/a
Pastabos: 1. Kai yra avariniai ir montažiniai režimai, atviros skirstomosios įrangos atramų ir oro linijų traversų atramų nuokrypiai nenormuojami. 2. Nuokrypiai ir įlinkiai, turi būti sumažinti, jei įrangos eksploatacijos techninės sąlygos numato griežtesnius apribojimus.					

Viršįtempių ribotuvo atramą veikiančios nuolatinės ir kintamos apkrovos pateiktos žemiau esančioje lentelėje.

Lentelė 21. Viršįtempių ribotuvą veikiančios apkrovos

Įrenginio apkrovų pasiskirstymas					
Eil. Nr.	Apkrovos pavadinimas	F, kN	q, kN/m	Jėgos veikimo kryptis	Pastaba
1.	**Nuolatinės apkrovos**				
1.1.	Konstrukcijos savasis svoris	BEM	-	↓	γ=78,50 kN/m³
1.2.	Technologiniai įrenginiai	0,15	-	↓	-
1.3.	Laidų svoris	0,21	-	↓	-
2.	**Kintamos apkrovos**				
2.1.	*Vėjas x-x kryptimi*				
2.1.1.	Į koloną	-	0,074	→	X-X
2.1.2.	Į traversą	-	0,036	→	X-X
2.1.3.	Į technologinius įrenginius	-	0,11	→	X-X
2.1.4.	Nuo laidų	0,15	-	→	X-X
2.2.	*Vėjas y-y kryptimi*				
2.2.1.	Į koloną	-	0,074	→	Y-Y
2.2.2.	Į traversą	-	0,036	→	Y-Y
2.2.3.	Į technologinius įrenginius	-	0,11	→	Y-Y
2.2.4.	Nuo laidų	-	-	-	Vėjo kryptis išilgai laidų
2.3.	*Apšalas*				
2.3.1.	Nuo įrenginio	1,01		↓	Z-Z
2.3.2.	Nuo laidų	0,043		↓	Z-Z
2.4.	*Laidų išilginis tempimas*	1,5		→	X-X

Lentelė 22. Apkrovų eksplikacija

Apkrovos nr.	Apkrovos žymuo	Apkrovos pavadinimas
1	LC1	Savasis svoris
2	LC2	Įrenginių svoris
3	LC3	Laidų svoris
4	LC4	Vėjas X-X
5	LC5	Vėjas Y-Y
6	LC6	Apšalas
7	LC7	Laidų išilginis tempimas

1.3 Materials

Matl. No.	Modulus E [kN/cm²]	Modulus G [kN/cm²]	Poisson's Ratio ν [-]	Spec. Weight γ [kN/m³]	Coeff. of Th. Exp. α [1/°C]	Partial Factor γ_M [-]	Material Model
1	Steel S 275 J2 | BDS EN 10025-2:2004-11						
	21000.00	8076.92	0.300	78.50	1.20E-05	1.00	Isotropic Linear Elastic

1.7 Nodal Supports

Support No.	Nodes No.	Axis System	Column in Z	Support Conditions u_X	u_Y	u_Z	φ_X	φ_Y	φ_Z
1	1,2	Global X,Y,Z	-	x	x	x	x	x	x

1.13 Cross-Sections

Section No.	Matl. No.	J [cm⁴] / A [cm²]	I_y [cm⁴] / A_y [cm²]	I_z [cm⁴] / A_z [cm²]	Principal Axes α [°]	Rotation α' [°]	Overall Dimensions [mm] Width b	Height h
1	QRO 250x10 | EN 10219-2:2006							
	1	14200.00	8707.00	8707.00	0.00	0.00	250.0	250.0
		92.60	40.52	40.52				
2	RO 244.5x8 | EN 10219-2:2006							
	1	8321.00	4160.00	4160.00	0.00	0.00	244.5	244.5
		59.40	29.63	29.63				
3	UPN 180 | ArcelorMittal (EN 10365:2017)							
	1	9.55	1350.00	114.00	0.00	0.00	70.0	180.0
		28.00	7.14	12.38				

1.17 Members

Mbr. No.	Line No.	Member	Rotation Type	Rotation β [°]	Cross-Section Start	Cross-Section End	Hinge No. Start	Hinge No. End	Ecc. No.	Div. No.	Length L [m]	
1	1	Beam	Angle	0.00	1	1	-	-	-	-	5.700	Z
2	2	Beam	Angle	0.00	1	1	-	-	-	-	5.700	Z
3	5	Beam	Angle	180.00	3	3	-	-	-	-	4.400	X
4	3	Beam	Angle	0.00	3	3	-	-	-	-	4.400	X
5	6	Beam	Angle	0.00	3	3	-	-	-	-	0.230	Y
6	14	Beam	Angle	0.00	3	3	-	-	-	-	0.230	Y
7	9	Beam	Angle	0.00	3	3	-	-	-	-	0.230	Y
8	15	Beam	Angle	0.00	3	3	-	-	-	-	0.230	Y
9	7	Beam	Angle	0.00	3	3	-	-	-	-	0.230	Y
10	8	Beam	Angle	0.00	3	3	-	-	-	-	0.230	Y
11	13	Beam	Angle	0.00	2	2	-	-	-	-	1.600	Z
12	12	Beam	Angle	0.00	2	2	-	-	-	-	1.600	Z
13	11	Beam	Angle	0.00	2	2	-	-	-	-	1.600	Z
14	18	Beam	Angle	0.00	3	3	-	-	-	-	0.230	Y

2.1 Load Cases

Load Case	Load Case Description	EN 1990 | LST Action Category	Active	Self-Weight - Factor in Direction X	Y	Z
LC1	Savasis svoris	Permanent	x	0.000	0.000	-1.000
LC2	Irenginiu svoris	Permanent	-			
LC3	Laidu svoris	Permanent	-			
LC4	Vejas X-X kryptimi	Wind	-			
LC5	Vejas Y-Y kryptimi	Wind	-			
LC6	Apsalas	Snow / ice	-			
LC7	Laidu isilginis tempimas	Temperature (non fire)	-			

2.1.1 Load Cases - Calculation Parameters

Load Case	Load Case Description	Calculation Parameters			
LC1	Savasis svoris	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC2	Irenginiu svoris	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC3	Laidu svoris	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC4	Vejas X-X kryptimi	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC5	Vejas Y-Y kryptimi	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC6	Apsalas	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC7	Laidu isilginis tempimas	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)

.1.1 Load Cases - Calculation Parameters

Load Case	Load Case Description	Calculation Parameters
		: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)

2.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
CO1	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
CO2	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
CO3	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
CO4	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
			5	0.78	LC7	Laidu isilginis tempimas
CO5	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
			5	0.78	LC7	Laidu isilginis tempimas
CO6	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
			5	0.91	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO7	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
			5	0.91	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO8	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
			5	0.91	LC6	Apsalas
CO9	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
			5	0.91	LC6	Apsalas
CO10	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC7	Laidu isilginis tempimas
CO11	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	1.30	LC7	Laidu isilginis tempimas
CO12	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	1.30	LC7	Laidu isilginis tempimas

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.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
CO13	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 0.91*LC6 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	0.91	LC6	Apsalas
			6	1.30	LC7	Laidu isilginis tempimas
CO14	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 0.91*LC6 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	0.91	LC6	Apsalas
			6	1.30	LC7	Laidu isilginis tempimas
CO15	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.91*LC6 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.91	LC6	Apsalas
			5	1.30	LC7	Laidu isilginis tempimas
CO16	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC6	Apsalas
CO17	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	1.30	LC6	Apsalas
CO18	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	1.30	LC6	Apsalas
CO19	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	1.30	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO20	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	1.30	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO21	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC6	Apsalas
			5	0.78	LC7	Laidu isilginis tempimas
CO22	STR	LC1 + LC2 + LC3	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
CO23	STR	LC1 + LC2 + LC3 + 1.3*LC4	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
CO24	STR	LC1 + LC2 + LC3 + 1.3*LC5	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
CO25	STR	LC1 + LC2 + LC3 + 1.3*LC4 + 0.78*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris

.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
			4	1.30	LC4	Vejas X-X kryptimi
			5	0.78	LC7	Laidu isilginis tempimas
CO26	STR	LC1 + LC2 + LC3 + 1.3*LC5 + 0.78*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
			5	0.78	LC7	Laidu isilginis tempimas
CO27	STR	LC1 + LC2 + LC3 + 1.3*LC4 + 0.91*LC6 + 0.78*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
			5	0.91	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO28	STR	LC1 + LC2 + LC3 + 1.3*LC5 + 0.91*LC6 + 0.78*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
			5	0.91	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO29	STR	LC1 + LC2 + LC3 + 1.3*LC4 + 0.91*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
			5	0.91	LC6	Apsalas
CO30	STR	LC1 + LC2 + LC3 + 1.3*LC5 + 0.91*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
			5	0.91	LC6	Apsalas
CO31	STR	LC1 + LC2 + LC3 + 1.3*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC7	Laidu isilginis tempimas
CO32	STR	LC1 + LC2 + LC3 + 0.78*LC4 + 1.3*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	1.30	LC7	Laidu isilginis tempimas
CO33	STR	LC1 + LC2 + LC3 + 0.78*LC5 + 1.3*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	1.30	LC7	Laidu isilginis tempimas
CO34	STR	LC1 + LC2 + LC3 + 0.78*LC4 + 0.91*LC6 + 1.3*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	0.91	LC6	Apsalas
			6	1.30	LC7	Laidu isilginis tempimas
CO35	STR	LC1 + LC2 + LC3 + 0.78*LC5 + 0.91*LC6 + 1.3*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	0.91	LC6	Apsalas
			6	1.30	LC7	Laidu isilginis tempimas
CO36	STR	LC1 + LC2 + LC3 + 0.91*LC6 + 1.3*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.91	LC6	Apsalas
			5	1.30	LC7	Laidu isilginis tempimas
CO37	STR	LC1 + LC2 + LC3 + 1.3*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC6	Apsalas
CO38	STR	LC1 + LC2 + LC3 + 0.78*LC4 + 1.3*LC6	1	1.00	LC1	Savasis svoris

.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	1.30	LC6	Apsalas
CO39	STR	LC1 + LC2 + LC3 + 0.78*LC5 + 1.3*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	1.30	LC6	Apsalas
CO40	STR	LC1 + LC2 + LC3 + 0.78*LC4 + 1.3*LC6 + 0.78*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	1.30	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO41	STR	LC1 + LC2 + LC3 + 0.78*LC5 + 1.3*LC6 + 0.78*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	1.30	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO42	STR	LC1 + LC2 + LC3 + 1.3*LC6 + 0.78*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC6	Apsalas
			5	0.78	LC7	Laidu isilginis tempimas
CO43	S Ch	LC1 + LC2 + LC3	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
CO44	S Ch	LC1 + LC2 + LC3 + LC4	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X kryptimi
CO45	S Ch	LC1 + LC2 + LC3 + LC5	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y kryptimi
CO46	S Ch	LC1 + LC2 + LC3 + LC4 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X kryptimi
			5	0.60	LC7	Laidu isilginis tempimas
CO47	S Ch	LC1 + LC2 + LC3 + LC5 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y kryptimi
			5	0.60	LC7	Laidu isilginis tempimas
CO48	S Ch	LC1 + LC2 + LC3 + LC4 + 0.7*LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X kryptimi
			5	0.70	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO49	S Ch	LC1 + LC2 + LC3 + LC5 + 0.7*LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y kryptimi
			5	0.70	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO50	S Ch	LC1 + LC2 + LC3 + LC4 + 0.7*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X kryptimi
			5	0.70	LC6	Apsalas
CO51	S Ch	LC1 + LC2 + LC3 + LC5 + 0.7*LC6	1	1.00	LC1	Savasis svoris

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.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor		Load Case
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y kryptimi
			5	0.70	LC6	Apsalas
CO52	S Ch	LC1 + LC2 + LC3 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC7	Laidu isilginis tempimas
CO53	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X kryptimi
			5	1.00	LC7	Laidu isilginis tempimas
CO54	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y kryptimi
			5	1.00	LC7	Laidu isilginis tempimas
CO55	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + 0.7*LC6 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X kryptimi
			5	0.70	LC6	Apsalas
			6	1.00	LC7	Laidu isilginis tempimas
CO56	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + 0.7*LC6 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y kryptimi
			5	0.70	LC6	Apsalas
			6	1.00	LC7	Laidu isilginis tempimas
CO57	S Ch	LC1 + LC2 + LC3 + 0.7*LC6 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.70	LC6	Apsalas
			5	1.00	LC7	Laidu isilginis tempimas
CO58	S Ch	LC1 + LC2 + LC3 + LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC6	Apsalas
CO59	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X kryptimi
			5	1.00	LC6	Apsalas
CO60	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y kryptimi
			5	1.00	LC6	Apsalas
CO61	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X kryptimi
			5	1.00	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO62	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y kryptimi
			5	1.00	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO63	S Ch	LC1 + LC2 + LC3 + LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC6	Apsalas

.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
			5	0.60	LC7	Laidu isilginis tempimas

2.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters			
CO1	1.35*LC1 + 1.35*LC2 + 1.35*LC3	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO2	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO3	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO4	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.78*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO5	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.78*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO6	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6 + 0.78*LC7	Method of analysis	:	x	Second order analysis (P-Delta)

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..5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters			
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO7	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6 + 0.78*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO8	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO9	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO10	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO11	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO12	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO13	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 0.91*LC6 + 1.3*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO14	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 0.91*LC6 + 1.3*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO15	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.91*LC6 + 1.3*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO16	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO17	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard

..5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters	
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO18	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO19	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO20	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO21	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO22	LC1 + LC2 + LC3	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters	
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO23	LC1 + LC2 + LC3 + 1.3*LC4	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO24	LC1 + LC2 + LC3 + 1.3*LC5	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO25	LC1 + LC2 + LC3 + 1.3*LC4 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO26	LC1 + LC2 + LC3 + 1.3*LC5 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO27	LC1 + LC2 + LC3 + 1.3*LC4 + 0.91*LC6 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO28	LC1 + LC2 + LC3 + 1.3*LC5 + 0.91*LC6 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters			
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO29	LC1 + LC2 + LC3 + 1.3*LC4 + 0.91*LC6	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO30	LC1 + LC2 + LC3 + 1.3*LC5 + 0.91*LC6	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO31	LC1 + LC2 + LC3 + 1.3*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO32	LC1 + LC2 + LC3 + 0.78*LC4 + 1.3*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO33	LC1 + LC2 + LC3 + 0.78*LC5 + 1.3*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO34	LC1 + LC2 + LC3 + 0.78*LC4 + 0.91*LC6 + 1.3*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z

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.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters	
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO35	LC1 + LC2 + LC3 + 0.78*LC5 + 0.91*LC6 + 1.3*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO36	LC1 + LC2 + LC3 + 0.91*LC6 + 1.3*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO37	LC1 + LC2 + LC3 + 1.3*LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO38	LC1 + LC2 + LC3 + 0.78*LC4 + 1.3*LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO39	LC1 + LC2 + LC3 + 0.78*LC5 + 1.3*LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO40	LC1 + LC2 + LC3 + 0.78*LC4 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO41	LC1 + LC2 + LC3 + 0.78*LC5 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO42	LC1 + LC2 + LC3 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO43	LC1 + LC2 + LC3	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO44	LC1 + LC2 + LC3 + LC4	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO45	LC1 + LC2 + LC3 + LC5	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO46	LC1 + LC2 + LC3 + LC4 + 0.6*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension

..5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO47	LC1 + LC2 + LC3 + LC5 + 0.6*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO48	LC1 + LC2 + LC3 + LC4 + 0.7*LC6 + 0.6*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO49	LC1 + LC2 + LC3 + LC5 + 0.7*LC6 + 0.6*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO50	LC1 + LC2 + LC3 + LC4 + 0.7*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO51	LC1 + LC2 + LC3 + LC5 + 0.7*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO52	LC1 + LC2 + LC3 + LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO53	LC1 + LC2 + LC3 + 0.6*LC4 + LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO54	LC1 + LC2 + LC3 + 0.6*LC5 + LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO55	LC1 + LC2 + LC3 + 0.6*LC4 + 0.7*LC6 + LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO56	LC1 + LC2 + LC3 + 0.6*LC5 + 0.7*LC6 + LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO57	LC1 + LC2 + LC3 + 0.7*LC6 + LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO58	LC1 + LC2 + LC3 + LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters	
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO59	LC1 + LC2 + LC3 + 0.6*LC4 + LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO60	LC1 + LC2 + LC3 + 0.6*LC5 + LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO61	LC1 + LC2 + LC3 + 0.6*LC4 + LC6 + 0.6*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO62	LC1 + LC2 + LC3 + 0.6*LC5 + LC6 + 0.6*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO63	LC1 + LC2 + LC3 + LC6 + 0.6*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)

.7 Result Combinations

Result Combin	Description	Loading
RC1	ULS (STR/GEO) - Permanent / transient - Eq. 6.10	CO1/p or to CO42
RC2	SLS - Characteristic	CO43/p or to CO63

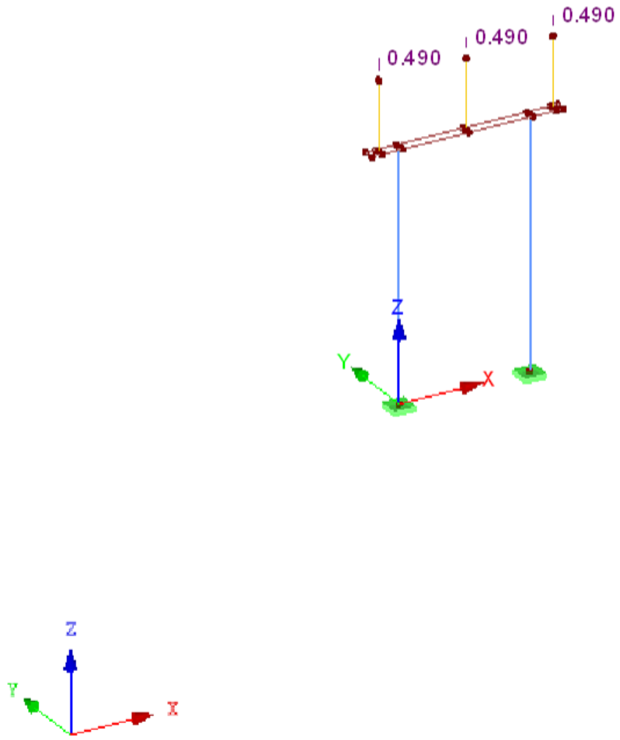
LC2
Irenginiu svoris

3.1 Nodal Loads - By Components - Coordinate System

LC2: Irenginiu svoris

No.	On Nodes No.	Coordinate System	Force [kN] P_X / P_U	P_Y / P_V	P_Z / P_W	Moment [kNm] M_X / M_U	M_Y / M_V	M_Z / M_W
1	14,17,19	0 | Global XYZ	0.000	0.000	-0.490	0.000	0.000	0.000

LC2 : Irenginiu svoris
Loads [kN]



	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	34	236	0

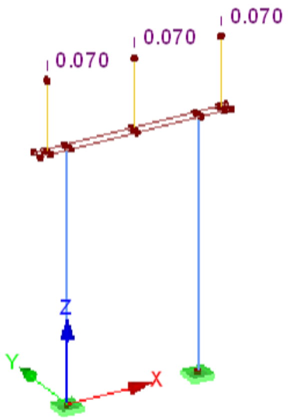
3.1 Nodal Loads - By Components - Coordinate System

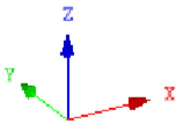
No.	On Nodes No.	Coordinate System	Force [kN] P_X / P_U	P_Y / P_V	P_Z / P_W	Moment [kNm] M_X / M_U	M_Y / M_V	M_Z / M_W
1	14,17,19	0 | Global XYZ	0.000	0.000	-0.070	0.000	0.000	0.000

LC3: Laidu svoris

LC3 : Laidu svoris
Loads [kN]

metric





LC4
Vejas X-X kryptimi

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	36	236	0

3.2 Member Loads

LC4: Vejas X-X kryptimi

No.	Reference to	On Members No.	Load Type	Load Distribution	Load Direction	Reference Length	Load Parameters Symbol	Value	Unit
1	Members	1,2	Force	Uniform	z	True Length	p	0.120	kN/m
2	Members	5	Force	Uniform	y	True Length	p	0.090	kN/m
3	Members	13	Force	Uniform	z	True Length	p	-0.130	kN/m
4	Members	11	Force	Uniform	z	True Length	p	-0.130	kN/m
5	Members	12	Force	Uniform	z	True Length	p	-0.130	kN/m

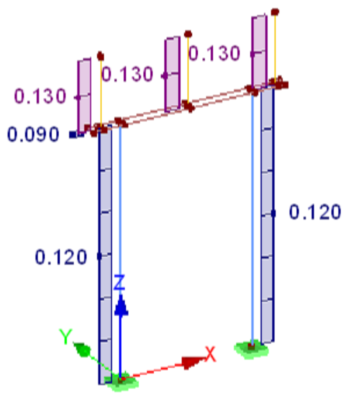
3.2/1 Member Loads - Load Eccentricity

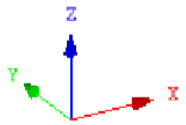
LC4: Vejas X-X kryptimi

No.	Referenc e to	On Members No.	Absolute Offset Mbr. Start		Absolute Offset Mbr. End		Relative Offset Mbr. Start		Relative Offset Mbr. End	
			e_Y [mm]	e_Z [mm]	e_Y [mm]	e_Z [mm]	y-Axis	z-Axis	y-Axis	z-Axis
1	Members	1,2	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
2	Members	5	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
3	Members	13	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
4	Members	11	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
5	Members	12	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle

4: Vejas X-X kryptimi

LC4 : Vejas X-X kryptimi
Loads [kN/m]





ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	38	236	0

3.2 Member Loads

LC5: Vejas Y-Y kryptimi

No.	Reference to	On Members No.	Load Type	Load Distribution	Load Direction	Reference Length	Load Parameters Symbol	Value	Unit
1	Members	11-13	Force	Uniform	y	True Length	p	0.130	kN/m
2	Members	4	Force	Uniform	y	True Length	p	-0.090	kN/m
3	Members	1,2	Force	Uniform	y	True Length	p	0.120	kN/m

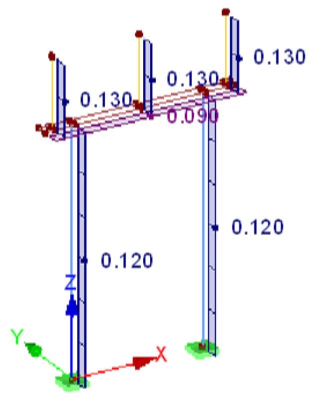
3.2/1 Member Loads - Load Eccentricity

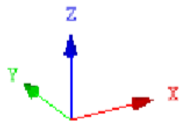
LC5: Vejas Y-Y kryptimi

No.	Referenc e to	On Members No.	Absolute Offset Mbr. Start	Absolute Offset Mbr. Start	Absolute Offset Mbr. End	Absolute Offset Mbr. End	Relative Offset Mbr. Start	Relative Offset Mbr. Start	Relative Offset Mbr. End	Relative Offset Mbr. End
			e_Y [mm]	e_Z [mm]	e_Y [mm]	e_Z [mm]	y-Axis	z-Axis	y-Axis	z-Axis
1	Members	11-13	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
2	Members	4	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
3	Members	1,2	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle

5: Vejas Y-Y kryptimi

LC5 : Vejas Y-Y kryptimi
Loads [kN/m]





		LAPAS	LAPŲ	LAIDA
	ED2201-XX-RTP-SK-T1.IS	40	236	0

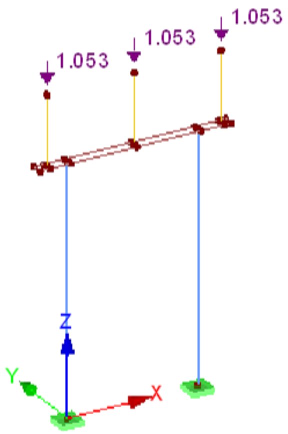
3.1 Nodal Loads - By Components - Coordinate System

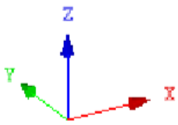
No.	On Nodes No.	Coordinate System	Force [kN] P_X / P_U	P_Y / P_V	P_Z / P_W	Moment [kNm] M_X / M_U	M_Y / M_V	M_Z / M_W
2	14,17,19	0 | Global XYZ	0.000	0.000	-1.053	0.000	0.000	0.000

LC6: Apsalas

LC6 : Apsalas
Loads [kN]

metric





LC7
Laidu isilginis tempimas

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	42	236	0

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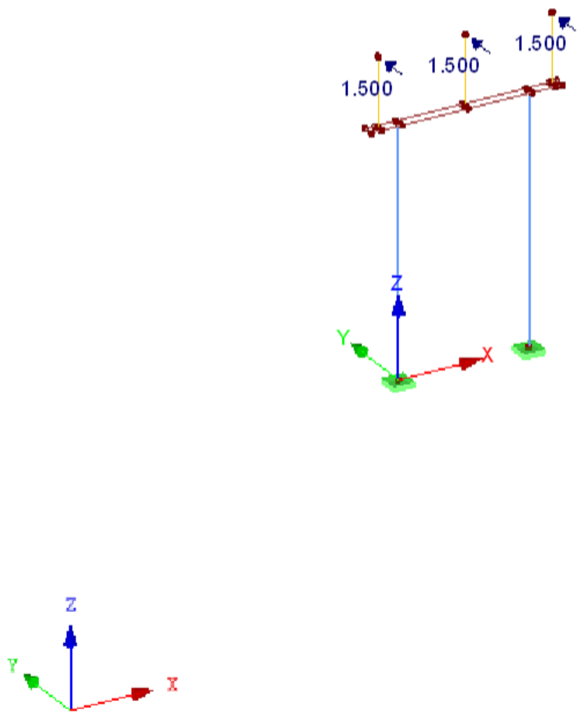
.1 Nodal Loads - By Components - Coordinate System

No.	On Nodes No.	Coordinate System	Force [kN] Px / Pu	Py / Pv	Pz / Pw	Moment [kNm] Mx / Mu	My / Mv	Mz / Mw
1	14,17,19	0 | Global XYZ	0.000	1.500	0.000	0.000	0.000	0.000

LC7: Laidu isilginis tempimas

LC7 : Laidu isilginis tempimas
Loads [kN]

Isometric

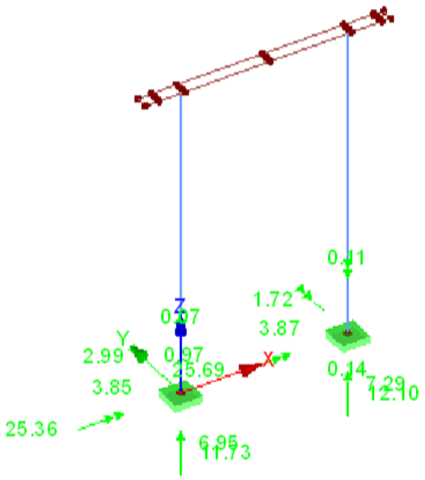


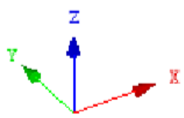
4.1 Nodes - Support Forces

Node No.	RC		Support Forces [kN] P_X	P_Y	P_Z	Support Moments [kNm] M_X	M_Y	M_Z	
1	RC1	Max	0.97	3.85	-6.95	0.00	2.99	0.07	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	0.00	0.00	-11.73	-25.36	0.00	0.00	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	0.75	2.96	-7.01	0.00	2.30	0.05	SLS - Characteristic
		Min	0.00	0.00	-8.75	-19.47	0.00	0.00	SLS - Characteristic
2	RC1	Max	0.00	3.87	-7.29	0.00	1.72	0.11	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-0.14	0.00	-12.10	-25.69	0.00	0.00	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	0.00	2.97	-7.29	0.00	1.32	0.09	SLS - Characteristic
		Min	-0.10	0.00	-9.02	-19.72	0.00	0.00	SLS - Characteristic

pport Reactions

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Support Reactions[kN], [kNm]
Result Combinations: Max and Min Values



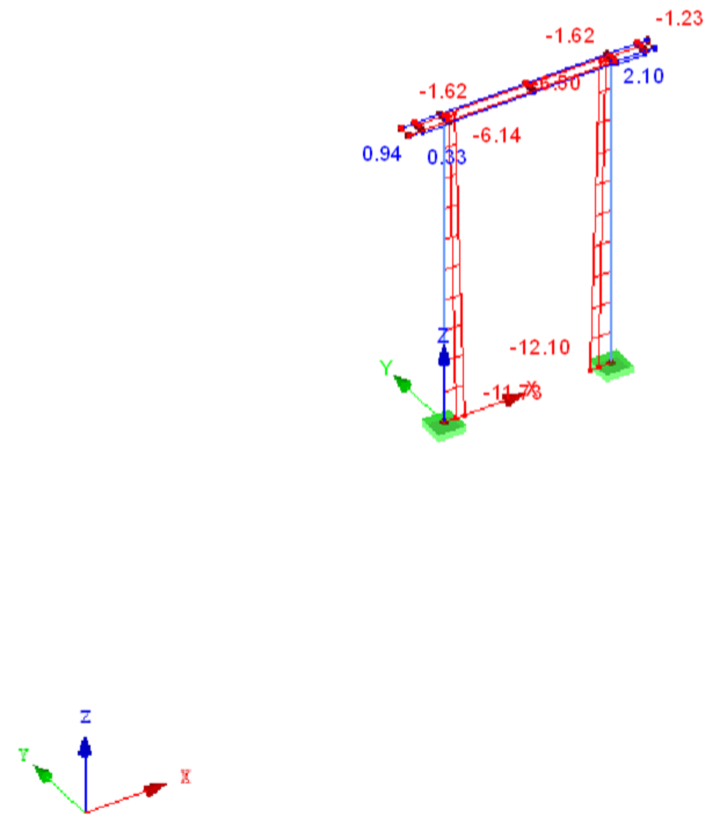


Max P-X': 0.97, Min P-X': -0.14 kN
Max P-Y': 3.87, Min P-Y': 0.00 kN
Max P-Z': -6.95, Min P-Z': -12.10 kN
Max M-X': 0.00, Min M-X': -25.69 kNm
Max M-Y': 2.99, Min M-Y': 0.00 kNm
Max M-Z': 0.11, Min M-Z': 0.00 kNm

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	45	236	0

ernal forces N

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces N
Result Combinations: Max and Min Values

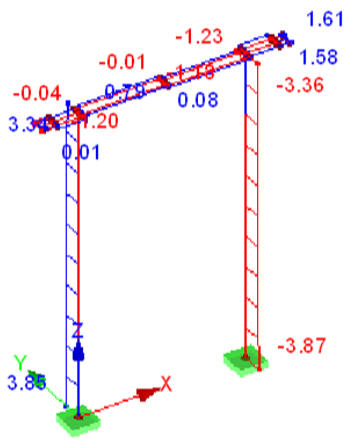


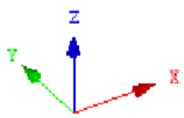
Max N: 2.10, Min N: -12.10 [kN]

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	46	236	0

ernal forces Vy

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces V-y
Result Combinations: Max and Min Values



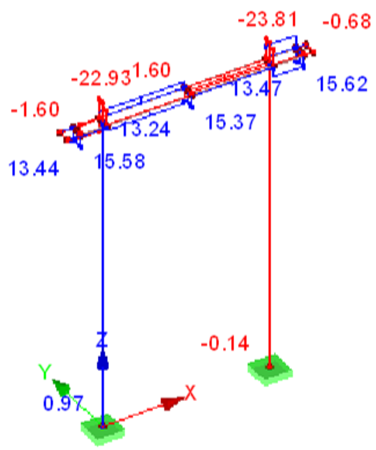


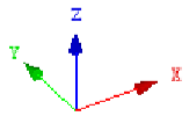
Max V-y: 3.85, Min V-y: -3.87 [kN]

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	47	236	0

...ernal forces Vz

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces V-z
Result Combinations: Max and Min Values



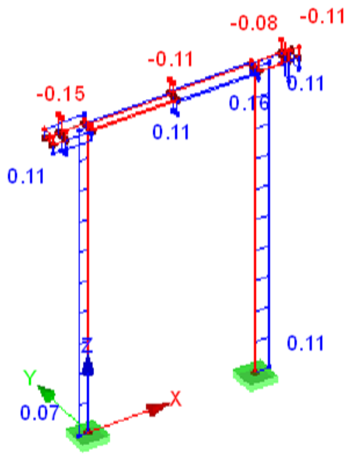


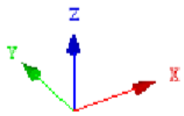
Max V-z: 15.62, Min V-z: -23.81 [kN]

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	48	236	0

...ernal forces MT

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces M-T
Result Combinations: Max and Min Values



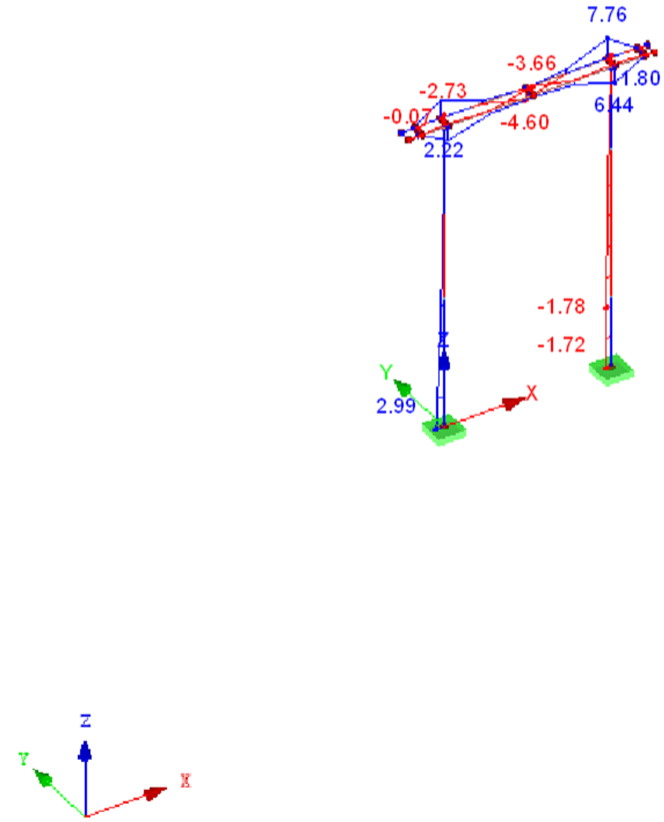


Max M-T: 0.16, Min M-T: -0.15 [kNm]

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	49	236	0

ernal forces My

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces M-y
Result Combinations: Max and Min Values

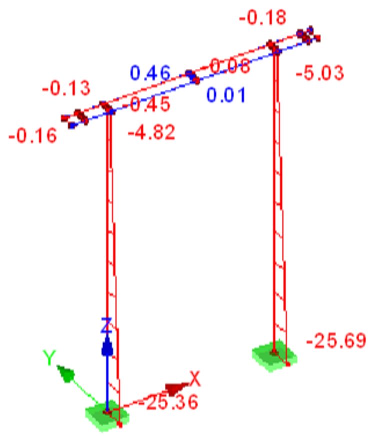


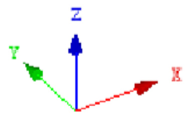
Max M-y: 7.76, Min M-y: -4.60 [kNm]

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	50	236	0

...ernal forces Mz

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces M-z
Result Combinations: Max and Min Values





Max M-z: 0.46, Min M-z: -25.69 [kNm]

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	51	236	0

Nodes - Displacements

Member	Node	Location		Displacements [mm]			
No.	No.	x [m]		u_x	u_y	u_z	Cross-Section
1	3	0.000	Max u_x	**0.0**	0.0	0.0	1 - QRO 250x10 ; EN 10219-2:2006
	1	5.700	Min u_x	**0.0**	0.0	0.0	
	3	0.000	Max u_y	0.0	**12.5**	0.0	
	3	0.000	Min u_y	0.0	**0.0**	0.0	
	3	0.000	Max u_z	0.0	6.5	**1.1**	
		5.130	Min u_z	0.0	0.0	**0.0**	
2	2	0.000	Max u_x	**0.0**	0.0	0.0	1 - QRO 250x10 ; EN 10219-2:2006
	4	5.700	Min u_x	**0.0**	0.0	-0.6	
	4	5.700	Max u_y	0.0	**12.7**	0.0	
	2	0.000	Min u_y	0.0	**0.0**	0.0	
		2.280	Max u_z	0.0	0.0	**0.0**	
	4	5.700	Min u_z	0.0	6.6	**-1.1**	
3	9	0.000	Max u_x	**0.0**	12.8	1.2	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
	8	4.400	Min u_x	**-1.1**	0.0	0.0	
		2.166	Max u_y	0.0	**13.1**	0.8	
		2.933	Min u_y	-1.1	**0.0**	0.1	
	9	0.000	Max u_z	0.0	12.8	**1.2**	
	8	4.400	Min u_z	-1.1	0.0	**0.0**	
4	7	0.000	Max u_x	**0.0**	0.0	0.0	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
	7	0.000	Min u_x	**-1.1**	-6.7	0.5	
		1.433	Max u_y	-1.1	**0.0**	0.0	
		2.166	Min u_y	0.0	**-13.1**	0.6	
	7	0.000	Max u_z	0.0	-12.8	**1.1**	
	7	0.000	Min u_z	-0.6	0.0	**-0.1**	
5	8	0.000	Max u_x	**0.0**	1.1	0.0	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
	8	0.000	Min u_x	**-12.5**	0.0	-1.1	
	6	0.230	Max u_y	-6.5	**1.1**	0.5	
	8	0.000	Min u_y	-12.5	**0.0**	-1.0	
	6	0.230	Max u_z	-12.5	0.0	**1.0**	
	8	0.000	Min u_z	-12.5	0.0	**-1.1**	
6		0.201	Max u_x	**0.0**	1.1	0.0	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
		0.115	Min u_x	**-12.5**	0.0	0.0	
		0.201	Max u_y	-6.5	**1.1**	0.3	
	21	0.000	Min u_y	-12.5	**0.0**	-0.8	
	16	0.230	Max u_z	-12.5	0.0	**0.8**	
	21	0.000	Min u_z	-12.5	0.0	**-0.8**	
7	13	0.000	Max u_x	**0.0**	0.0	0.0	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
	12	0.230	Min u_x	**-12.5**	0.0	0.4	
	12	0.230	Max u_y	-6.5	**1.1**	0.2	
	13	0.000	Min u_y	-12.5	**0.0**	-0.4	
	12	0.230	Max u_z	-12.5	0.0	**0.4**	
	13	0.000	Min u_z	-12.5	0.0	**-0.5**	

8		0.172	Max u_x	**0.0**	1.1	-0.1	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
		0.115	Min u_x	**-13.1**	0.0	-0.1	
	22	0.230	Max u_y	-6.8	**1.1**	0.3	
	23	0.000	Min u_y	-13.1	**0.0**	-0.8	
	22	0.230	Max u_z	-13.1	0.0	**0.6**	
	23	0.000	Min u_z	-13.1	0.0	**-0.8**	
9		0.201	Max u_x	**0.0**	1.1	0.0	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
	10	0.230	Min u_x	**-12.7**	0.0	0.4	
	10	0.230	Max u_y	-6.6	**1.1**	0.2	
	11	0.000	Min u_y	-12.7	**0.0**	-0.5	
	10	0.230	Max u_z	-12.7	0.0	**0.4**	
	11	0.000	Min u_z	-12.7	0.0	**-0.5**	
10	7	0.230	Max u_x	**0.0**	1.1	-0.1	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
	9	0.000	Min u_x	**-12.8**	0.0	-1.2	
	7	0.230	Max u_y	-6.7	**1.1**	0.5	
	9	0.000	Min u_y	-12.8	**0.0**	-1.2	
	7	0.230	Max u_z	-12.8	0.0	**1.1**	
	9	0.000	Min u_z	-12.8	0.0	**-1.2**	
11	20	0.000	Max u_x	**0.0**	0.0	-1.1	2 - RO 244.5x8 ; EN 10219-2:2006
	19	1.600	Min u_x	**-0.1**	15.6	0.1	
	19	1.600	Max u_y	-0.1	**24.2**	0.1	
	20	0.000	Min u_y	0.0	**0.0**	0.0	
	19	1.600	Max u_z	-0.1	15.6	**0.1**	
	19	1.600	Min u_z	0.0	0.0	**-3.1**	
12	18	0.000	Max u_x	**-0.1**	6.8	-1.1	2 - RO 244.5x8 ; EN 10219-2:2006
	17	1.600	Min u_x	**-0.1**	0.0	0.0	
	17	1.600	Max u_y	-0.1	**23.0**	0.0	
	18	0.000	Min u_y	-0.1	**0.0**	0.0	
	17	1.600	Max u_z	-0.1	12.2	**0.0**	
	17	1.600	Min u_z	-0.1	0.0	**-3.1**	
13	15	0.000	Max u_x	**0.0**	0.0	0.0	2 - RO 244.5x8 ; EN 10219-2:2006
	14	1.600	Min u_x	**-0.1**	14.3	-2.1	
	14	1.600	Max u_y	-0.1	**26.5**	-0.1	
	15	0.000	Min u_y	0.0	**0.0**	0.0	
	15	0.000	Max u_z	0.0	0.0	**0.0**	
	14	1.600	Min u_z	-0.1	14.3	**-3.3**	
14	25	0.000	Max u_x	**0.0**	1.1	0.0	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
		0.115	Min u_x	**-12.8**	0.0	-0.1	
	24	0.230	Max u_y	-6.7	**1.1**	0.5	
	25	0.000	Min u_y	-12.8	**0.0**	-1.0	
	24	0.230	Max u_z	-12.8	0.0	**0.9**	
	25	0.000	Min u_z	-12.8	0.0	**-1.0**	

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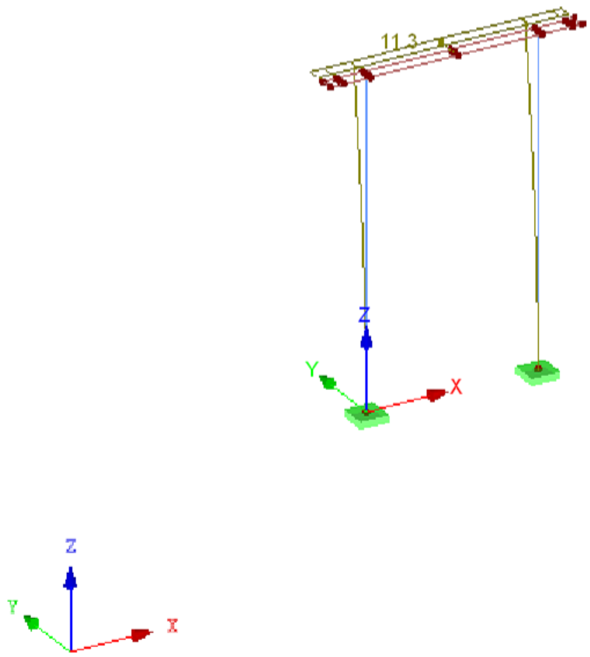
...obal Deformations uY

LC7 : Laidu isilginis tempimas
Global Deformations u-Y [mm]



Factor of deformations: 36.00
Max u-Y: 11.3, Min u-Y: 0.0 mm

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	54	236	0

1.5 Effective Lengths - Members

Member	Buckling	Buckling About Axis y			Buckling About Axis z			Lateral-Torsional Buckling				
No.	Possible	Possible	$k_{cr,y}$	$L_{cr,y}$ [m]	Possible	$k_{cr,z}$	$L_{cr,z}$ [m]	Possible	k_z	k_w	L_w [m]	L_T [m]
1	x	x	1.00	5.700	x	1.00	5.700	-	1.0	1.0	5.700	5.700
2	x	x	1.00	5.700	x	1.00	5.700	-	1.0	1.0	5.700	5.700
3	x	x	1.00	4.400	x	1.00	4.400	x	1.0	1.0	4.400	4.400
4	x	x	1.00	4.400	x	1.00	4.400	x	1.0	1.0	4.400	4.400
5	x	x	1.00	0.230	x	1.00	0.230	x	1.0	1.0	0.230	0.230
6	x	x	1.00	0.230	x	1.00	0.230	x	1.0	1.0	0.230	0.230
7	x	x	1.00	0.230	x	1.00	0.230	-	1.0	1.0	0.230	0.230
8	x	x	1.00	0.230	x	1.00	0.230	x	1.0	1.0	0.230	0.230
9	x	x	1.00	0.230	x	1.00	0.230	x	1.0	1.0	0.230	0.230

1.12 Parameters - Members

Member No.	Description	Parameter
1	Cross-Section	1 - QRO 250x10 | EN 10219-2:2006
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
2	Cross-Section	1 - QRO 250x10 | EN 10219-2:2006
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
3	Cross-Section	3 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
4	Cross-Section	3 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
5	Cross-Section	3 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
6	Cross-Section	3 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
7	Cross-Section	3 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
8	Cross-Section	3 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
9	Cross-Section	3 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-

Design by cross-sections

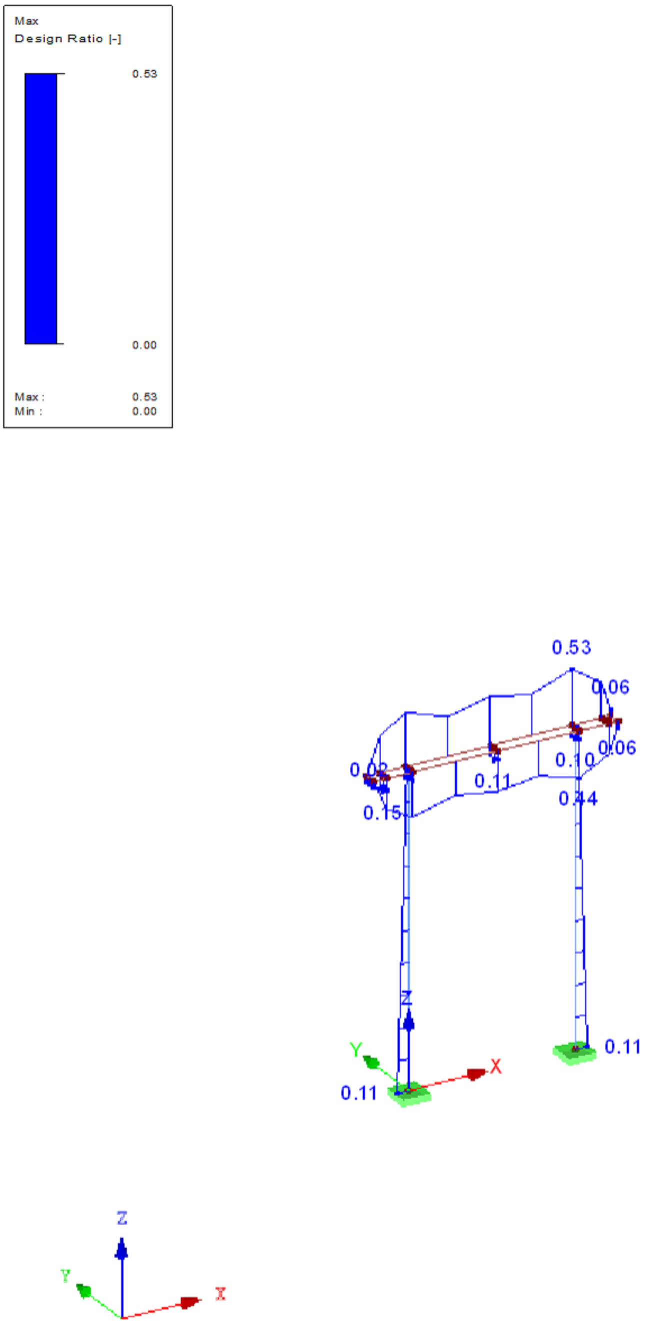
Section No.	Member No.	Location x [m]	Load-ing	Design Ratio		Design According to Formula
1	QRO 250x10 | EN 10219-2:2006					
	1	0.000	CO37	0.00	≤ 1	CS100) Negligible internal forces
	2	0.000	CO19	0.00	≤ 1	CS102) Cross-section check - Compression acc. to 6.2.4
	1	5.700	LC4	0.01	≤ 1	CS111) Cross-section check - Bending about y-axis acc. to 6.2.5 - Class 1 or 2
	2	0.000	LC7	0.07	≤ 1	CS116) Cross-section check - Bending about z-axis acc. to 6.2.5 - Class 1 or 2
	2	0.000	CO33	0.01	≤ 1	CS123) Cross-section check - Shear force in y-axis acc. to 6.2.6
	1	5.700	LC4	0.01	≤ 1	CS141) Cross-section check - Bending and shear force acc. to 6.2.5 and 6.2.8
	2	0.000	LC7	0.07	≤ 1	CS151) Cross-section check - Bending about z-axis and shear force acc. to 6.2.5 and 6.2.8
	1	2.850	CO32	0.01	≤ 1	CS161) Cross-section check - Biaxial bending and shear force acc. to 6.2.6, 6.2.7 and 6.2.9
	1	5.700	CO8	0.01	≤ 1	CS181) Cross-section check - Bending, shear and axial force acc. to 6.2.9.1
	2	0.000	CO14	0.11	≤ 1	CS201) Cross-section check - Bending about z-axis, shear and axial force acc. to 6.2.9.1
	2	0.000	CO13	0.02	≤ 1	CS221) Cross-section check - Biaxial bending, shear and axial force acc. to 6.2.10 and 6.2.9
3	UPN 180 | ArcelorMittal (EN 10365:2017)					
	3	4.166	CO39	0.00	≤ 1	CS100) Negligible internal forces
	4	0.166	CO33	0.00	≤ 1	CS101) Cross-section check - Tension acc. to 6.2.3
	3	0.700	CO33	0.00	≤ 1	CS102) Cross-section check - Compression acc. to 6.2.4
	7	0.115	CO57	0.05	≤ 1	CS111) Cross-section check - Bending about y-axis acc. to 6.2.5 - Class 1 or 2
	6	0.000	CO33	0.01	≤ 1	CS116) Cross-section check - Bending about z-axis acc. to 6.2.5 - Class 1 or 2
	9	0.115	CO14	0.10	≤ 1	CS121) Cross-section check - Shear force in z-axis acc. to 6.2.6
	6	0.000	CO33	0.01	≤ 1	CS123) Cross-section check - Shear force in y-axis acc. to 6.2.6
	3	0.000	LC7	0.00	≤ 1	CS126) Cross-section check - Shear buckling acc. to 6.2.6(6)
	6	0.115	CO6	0.11	≤ 1	CS131) Cross-section check - Torsion acc. to 6.2.7
	6	0.000	CO14	0.07	≤ 1	CS132) Cross-section check - Torsion and shear force acc. to 6.2.7(9)
	6	0.230	CO33	0.01	≤ 1	CS137) Cross-section check - Torsion and shear force acc. to 6.2.7(9)
	7	0.115	CO57	0.05	≤ 1	CS141) Cross-section check - Bending and shear force acc. to 6.2.5 and 6.2.8
	6	0.115	CO14	0.04	≤ 1	CS146) Cross-section check - Bending, shear force and torsion acc. to 6.2.5 to 6.2.8
	6	0.000	CO33	0.01	≤ 1	CS151) Cross-section check - Bending about z-axis and shear force acc. to 6.2.5 and 6.2.8
	6	0.000	CO14	0.01	≤ 1	CS156) Cross-section check - Bending about z-axis, shear force and torsion acc. to 6.2.5 to 6.2.8
	3	0.700	CO14	0.21	≤ 1	CS161) Cross-section check - Biaxial bending and shear force acc. to 6.2.6, 6.2.7 and 6.2.9
	4	3.700	CO32	0.14	≤ 1	CS166) Cross-section check - Biaxial bending, shear force and torsion acc. to 6.2.5 to 6.2.8
	7	0.000	CO13	0.01	≤ 1	CS201) Cross-section check - Bending about z-axis, shear and axial force acc. to 6.2.9.1
	3	0.700	CO56	0.16	≤ 1	CS221) Cross-section check - Biaxial bending, shear and axial force acc. to 6.2.10 and 6.2.9
	3	0.700	CO14	0.21	≤ 1	CS226) Cross-section check - Biaxial bending, shear, torsion and axial force acc. to 6.2.10 and 6.2.9
	3	0.700	CO14	0.26	≤ 1	CS271) Cross-section check - Axial stress and torsion - Elastic design
	3	0.700	CO14	0.53	≤ 1	ST333) Stability analysis - Lateral torsional buckling acc. to 6.3.2.1 and 6.3.2.2 - General Section

sign Ratio

RF-STEEL EC3 CA1

Isom

Ultimate Limit State: Cross-Section Design, Stability Design, Weld Design, Pressure Design, Plastic Design

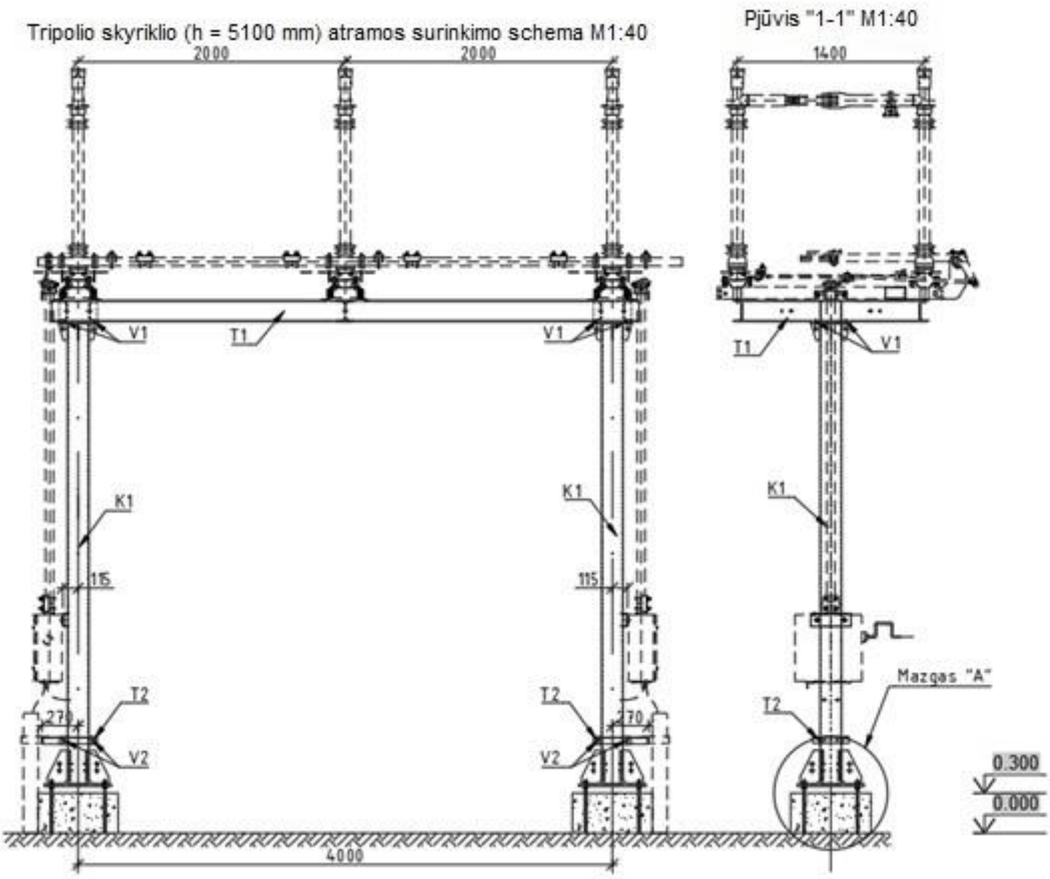


Max Design Ratio: 0.53

Išvados:

- Viršįtampių ribotuvo kolonos ribinis poslinkis lygus 58 mm, traversos – 15 mm. Pagal atliktus skaičiavimus kolonos poslinkis y kryptimi lygus 12,7 mm, traversos poslinkis z kryptimi – 1,2 mm. Gauti rezultatai neviršija ribinio poslinkio reikšmės.
- Viršįtempių ribotuvo atramos labiausiai pagal skerspjūvį išnaudojamas elemento profilis – UPN 180. Nustatytos reikšmės neviršija ribinių 0,53 $\leq$ 1.

2.2. Tripolis skyriklis (h = 5100 mm)



Pav. 6 Tripolio skyriklio atrama

Tripolio skyriklio atramą sudaro:

- Dvi vamzdinio profilio kolonos rėmo plokštumoje standžiai sujungtos su pamatu per inkarinius varžtus;
- Sudvejinta traversa iš UPN profilių, kuri tarpusavyje sujungta standžiai IPE ar UPN tipo profiliais.
- Traversa su kolona jungiama varžtais – standžiai.
- Laikančiųjų konstrukcijų plienas S275J2.

Lentelė 23. Atviros skirstomosios įrangos konstrukcijų ribiniai poslinkiai ir įlinkiai

Konstrukcijos apibudinimas ir nuokrypio kryptis	Atramų santykinės nuokrypos	Santykiniai traversų įlinkiai (tarpatramio -1 arba gembės ilgiui -2)			
		Vertikalieji		Horizontalieji	
		Tarpatramyj e	Gembėje	Tarpatramyje	Gembėje
Atviros skirstomosios įrangos atramos išilgai laidų	1/100 5,1/100=0,051m	1/200 4/200=0,02	1/70 0,50/70=0,01 0	1/200 4/200=0,02	1/70 0,5/70=0,010
Atviros skirstomosios įrangos atramos skersai laidų	1/70 5,1/70=0,073m	n/a	n/a	n/a	n/a
Pastabos: 1. Kai yra avariniai ir montažiniai režimai, atviros skirstomosios įrangos atramų ir oro linijų traversų atramų nuokrypiai nenormuojami. 2. Nuokrypiai ir įlinkiai, turi būti sumažinti, jei įrangos eksploatacijos techninės sąlygos numato griežtesnius apribojimus.					

Tripolio skyriklio atramą veikiančios nuolatinės ir kintamos apkrovos pateiktos žemiau esančioje lentelėje.

Lentelė 24. Tripolį skyriklį veikiančios apkrovos

Įrenginio apkrovų pasiskirstymas					
Eil. Nr.	Apkrovos pavadinimas	F, kN	q, kN/m	Jėgos veikimo kryptis	Pastaba
1.	**Nuolatinės apkrovos**				
1.1.	Konstrukcijos savasis svoris	BEM	-	↓	γ=78,50 kN/m^3
1.2.	Technologiniai įrenginiai	0,75	-	↓	-
1.3.	Laidų svoris	0,21	-	↓	-
2.	**Kintamos apkrovos**				
2.1.	*Vėjas x-x kryptimi*				
2.1.1.	Į koloną	-	0,092	→	X-X
2.1.2.	Į traversą	-	0,074	→	X-X
2.1.3.	Į technologinius įrenginius	-	0,12	→	X-X
2.1.4.	Nuo laidų	0,15	-	-	X-X
2.2.	*Vėjas y-y kryptimi*				
2.2.1.	Į koloną	-	0,092	→	Y-Y
2.2.2.	Į traversą	-	0,074	→	Y-Y
2.2.3.	Į technologinius įrenginius	-	0,12	→	Y-Y
2.2.4.	Nuo laidų	-	-	→	Vėjo kryptis išilgai laidų
2.3.	*Apšalas*				
2.3.1.	Nuo įrenginio	0,142		↓	Z-Z
2.3.2.	Nuo laidų	0,05		↓	Z-Z
2.4.	*Laidų išilginis tempimas*	1,5		→	X-X

Lentelė 25. Apkrovų eksplikacija

Apkrovos nr.	**Apkrovos žymuo**	**Apkrovos pavadinimas**
1	LC1	Savasis svoris
2	LC2	Įrenginių svoris
3	LC3	Laidų svoris
4	LC4	Vėjas X-X
5	LC5	Vėjas Y-Y
6	LC6	Apšalas
7	LC7	Laidų išilginis tempimas

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. Exp. α [1/°C]	Partial Factor γ_M [-]	Material Model
2	Steel S 275 J2 | BDS EN 10025-2:2004-11						
	21000.00	8076.92	0.300	78.50	1.20E-05	1.00	Isotropic Linear Elastic

1.7 Nodal Supports

Support No.	Nodes No.	Axis System	Column in Z	Support Conditions u_X	u_Y	u_Z	φ_X	φ_Y	φ_Z
1	1,2	Global X,Y,Z	-	x	x	x	x	x	x

1.13 Cross-Sections

Section No.	Matl. No.	J [cm^4] / A [cm^2]	I_y [cm^4] / A_y [cm^2]	I_z [cm^4] / A_z [cm^2]	Principal Axes α [°]	Rotation α' [°]	Overall Dimensions [mm] Width b	Height h
1	QRO 250x6 | EN 10219-2:2006							
	2	8843.00	5672.00	5672.00	0.00	0.00	250.0	250.0
		57.60	24.56	24.56				
2	UPN 180 | ArcelorMittal (EN 10365:2017)							
	2	9.55	1350.00	114.00	0.00	0.00	70.0	180.0
		28.00	7.14	12.38				
3	HE A 180 | Euronorm 53-62							

1.13 Cross-Sections

Section No.	Matl. No.	J [cm⁴] / A [cm²]	I_y [cm⁴] / A_y [cm²]	I_z [cm⁴] / A_z [cm²]	Principal Axes α [°]	Rotation α' [°]	Overall Dimensions [mm] Width b	Height h
	2	14.90	2510.00	925.00	0.00	0.00	180.0	171.0
		45.30	28.48	8.89				
4	RO 610x10 | EN 10219-2:2006							
	2	169700.00	84850.00	84850.00	0.00	0.00	610.0	610.0
		188.00	93.91	93.91				
5	QRO 220x5 | EN 10219-2:2006							
	2	5038.00	3238.00	3238.00	0.00	0.00	220.0	220.0
		42.40	18.03	18.03				
6	RO 219.1x6 | EN 10219-2:2006							
	2	4564.00	2282.00	2282.00	0.00	0.00	219.1	219.1
		40.20	20.02	20.02				

1.17 Members

Mbr. No.	Line No.	Member	Rotation Type	β [°]	Cross-Section Start	End	Hinge No. Start	End	Ecc. No.	Div. No.	Length L [m]	
3	3	Beam	Angle	180.00	2	2	-	-	-	-	4.470	X
4	4	Beam	Angle	0.00	2	2	-	-	-	-	4.470	X
5	5	Beam	Angle	0.00	3	3	-	-	-	-	1.320	Y
7	9	Beam	Angle	0.00	3	3	-	-	-	-	1.320	Y
8	8	Beam	Angle	0.00	3	3	-	-	-	-	1.320	Y
12	1	Beam	Angle	0.00	5	5	-	-	-	-	5.020	Z
13	2	Beam	Angle	0.00	5	5	-	-	-	-	5.020	Z
20	14	Beam	Angle	0.00	6	6	-	-	-	-	1.650	Z
21	17	Beam	Angle	0.00	6	6	-	-	-	-	1.650	Z
22	13	Beam	Angle	0.00	6	6	-	-	-	-	1.650	Z
23	16	Beam	Angle	0.00	6	6	-	-	-	-	1.650	Z
24	12	Beam	Angle	0.00	6	6	-	-	-	-	1.650	Z
25	15	Beam	Angle	0.00	6	6	-	-	-	-	1.650	Z
26	18	Beam	Angle	0.00	3	3	-	-	-	-	1.320	Y
27	19	Beam	Angle	0.00	3	3	-	-	-	-	1.320	Y
28	6	Beam	Angle	270.00	2	2	-	-	-	-	1.320	Y
29	7	Beam	Angle	270.00	2	2	-	-	-	-	1.320	Y
30	10	Beam	Angle	270.00	2	2	-	-	-	-	1.320	Y

2.1 Load Cases

Load Case	Load Case Description	EN 1990 | LST Action Category	Active	Self-Weight - Factor in Direction X	Y	Z
LC1	Savasis svoris	Permanent	x	0.000	0.000	-1.000
LC2	Irenginiu svoris	Permanent	-			
LC3	Laidu svoris	Permanent	-			
LC4	Vejas X-X	Wind	-			
LC5	Vejas Y-Y	Wind	-			
LC6	Apsalas	Snow / ice	-			
LC7	Laidu isilginis tempimas	Temperature (non fire)	-			

2.1.1 Load Cases - Calculation Parameters

Load Case	Load Case Description	Calculation Parameters			
LC1	Savasis svoris	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC2	Irenginiu svoris	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC3	Laidu svoris	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)

.1.1 Load Cases - Calculation Parameters

Load Case	Load Case Description	Calculation Parameters			
LC4	Vejas X-X	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC5	Vejas Y-Y	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC6	Apsalas	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC7	Laidu isilginis tempimas	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)

2.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
CO1	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
CO2	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X
CO3	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y
CO4	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X
			5	0.91	LC6	Apsalas
CO5	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y
			5	0.91	LC6	Apsalas
CO6	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X
			5	0.91	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO7	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y
			5	0.91	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO8	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X
			5	0.78	LC7	Laidu isilginis tempimas
CO9	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.78*LC7	1	1.35	LC1	Savasis svoris

.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor		Load Case
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y
			5	0.78	LC7	Laidu isilginis tempimas
CO10	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC6	Apsalas
CO11	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X
			5	1.30	LC6	Apsalas
CO12	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y
			5	1.30	LC6	Apsalas
CO13	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X
			5	1.30	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO14	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y
			5	1.30	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO15	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC6	Apsalas
			5	0.78	LC7	Laidu isilginis tempimas
CO16	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC7	Laidu isilginis tempimas
CO17	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X
			5	1.30	LC7	Laidu isilginis tempimas
CO18	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y
			5	1.30	LC7	Laidu isilginis tempimas
CO19	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 0.91*LC6 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X
			5	0.91	LC6	Apsalas
			6	1.30	LC7	Laidu isilginis tempimas
CO20	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 0.91*LC6 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y
			5	0.91	LC6	Apsalas
			6	1.30	LC7	Laidu isilginis tempimas
CO21	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.91*LC6 + 1.3*LC7	1	1.35	LC1	Savasis svoris

.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.91	LC6	Apsalas
			5	1.30	LC7	Laidu isilginis tempimas
CO22	S Ch	LC1 + LC2 + LC3	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
CO23	S Ch	LC1 + LC2 + LC3 + LC4	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X
CO24	S Ch	LC1 + LC2 + LC3 + LC5	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y
CO25	S Ch	LC1 + LC2 + LC3 + LC4 + 0.7*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X
			5	0.70	LC6	Apsalas
CO26	S Ch	LC1 + LC2 + LC3 + LC5 + 0.7*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y
			5	0.70	LC6	Apsalas
CO27	S Ch	LC1 + LC2 + LC3 + LC4 + 0.7*LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X
			5	0.70	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO28	S Ch	LC1 + LC2 + LC3 + LC5 + 0.7*LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y
			5	0.70	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO29	S Ch	LC1 + LC2 + LC3 + LC4 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X
			5	0.60	LC7	Laidu isilginis tempimas
CO30	S Ch	LC1 + LC2 + LC3 + LC5 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y
			5	0.60	LC7	Laidu isilginis tempimas
CO31	S Ch	LC1 + LC2 + LC3 + LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC6	Apsalas
CO32	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X
			5	1.00	LC6	Apsalas
CO33	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y
			5	1.00	LC6	Apsalas
CO34	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X

.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
			5	1.00	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO35	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y
			5	1.00	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO36	S Ch	LC1 + LC2 + LC3 + LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC6	Apsalas
			5	0.60	LC7	Laidu isilginis tempimas
CO37	S Ch	LC1 + LC2 + LC3 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC7	Laidu isilginis tempimas
CO38	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X
			5	1.00	LC7	Laidu isilginis tempimas
CO39	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y
			5	1.00	LC7	Laidu isilginis tempimas
CO40	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + 0.7*LC6 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X
			5	0.70	LC6	Apsalas
			6	1.00	LC7	Laidu isilginis tempimas
CO41	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + 0.7*LC6 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y
			5	0.70	LC6	Apsalas
			6	1.00	LC7	Laidu isilginis tempimas
CO42	S Ch	LC1 + LC2 + LC3 + 0.7*LC6 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.70	LC6	Apsalas
			5	1.00	LC7	Laidu isilginis tempimas

2.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters			
CO1	1.35*LC1 + 1.35*LC2 + 1.35*LC3	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO2	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:

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..5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters	
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO3	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO4	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO5	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO6	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO7	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO8	1.35*LC1 + 1.35*LC2 + 1.35*LC3 +	Method of analysis	: x Second order analysis (P-Delta)

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.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
	1.3*LC4 + 0.78*LC7			
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO9	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.78*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO10	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO11	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO12	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO13	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters	
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO14	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO15	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO16	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO17	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO18	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO19	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 0.91*LC6 + 1.3*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear	: x Picard

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
		algebraic equations		
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO20	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 0.91*LC6 + 1.3*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO21	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.91*LC6 + 1.3*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO22	LC1 + LC2 + LC3	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO23	LC1 + LC2 + LC3 + LC4	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO24	LC1 + LC2 + LC3 + LC5	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)

..5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters			
CO25	LC1 + LC2 + LC3 + LC4 + 0.7*LC6	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO26	LC1 + LC2 + LC3 + LC5 + 0.7*LC6	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO27	LC1 + LC2 + LC3 + LC4 + 0.7*LC6 + 0.6*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO28	LC1 + LC2 + LC3 + LC5 + 0.7*LC6 + 0.6*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO29	LC1 + LC2 + LC3 + LC4 + 0.6*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO30	LC1 + LC2 + LC3 + LC5 + 0.6*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters	
CO31	LC1 + LC2 + LC3 + LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO32	LC1 + LC2 + LC3 + 0.6*LC4 + LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO33	LC1 + LC2 + LC3 + 0.6*LC5 + LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO34	LC1 + LC2 + LC3 + 0.6*LC4 + LC6 + 0.6*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO35	LC1 + LC2 + LC3 + 0.6*LC5 + LC6 + 0.6*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO36	LC1 + LC2 + LC3 + LC6 + 0.6*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
CO37	LC1 + LC2 + LC3 + LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO38	LC1 + LC2 + LC3 + 0.6*LC4 + LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO39	LC1 + LC2 + LC3 + 0.6*LC5 + LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO40	LC1 + LC2 + LC3 + 0.6*LC4 + 0.7*LC6 + LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO41	LC1 + LC2 + LC3 + 0.6*LC5 + 0.7*LC6 + LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO42	LC1 + LC2 + LC3 + 0.7*LC6 + LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_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 to CO21
RC2	SLS - Characteristic	CO22/p or to CO42

Z
renginiu svoris

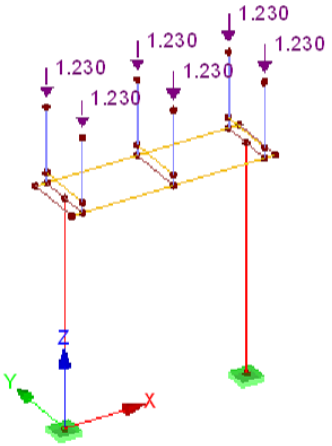
3.1 Nodal Loads - By Components - Coordinate System

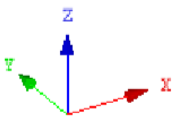
	On Nodes	Coordinate	Force [kN]			Moment [kNm]		
No.	No.	System	P_X / P_U	P_Y / P_V	P_Z / P_W	M_X / M_U	M_Y / M_V	M_Z / M_W
1	24,25,27,29,30,32	0 | Global XYZ	0.000	0.000	-1.230	0.000	0.000	0.000

LC2: Irenginiu svoris

LC2 : Irenginiu svoris
Loads [kN]

Isometric



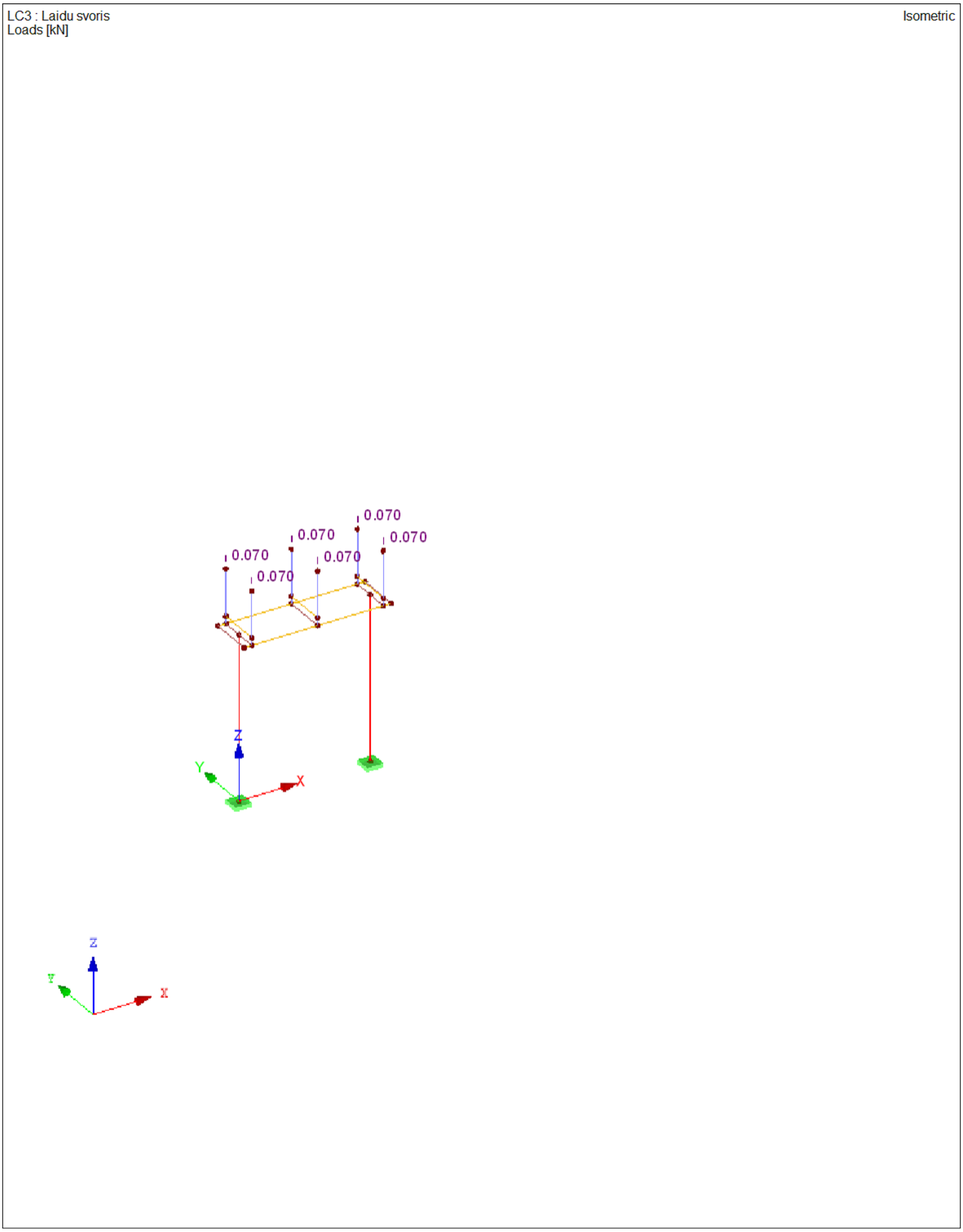


ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	73	236	0

3.1 Nodal Loads - By Components - Coordinate System

No.	On Nodes No.	Coordinate System	Force [kN] P_X / P_U	P_Y / P_V	P_Z / P_W	Moment [kNm] M_X / M_U	M_Y / M_V	M_Z / M_W
1	24,25,27,29,30,32	0 | Global XYZ	0.000	0.000	-0.070	0.000	0.000	0.000

LC3: Laidu svoris



ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	74	236	0

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LC4
Vejas X-X

3.2 Member Loads

LC4: Vejas X-X

No.	Reference to	On Members No.	Load Type	Load Distribution	Load Direction	Reference Length	Load Parameters Symbol	Value	Unit
1	Members	13	Force	Uniform	z	True Length	p	-0.092	kN/m
2	Members	12	Force	Uniform	z	True Length	p	-0.092	kN/m
3	Members	20-25	Force	Uniform	z	True Length	p	-0.120	kN/m
4	Members	26	Force	Uniform	y	True Length	p	0.120	kN/m

3.2/1 Member Loads - Load Eccentricity

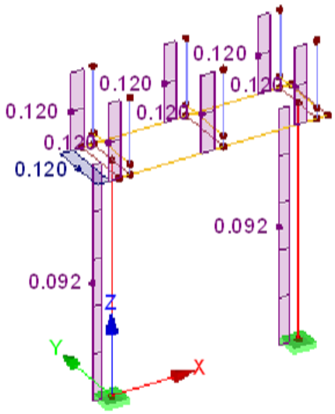
LC4: Vejas X-X

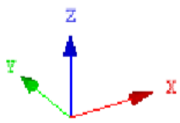
No.	Reference to	On Members No.	Absolute Offset Mbr. Start		Absolute Offset Mbr. End		Relative Offset Mbr. Start		Relative Offset Mbr. End	
			e_Y [mm]	e_Z [mm]	e_Y [mm]	e_Z [mm]	y-Axis	z-Axis	y-Axis	z-Axis
1	Members	13	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
2	Members	12	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
3	Members	20-25	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
4	Members	26	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle

LC4: Vejas X-X

LC4 : Vejas X-X
Loads [kN/m]

Isometric





ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	76	236	0

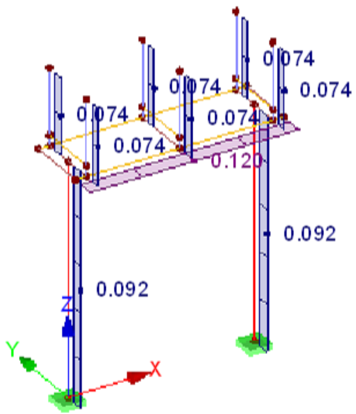
3.2 Member Loads

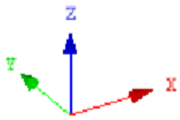
No.	Reference to	On Members No.	Load Type	Load Distribution	Load Direction	Reference Length	Load Parameters Symbol	Value	Unit
1	Members	12,13	Force	Uniform	y	True Length	p	0.092	kN/m
2	Members	4	Force	Uniform	y	True Length	p	-0.120	kN/m
3	Members	20-25	Force	Uniform	y	True Length	p	0.074	kN/m

3.2/1 Member Loads - Load Eccentricity

No.	Referenc e to	On Members No.	Absolute Offset Mbr. Start	Absolute Offset Mbr. Start	Absolute Offset Mbr. End	Absolute Offset Mbr. End	Relative Offset Mbr. Start	Relative Offset Mbr. Start	Relative Offset Mbr. End	Relative Offset Mbr. End
			e_Y [mm]	e_Z [mm]	e_Y [mm]	e_Z [mm]	y-Axis	z-Axis	y-Axis	z-Axis
1	Members	12,13	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
2	Members	4	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
3	Members	20-25	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle

LC5 : Vejas Y-Y
Loads [kN/m]



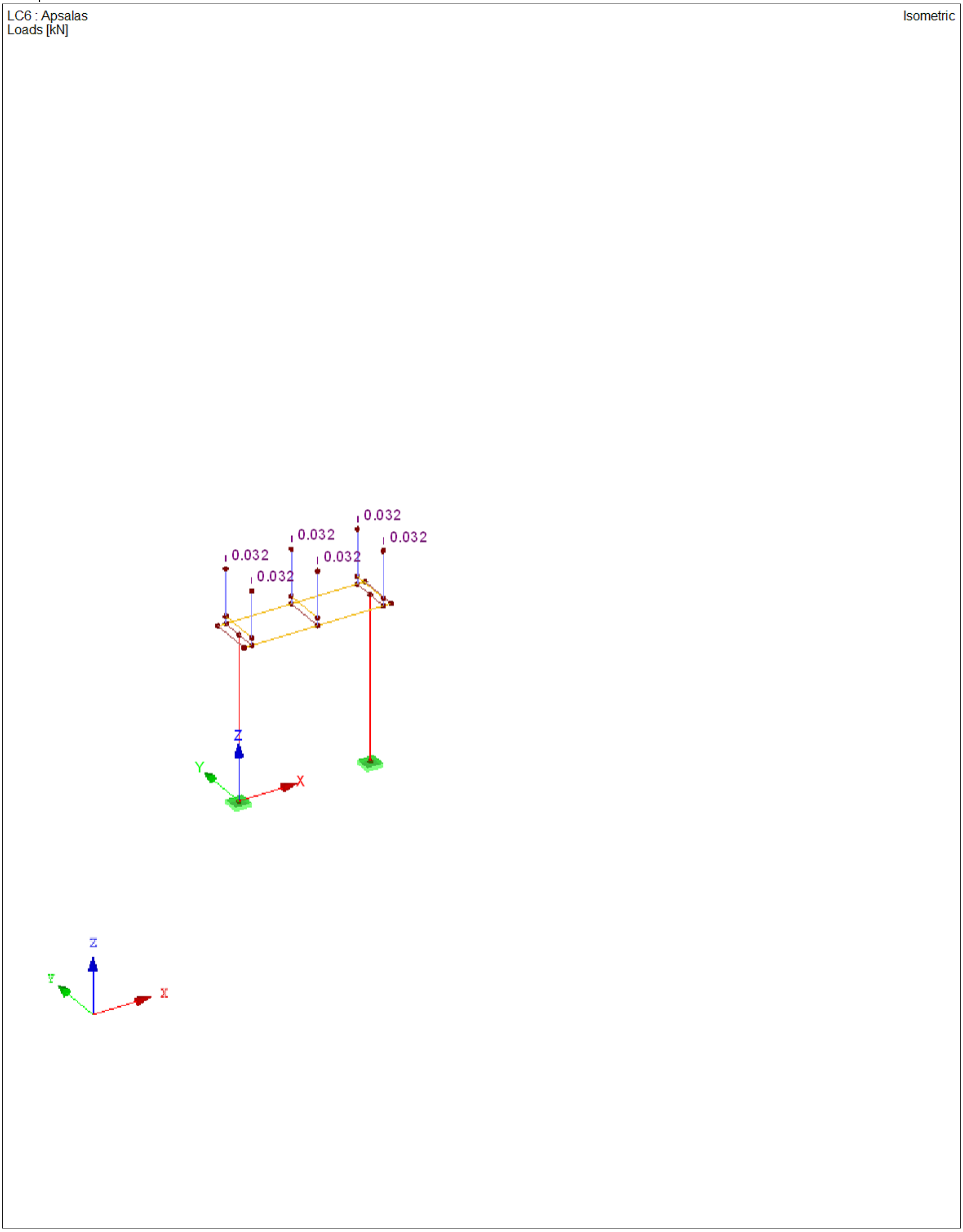


ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	78	236	0

3.1 Nodal Loads - By Components - Coordinate System

No.	On Nodes No.	Coordinate System	Force [kN] P_X / P_U	P_Y / P_V	P_Z / P_W	Moment [kNm] M_X / M_U	M_Y / M_V	M_Z / M_W
1	24,25,27,29,30,32	0 | Global XYZ	0.000	0.000	-0.032	0.000	0.000	0.000

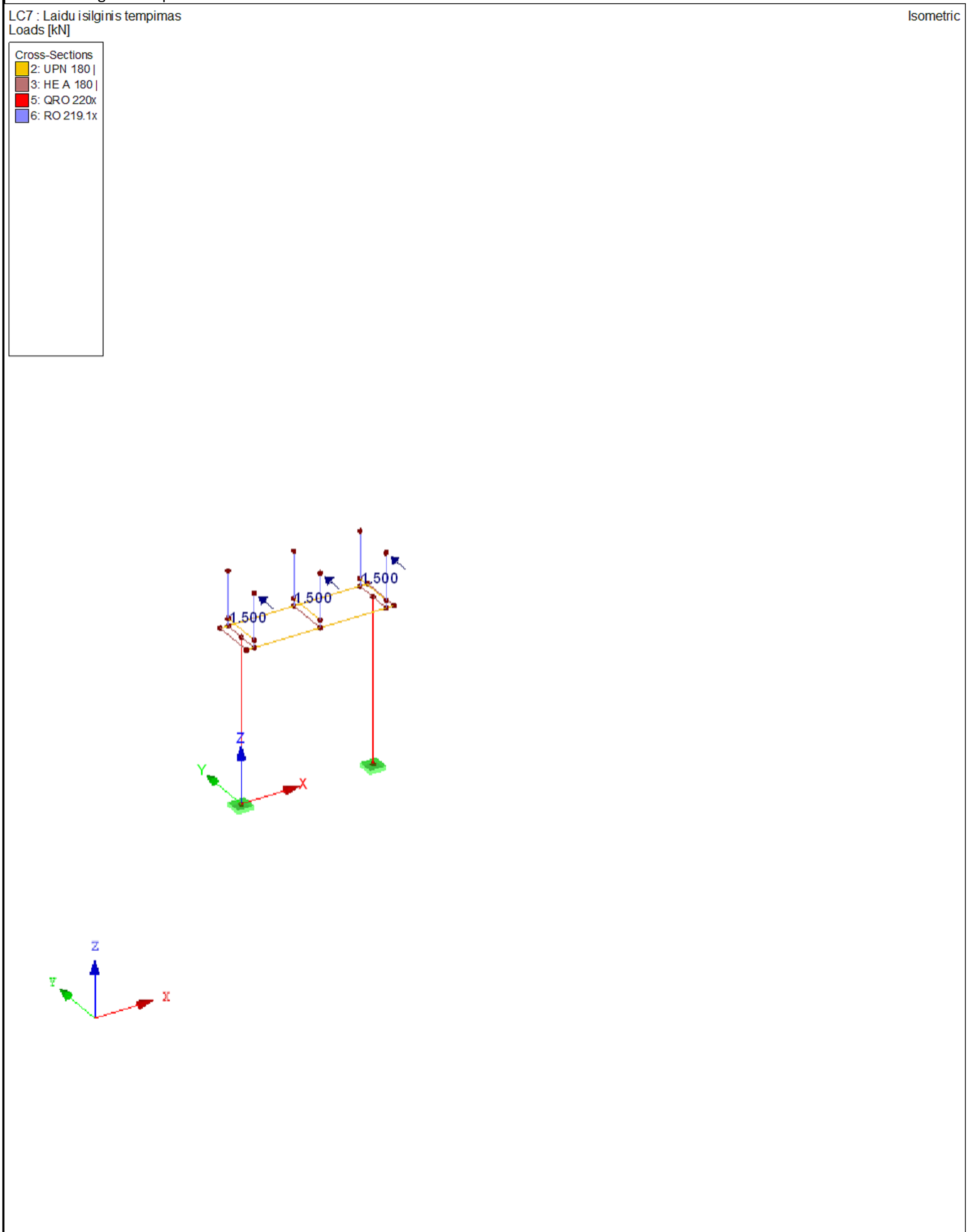
LC6: Apsalas



3.1 Nodal Loads - By Components - Coordinate System

No.	On Nodes No.	Coordinate System	Force [kN] P_X / P_U	Force [kN] P_Y / P_V	Force [kN] P_Z / P_W	Moment [kNm] M_X / M_U	Moment [kNm] M_Y / M_V	Moment [kNm] M_Z / M_W
1	29,30,32	0 | Global XYZ	0.000	1.500	0.000	0.000	0.000	0.000

LC7: Laidu isilginis tempimas



Nodes - Displacements

Member No.	Node No.	Location x [m]		Displacements [mm] u_x	u_y	u_z	Cross-Section
3		4.235	Max u_x	**0.0**	24.8	5.5	2 - UPN 180 ; ArcelorMittal (EN 10365:2017)
		0.235	Min u_x	**-5.3**	12.8	3.0	
		2.235	Max u_y	0.0	**26.0**	7.5	
		3.735	Min u_y	-5.3	**0.0**	0.6	
		2.235	Max u_z	0.0	26.0	**7.5**	
	4	4.470	Min u_z	-5.3	0.0	**-0.1**	
4		0.235	Max u_x	**0.0**	-24.8	5.3	2 - UPN 180 ; ArcelorMittal (EN 10365:2017)
	6	4.470	Min u_x	**-5.3**	-12.8	2.9	
		1.235	Max u_y	-5.3	**0.0**	-1.0	
		2.235	Min u_y	0.0	**-26.0**	4.8	
	7	0.000	Max u_z	0.0	-24.8	**5.4**	
		2.235	Min u_z	-3.2	0.0	**-1.4**	
5	26	0.000	Max u_x	**0.0**	0.0	-0.1	3 - HE A 180 ; Euronorm 53-62
	31	1.320	Min u_x	**-24.8**	0.0	5.3	
	31	1.320	Max u_y	-12.8	**5.3**	2.7	
	26	0.000	Min u_y	-24.8	**0.0**	-5.5	
	31	1.320	Max u_z	-24.8	0.0	**5.3**	
	26	0.000	Min u_z	-24.8	0.0	**-5.5**	
7	16	1.320	Max u_x	**0.0**	0.0	-1.4	3 - HE A 180 ; Euronorm 53-62
	3	0.000	Min u_x	**-26.0**	0.0	-7.5	
	16	1.320	Max u_y	-13.4	**5.3**	1.9	
	3	0.000	Min u_y	0.0	**0.0**	-1.4	
	16	1.320	Max u_z	-26.0	0.0	**4.8**	
	3	0.000	Min u_z	-26.0	0.0	**-7.5**	
8	28	0.000	Max u_x	**0.0**	0.0	-0.1	3 - HE A 180 ; Euronorm 53-62
	33	1.320	Min u_x	**-24.8**	0.0	5.3	
	28	0.000	Max u_y	-12.8	**5.3**	-3.0	
		1.131	Min u_y	-21.3	**0.0**	3.3	
	33	1.320	Max u_z	-24.8	0.0	**5.3**	
	28	0.000	Min u_z	-24.8	0.0	**-5.5**	
12	1	0.000	Max u_x	**0.0**	0.0	0.0	5 - QRO 220x5 ; EN 10219-2:2006
	21	5.020	Min u_x	**-0.1**	0.0	0.0	
	21	5.020	Max u_y	-0.1	**24.8**	0.0	
	1	0.000	Min u_y	0.0	**0.0**	0.0	
		3.514	Max u_z	0.0	3.2	**0.0**	
	21	5.020	Min u_z	0.0	12.8	**-5.2**	
13	2	0.000	Max u_x	**0.0**	0.0	0.0	5 - QRO 220x5 ; EN 10219-2:2006
	22	5.020	Min u_x	**-0.1**	0.0	-5.3	
	22	5.020	Max u_y	-0.1	**24.8**	0.0	
	2	0.000	Min u_y	0.0	**0.0**	0.0	
	22	5.020	Max u_z	-0.1	21.3	**0.0**	
	22	5.020	Min u_z	-0.1	0.0	**-5.3**	
20	26	0.000	Max u_x	**-0.1**	0.0	-5.3	6 - RO 219.1x6 ; EN 10219-2:2006

	27	1.650	Min u_x	**-5.5**	38.5	-2.3	
	27	1.650	Max u_y	-5.5	**38.5**	-2.3	
	26	0.000	Min u_y	-0.1	**0.0**	0.0	
	26	0.000	Max u_z	-5.5	24.8	**0.0**	
	27	1.650	Min u_z	-3.0	20.0	**-7.3**	
21	31	0.000	Max u_x	**5.3**	24.8	0.0	6 - RO 219.1x6 ; EN 10219-2:2006
	32	1.650	Min u_x	**-0.1**	-0.1	-1.6	
	32	1.650	Max u_y	5.3	**38.9**	-0.8	
	32	1.650	Min u_y	-0.1	**-0.1**	-1.6	
	31	0.000	Max u_z	-0.1	0.0	**0.0**	
	32	1.650	Min u_z	-0.1	-0.1	**-6.9**	
22	3	0.000	Max u_x	**-1.4**	0.0	0.0	6 - RO 219.1x6 ; EN 10219-2:2006
	25	1.650	Min u_x	**-7.6**	41.5	0.0	
	25	1.650	Max u_y	-7.6	**41.5**	0.0	
	25	1.650	Min u_y	-1.4	**0.0**	0.0	
	3	0.000	Max u_z	-1.4	0.0	**0.0**	
	25	1.650	Min u_z	-1.4	0.0	**-5.3**	
23	16	0.000	Max u_x	**4.8**	26.0	0.0	6 - RO 219.1x6 ; EN 10219-2:2006
	30	1.650	Min u_x	**-1.4**	0.0	-3.2	
	30	1.650	Max u_y	4.8	**42.0**	0.0	
	16	0.000	Min u_y	-1.4	**0.0**	0.0	
	16	0.000	Max u_z	-1.4	0.0	**0.0**	
	30	1.650	Min u_z	1.9	21.9	**-5.3**	
24	28	0.000	Max u_x	**-0.1**	0.0	0.0	6 - RO 219.1x6 ; EN 10219-2:2006
	24	1.650	Min u_x	**-5.5**	38.5	2.3	
	24	1.650	Max u_y	-5.5	**38.5**	2.3	
	28	0.000	Min u_y	-0.1	**0.0**	0.0	
	24	1.650	Max u_z	-5.5	38.5	**2.3**	
	28	0.000	Min u_z	-3.0	12.8	**-5.3**	
25	33	0.000	Max u_x	**5.3**	24.8	0.0	6 - RO 219.1x6 ; EN 10219-2:2006
	29	1.650	Min u_x	**-0.1**	-0.1	-3.8	
	29	1.650	Max u_y	5.3	**38.9**	0.8	
	29	1.650	Min u_y	-0.1	**-0.1**	-3.8	
	29	1.650	Max u_z	-0.1	-0.1	**1.6**	
	33	0.000	Min u_z	-0.1	0.0	**-5.3**	
26	4	0.000	Max u_x	**0.0**	0.0	0.1	3 - HE A 180 ; Euronorm 53-62
	4	0.000	Min u_x	**-24.8**	0.0	-5.2	
		1.131	Max u_y	-12.8	**5.3**	2.1	
	4	0.000	Min u_y	-24.8	**0.0**	-5.2	
	6	1.320	Max u_z	-24.8	0.0	**5.4**	
	4	0.000	Min u_z	-24.8	0.0	**-5.2**	
27	5	0.000	Max u_x	**0.0**	5.3	0.1	3 - HE A 180 ; Euronorm 53-62
	5	0.000	Min u_x	**-24.8**	0.0	-5.2	
		0.660	Max u_y	0.0	**5.3**	0.1	
	7	1.320	Min u_y	-24.8	**0.0**	5.4	
	7	1.320	Max u_z	-24.8	0.0	**5.4**	

	5	0.000	Min u_z	-24.8	0.0	**-5.2**	
28	34	0.000	Max u_x	**28.2**	-4.8	0.0	2 - UPN 180 ; ArcelorMittal (EN 10365:2017)
	35	1.320	Min u_x	**0.0**	1.4	0.0	
	35	1.320	Max u_y	28.2	**7.5**	0.0	
	34	0.000	Min u_y	28.2	**-4.8**	0.0	
	34	0.000	Max u_z	0.0	1.4	**0.0**	
	34	0.000	Min u_z	14.6	-1.9	**-5.3**	
29	36	0.000	Max u_x	**26.7**	-5.3	0.1	2 - UPN 180 ; ArcelorMittal (EN 10365:2017)
	36	0.000	Min u_x	**0.0**	0.1	-5.1	
	37	1.320	Max u_y	26.7	**5.5**	0.3	
	36	0.000	Min u_y	26.7	**-5.3**	0.1	
	37	1.320	Max u_z	26.7	5.5	**0.3**	
	36	0.000	Min u_z	13.8	-2.7	**-5.1**	
30	38	0.000	Max u_x	**26.7**	-5.3	-0.1	2 - UPN 180 ; ArcelorMittal (EN 10365:2017)
	38	0.000	Min u_x	**0.0**	0.1	-0.2	
	39	1.320	Max u_y	26.7	**5.5**	-0.3	
	38	0.000	Min u_y	26.7	**-5.3**	-0.1	
	38	0.000	Max u_z	26.7	-5.3	**-0.1**	
	39	1.320	Min u_z	13.8	3.0	**-5.5**	

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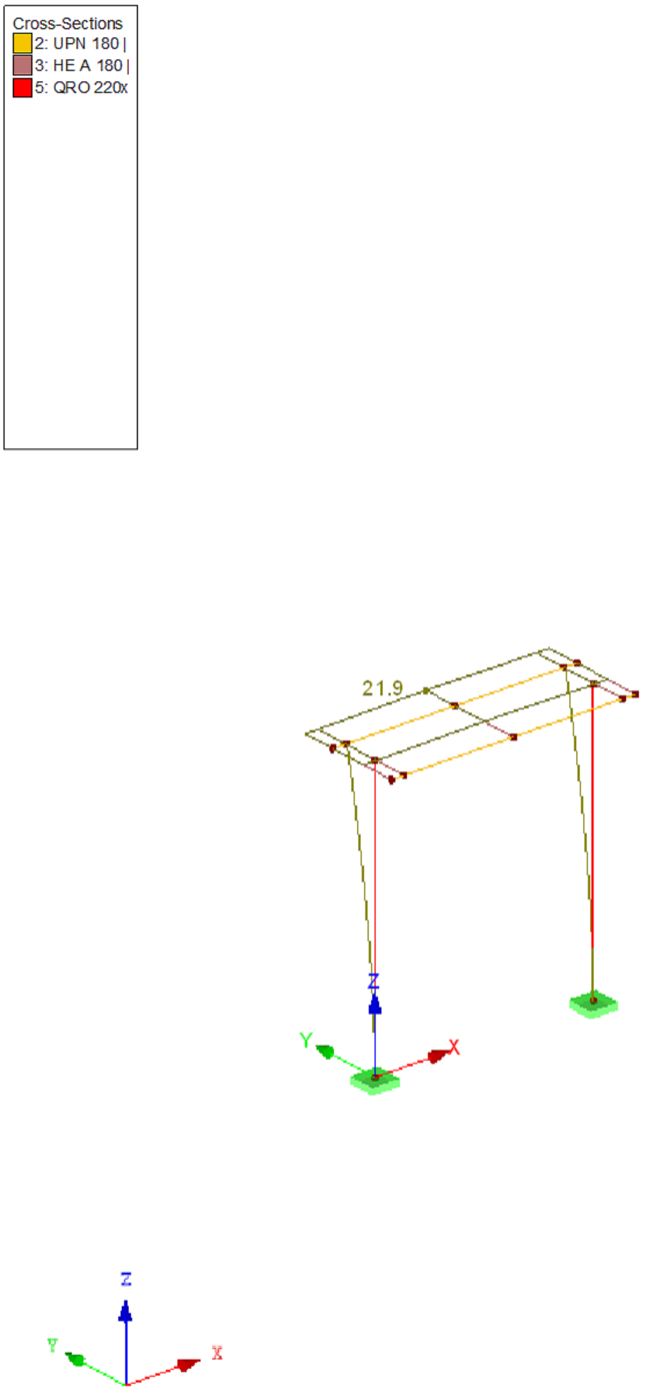
Global Deformations uY

LC7 : Laidu isilginis tempimas
Global Deformations u-Y [mm]

Isometric



Factor of deformations: 30.00
Max u-Y: 21.9, Min u-Y: 0.0 mm

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	84	236	0

.2 Nodes - Support Forces

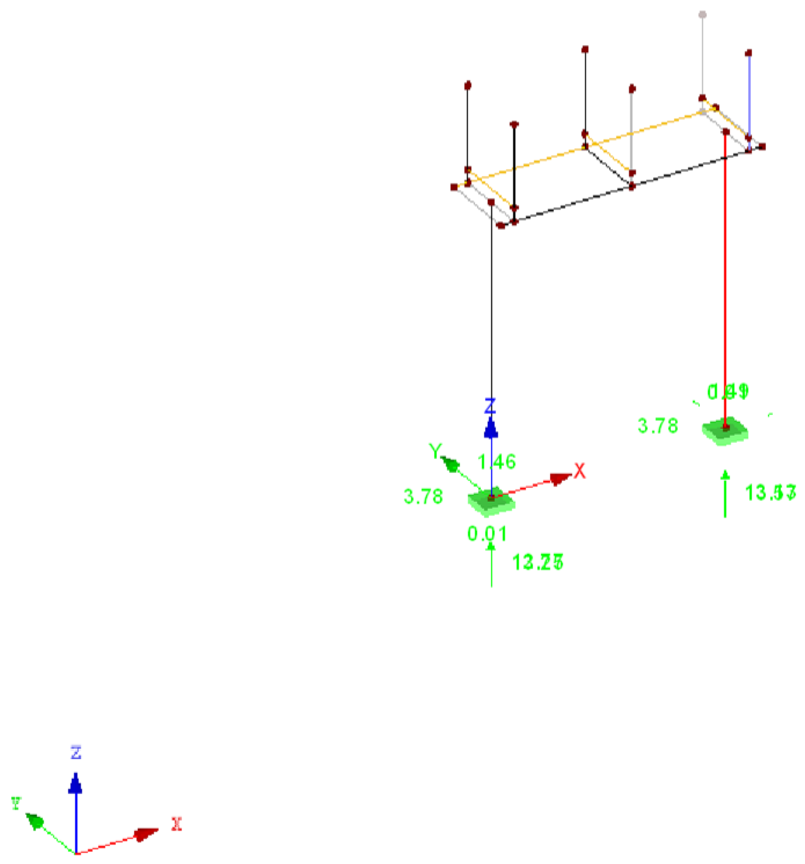
Node No.	RC		Support Forces [kN] $P_{X'}$	$P_{Y'}$	$P_{Z'}$	Support Moments [kNm] $M_{X'}$	$M_{Y'}$	$M_{Z'}$	
1	RC1	Max	1.46	3.78	-12.77	0.00	5.89	0.02	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-0.01	0.00	-13.25	-23.67	-0.02	0.00	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	1.13	2.91	-9.45	0.00	4.52	0.02	SLS - Characteristic
		Min	-0.01	0.00	-9.82	-18.10	-0.02	0.00	SLS - Characteristic
2	RC1	Max	1.49	3.78	-13.13	0.00	5.94	0.00	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	0.01	0.00	-13.57	-23.67	0.02	-0.02	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	1.14	2.91	-9.72	0.00	4.55	0.00	SLS - Characteristic
		Min	0.01	0.00	-10.06	-18.10	0.02	-0.02	SLS - Characteristic

Support Reactions

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Support Reactions[kN]
Result Combinations: Max and Min Values

Isometric

Cross-Sections
2: UPN 180 |
5: QRO 220x
6: RO 219.1x



Max P-X': 1.49, Min P-X': -0.01 kN
Max P-Y': 3.78, Min P-Y': 0.00 kN
Max P-Z': -12.77, Min P-Z': -13.57 kN

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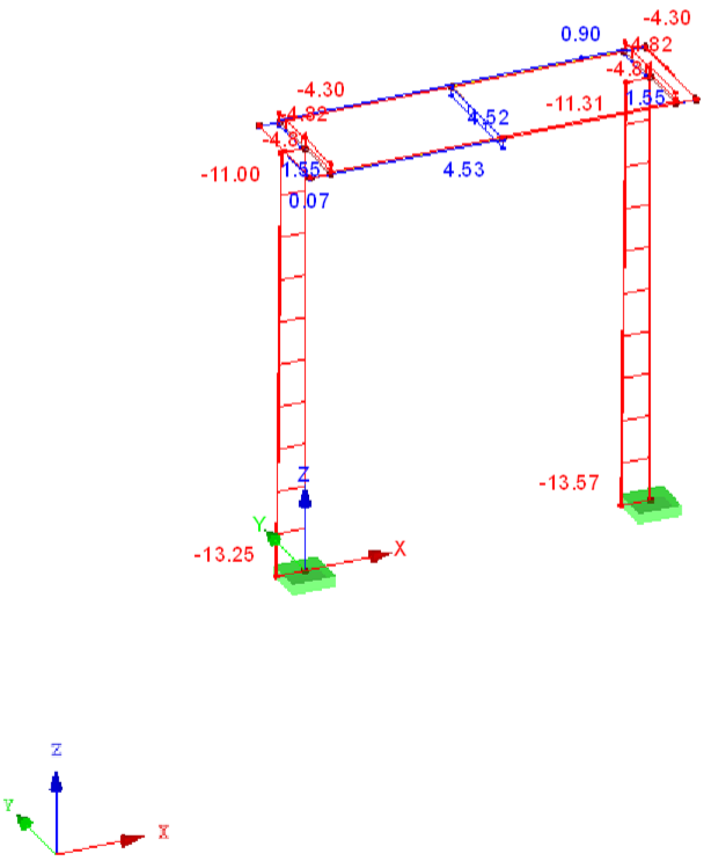
Internal forces N

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces N
Result Combinations: Max and Min Values

Isometric

Cross-Sections
2: UPN 180 |
3: HE A 180 |
5: QRO 220x

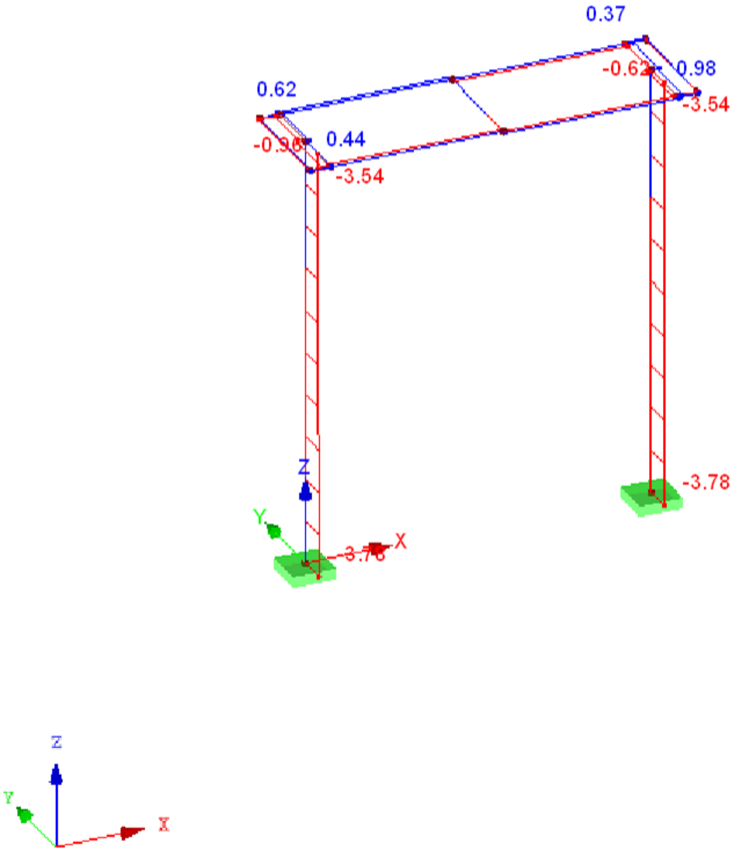


Max N: 4.53, Min N: -13.57 [kN]

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	87	236	0

Internal forces Vy

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces V-y
Result Combinations: Max and Min Values

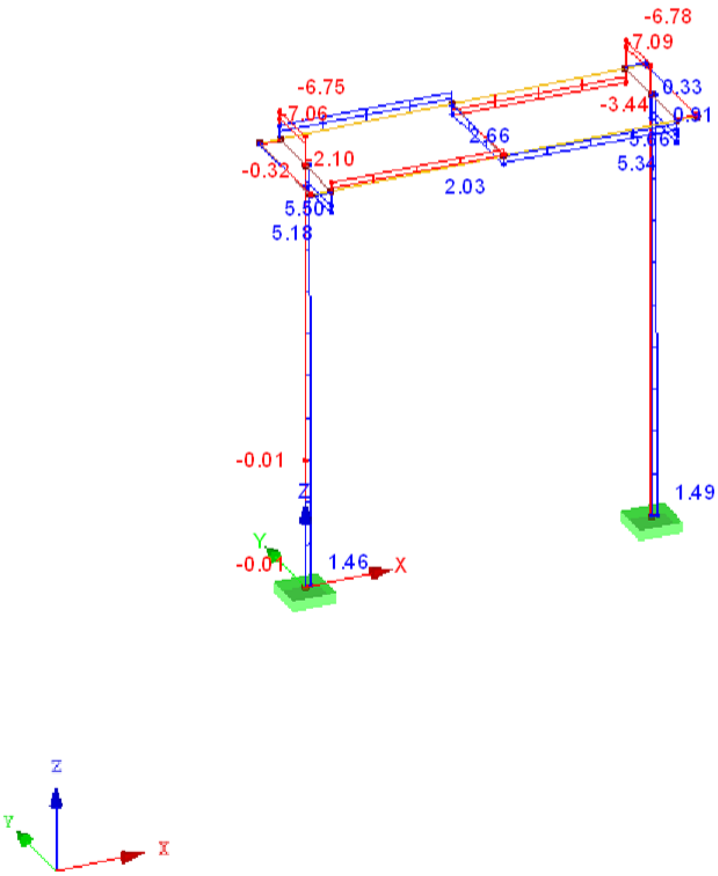


Max V-y: 0.98, Min V-y: -3.78 [kN]

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	88	236	0

...ernal forces Vz

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces V-z
Result Combinations: Max and Min Values

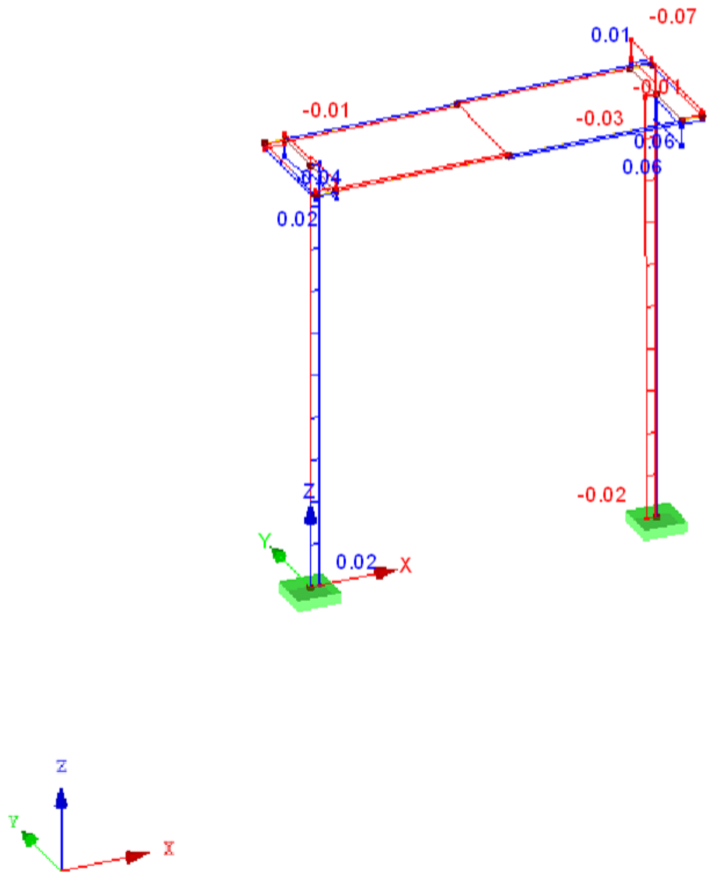


Max V-z: 5.66, Min V-z: -7.09 [kN]

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	89	236	0

ernal forces MT

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces M-T
Result Combinations: Max and Min Values

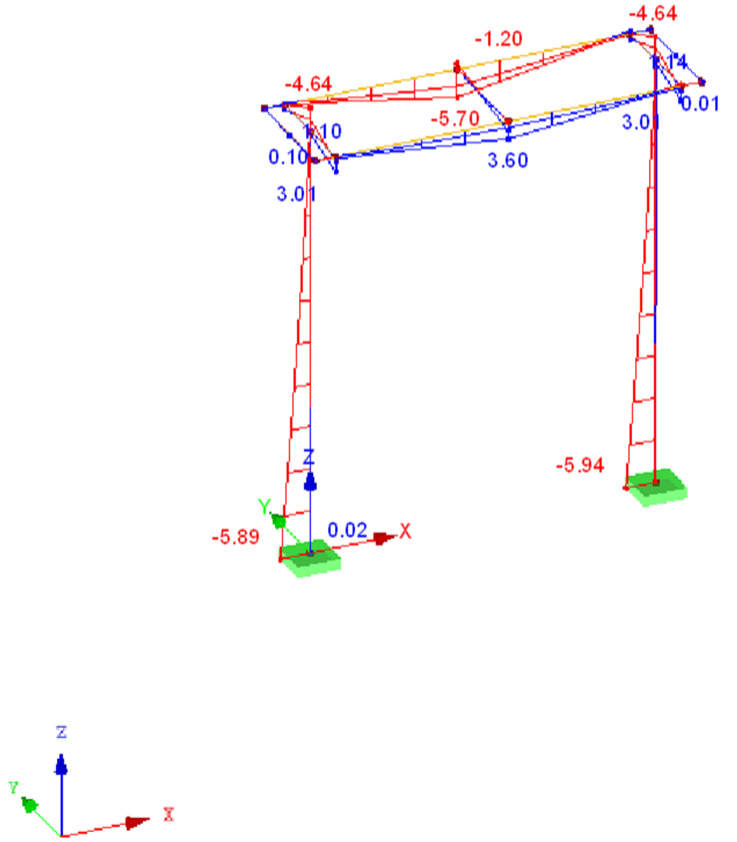


Max M-T: 0.06, Min M-T: -0.07 [kNm]

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	90	236	0

ernal forces My

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces M-y
Result Combinations: Max and Min Values

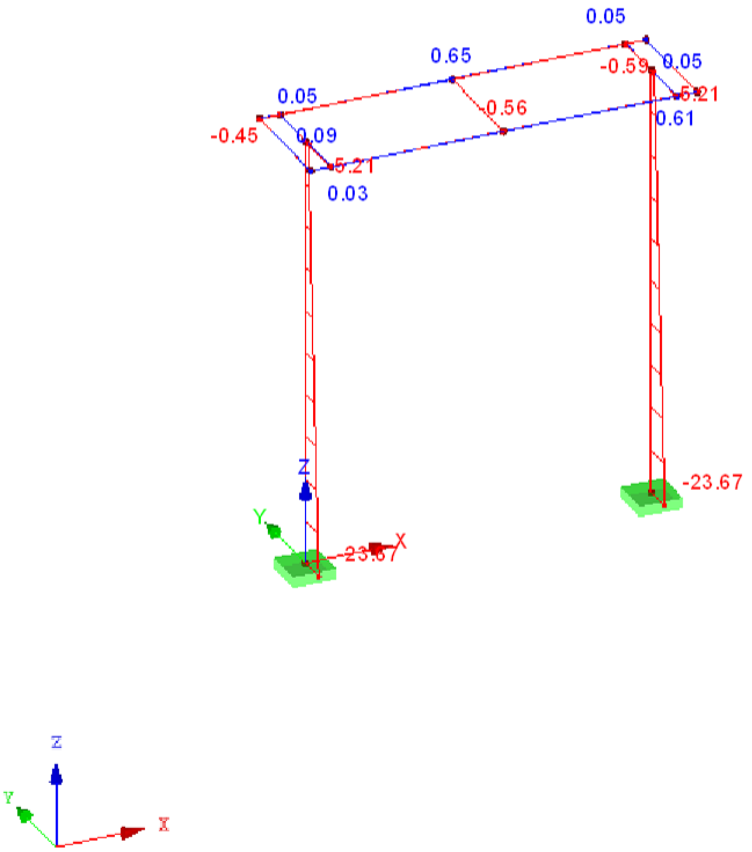


Max M-y: 3.60, Min M-y: -5.94 [kNm]

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	91	236	0

…ernal forces Mz

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces M-z
Result Combinations: Max and Min Values



Max M-z: 0.65, Min M-z: -23.67 [kNm]

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	92	236	0

1.5 Effective Lengths - Members

Member No.	Buckling Possible	Buckling About Axis y Possible	$k_{cr,y}$	$L_{cr,y}$ [m]	Buckling About Axis z Possible	$k_{cr,z}$	$L_{cr,z}$ [m]	Lateral-Torsional Buckling Possible	k_z	k_w	L_w [m]	L_T [m]
3	x	x	1.00	4.470	x	1.00	4.470	x	1.0	1.0	4.470	4.470
4	x	x	1.00	4.470	x	1.00	4.470	x	1.0	1.0	4.470	4.470
5	x	x	1.00	1.320	x	1.00	1.320	x	1.0	1.0	1.320	1.320
7	x	x	1.00	1.320	x	1.00	1.320	x	1.0	1.0	1.320	1.320
8	x	x	1.00	1.320	x	1.00	1.320	x	1.0	1.0	1.320	1.320
12	x	x	1.00	5.020	x	1.00	5.020	-	1.0	1.0	5.020	5.020
13	x	x	1.00	5.020	x	1.00	5.020	-	1.0	1.0	5.020	5.020

1.12 Parameters - Members

Member No.	Description	Parameter
3	Cross-Section	2 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
4	Cross-Section	2 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
5	Cross-Section	3 - HE A 180 | Euronorm 53-62
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
7	Cross-Section	3 - HE A 180 | Euronorm 53-62
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
8	Cross-Section	3 - HE A 180 | Euronorm 53-62
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
12	Cross-Section	5 - QRO 220x5 | EN 10219-2:2006
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
13	Cross-Section	5 - QRO 220x5 | EN 10219-2:2006
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-

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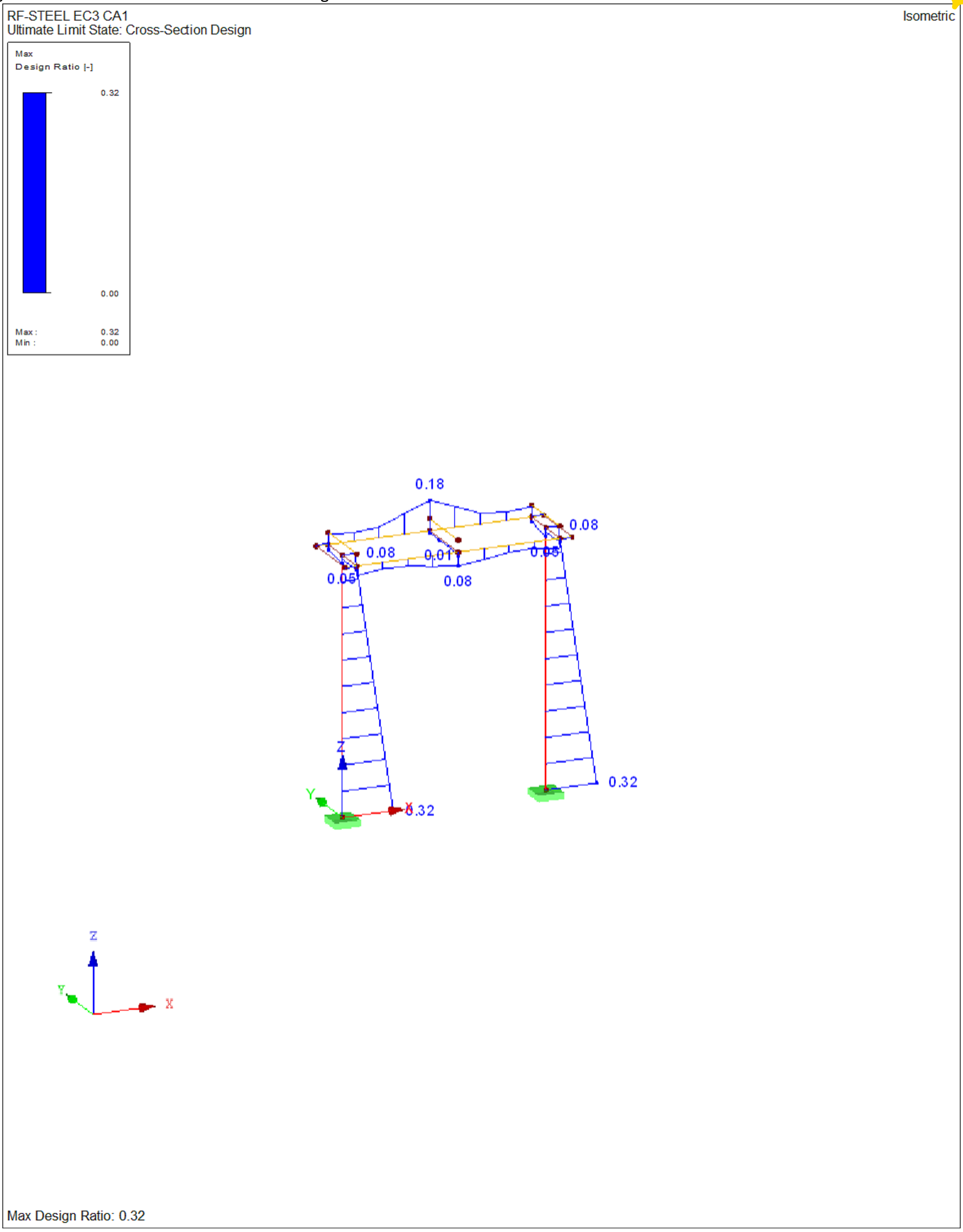
; Design by cross-sections

No.	No.	x [m]	ing	Ratio		Design According to Formula
2	UPN 180 | ArcelorMittal (EN 10365:2017)					
	3	0.235	CO26	0.00	≤ 1	CS100) Negligible internal forces
	3	2.235	CO4	0.08	≤ 1	CS111) Cross-section check - Bending about y-axis acc. to 6.2.5 - Class 1 or 2
	3	4.235	CO6	0.03	≤ 1	CS116) Cross-section check - Bending about z-axis acc. to 6.2.5 - Class 1 or 2
	3	0.235	CO19	0.01	≤ 1	CS121) Cross-section check - Shear force in z-axis acc. to 6.2.6
	4	0.235	CO20	0.00	≤ 1	CS123) Cross-section check - Shear force in y-axis acc. to 6.2.6
	3	0.235	LC1	0.00	≤ 1	CS126) Cross-section check - Shear buckling acc. to 6.2.6(6)
	3	2.235	CO4	0.08	≤ 1	CS141) Cross-section check - Bending and shear force acc. to 6.2.5 and 6.2.8
	3	4.235	CO6	0.03	≤ 1	CS151) Cross-section check - Bending about z-axis and shear force acc. to 6.2.5 and 6.2.8
	3	2.235	CO20	0.18	≤ 1	CS161) Cross-section check - Biaxial bending and shear force acc. to 6.2.6, 6.2.7 and 6.2.9
	3	2.235	CO7	0.11	≤ 1	ST332) Stability analysis - Lateral torsional buckling acc. to 6.3.2.1 and 6.3.2.2(4) - General Section
	3	2.235	CO20	0.32	≤ 1	ST333) Stability analysis - Lateral torsional buckling acc. to 6.3.2.1 and 6.3.2.2 - General Section
3	HE A 180 | Euronorm 53-62					
	5	0.660	LC5	0.00	≤ 1	CS100) Negligible internal forces
	7	1.320	CO16	0.00	≤ 1	CS101) Cross-section check - Tension acc. to 6.2.3
	5	0.660	CO5	0.00	≤ 1	CS102) Cross-section check - Compression acc. to 6.2.4
	5	0.660	CO20	0.05	≤ 1	CS111) Cross-section check - Bending about y-axis acc. to 6.2.5 - Class 1 or 2
	8	0.000	CO19	0.01	≤ 1	CS116) Cross-section check - Bending about z-axis acc. to 6.2.5 - Class 1 or 2
	8	0.660	CO19	0.03	≤ 1	CS121) Cross-section check - Shear force in z-axis acc. to 6.2.6
	5	0.000	LC1	0.00	≤ 1	CS126) Cross-section check - Shear buckling acc. to 6.2.6(6)
	5	0.660	CO20	0.05	≤ 1	CS141) Cross-section check - Bending and shear force acc. to 6.2.5 and 6.2.8
	8	0.000	CO19	0.01	≤ 1	CS151) Cross-section check - Bending about z-axis and shear force acc. to 6.2.5 and 6.2.8
	5	1.320	CO19	0.01	≤ 1	CS161) Cross-section check - Biaxial bending and shear force acc. to 6.2.6, 6.2.7 and 6.2.9
	5	0.660	CO5	0.03	≤ 1	CS181) Cross-section check - Bending, shear and axial force acc. to 6.2.9.1
	5	1.320	CO6	0.01	≤ 1	CS221) Cross-section check - Biaxial bending, shear and axial force acc. to 6.2.10 and 6.2.9
5	QRO 220x5 | EN 10219-2:2006					
	13	5.020	LC4	0.00	≤ 1	CS100) Negligible internal forces
	13	0.000	CO6	0.01	≤ 1	CS102) Cross-section check - Compression acc. to 6.2.4
	12	0.000	CO10	0.01	≤ 1	CS103) Cross-section check - Compression acc. to 6.2.4 - Class 4
	13	0.000	CO4	0.00	≤ 1	CS122) Cross-section check - Shear force in z-axis acc. to 6.2.6(4) - Class 3 or 4

	12	0.000	CO18	0.01	≤ 1	CS124) Cross-section check - Shear force in y-axis acc. to 6.2.6(4) - Class 3 [illegible]
	12	0.000	LC4	0.00	≤ 1	CS126) Cross-section check - Shear buckling acc. to 6.2.6(6)
	12	4.016	CO11	0.02	≤ 1	CS191) Cross-section check - Bending, shear and axial force acc. to 6.2.9.3 - Class 4
	13	0.000	CO4	0.09	≤ 1	CS192) Cross-section check - Bending, shear and axial force acc. to 6.2.10 and 6.2.9.3 - Class 4
	12	0.000	CO20	0.32	≤ 1	CS212) Cross-section check - Bending about z-axis, shear and axial force acc. to 6.2.10 and 6.2.9.3 - Class 4
	13	0.000	CO19	0.30	≤ 1	CS222) Cross-section check - Biaxial bending, shear and axial force acc. to 6.2.10 and 6.2.9 - Class 3
	12	4.518	CO19	0.09	≤ 1	CS232) Cross-section check - Biaxial bending, shear and axial force acc. to 6.2.10 and 6.2.9.3 - Class 4
	12	0.000	LC4	0.06	≤ 1	CS245) Cross-section check - Bending and shear force acc. to 6.2.10 and 6.2.9.3 - Class 4
	12	0.000	LC7	0.19	≤ 1	CS255) Cross-section check - Bending about z-axis and shear acc. to 6.2.10 and 6.2.9.3 - Class 4

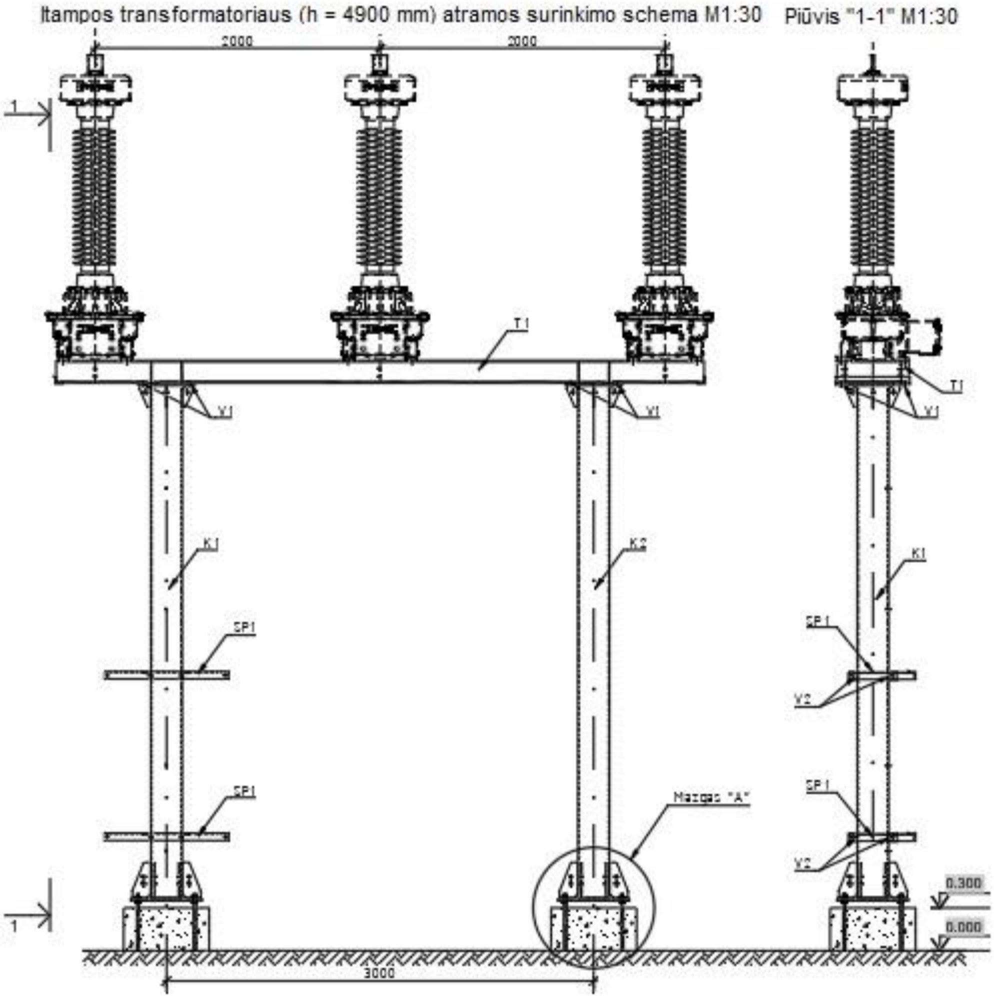
Design: Ultimate Limit State - Cross-Section Design



Išvados:

- Tripolio skyriklio kolonos ribinis poslinkis lygus 51 mm, traversos – 20 mm. Pagal atliktus skaičiavimus kolonos poslinkis y kryptimi lygus 24,8 mm, traversos poslinkis z kryptimi – 7,5 mm. Gauti rezultatai neviršija ribinio poslinkio reikšmės.
- Viršįtempių ribotuvo atramos labiausiai pagal skerspjūvį išnaudojamas elemento profilis – 220x220x5 mm kvadratinio skerspjūvio kolona. Nustatytos reikšmės neviršija ribinių 0,32 ≤ 1.

2.3. Įtampos transformatorius (h = 4900 mm)



Pav. 7 Įtampos transformatoriaus atrama

Įtampos transformatoriaus atramai priimtos:

- Dvi vamzdinio profilio kolonos rėmo plokštumoje standžiai sujungtos su pamatu per inkarinius varžtus;
- Sudvejinta traversa iš UPN profilių, kuri tarpusavyje sujungta standžiai IPE ar UPN tipo profiliais.
- Traversa su kolona jungiama varžtais – standžiai.
- Laikančiųjų konstrukcijų plienas S275J2.

Lentelė 26. Atviros skirstomosios įrangos konstrukcijų ribiniai poslinkiai ir įlinkiai

Konstrukcijos apibudinimas ir nuokrypio kryptis	Atramų santykinės nuokrypos	Santykiniai traversų įlinkiai (tarpatramio -1 arba gembės ilgiui -2)			
		Vertikalieji		Horizontalieji	
		Tarpatramyje	Gembėje	Tarpatramyje	Gembėje
Atviros skirstomosios įrangos atramos išilgai laidų	1/100 4,9/100=0,049m	1/200 3/200=0,015	1/70 0,50/70=0,010	1/200 3/200=0,015	1/70 0,5/70=0,010
Atviros skirstomosios įrangos atramos skersai laidų	1/70 4,9/70=0,07m	n/a	n/a	n/a	n/a
Pastabos: 1. Kai yra avariniai ir montažiniai režimai, atviros skirstomosios įrangos atramų ir oro linijų traversų atramų nuokrypiai nenormuojami. 2. Nuokrypiai ir įlinkiai, turi būti sumažinti, jei įrangos eksploatacijos techninės sąlygos numato griežtesnius apribojimus.					

Įtampos transformatoriaus atramą veikiančios nuolatinės ir kintamos apkrovos pate[illegible]s žemiau esančioje lentelėje.

Lentelė 27. Įtapos transformatorių veikiančios apkrovos

Įrenginio apkrovų pasiskirstymas					
Eil. Nr.	Apkrovos pavadinimas	F, kN	q, kN/m	Jėgos veikimo kryptis	Pastaba
1.	**Nuolatinės apkrovos**				
1.1.	Konstrukcijos savasis svoris	BEM	-	↓	γ=78,50 kN/m^3
1.2.	Technologiniai įrenginiai	1,50	-	↓	-
1.3.	Laidų svoris	1,62	-	↓	-
2.	**Kintamos apkrovos**				
2.1.	*Vėjas x-x kryptimi*				
2.1.1.	Į koloną	-	0,12	→	X-X
2.1.2.	Į traversą	-	0,11	→	X-X
2.1.3.	Į technologinius įrenginius	-	0,13	→	X-X
2.1.4.	Nuo laidų	0,15	-	-	X-X
2.2.	*Vėjas y-y kryptimi*				
2.2.1.	Į koloną	-	0,12	→	Y-Y
2.2.2.	Į traversą	-	0,11	→	Y-Y
2.2.3.	Į technologinius įrenginius	-	0,13	→	Y-Y
2.2.4.	Nuo laidų	-	-	→	Vėjo kryptis išilgai laidų
2.3.	*Apšalas*				
2.3.1.	Nuo įrenginio	1,01		↓	Z-Z
2.3.2.	Nuo laidų	0,043		↓	Z-Z
2.4.	*Laidų išilginis tempimas*	1,5		→	X-X

Lentelė 28. Apkrovų eksplikacija

Apkrovos nr.	Apkrovos žymuo	Apkrovos pavadinimas
1	LC1	Savasis svoris
2	LC2	Įrenginių svoris
3	LC3	Laidų svoris
4	LC4	Vėjas X-X
5	LC5	Vėjas Y-Y
6	LC6	Apšalas
7	LC7	Laidų išilginis tempimas

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. Exp. α [1/°C]	Partial Factor γ_M [-]	Material Model
1	Steel S 275 J2 | BDS EN 10025-2:2004-11						
	21000.00	8076.92	0.300	78.50	1.20E-05	1.00	Isotropic Linear Elastic

1.7 Nodal Supports

Support No.	Nodes No.	Axis System	Column in Z	Support Conditions u_X	u_Y	u_Z	φ_X	φ_Y	φ_Z
1	1,2	Global X,Y,Z	-	x	x	x	x	x	x

1.13 Cross-Sections

Section No.	Matl. No.	J [cm^4] A [cm^2]	I_y [cm^4] A_y [cm^2]	I_z [cm^4] A_z [cm^2]	Principal Axes α [°]	Rotation α' [°]	Overall Dimensions [mm] Width b	Height h
1	QRO 250x6 | EN 10219-2:2006							
	1	8843.00 57.60	5672.00 24.56	5672.00 24.56	0.00	0.00	250.0	250.0
2	RO 244.5x8 | EN 10219-2:2006							
	1	8321.00 59.40	4160.00 29.63	4160.00 29.63	0.00	0.00	244.5	244.5
3	UPN 180 | ArcelorMittal (EN 10365:2017)							

1.13 Cross-Sections

Section No.	Matl. No.	J [cm⁴] / A [cm²]	I_y [cm⁴] / A_y [cm²]	I_z [cm⁴] / A_z [cm²]	Principal Axes α [°]	Rotation α' [°]	Overall Dimensions [mm] Width b	Height h
	1	9.55	1350.00	114.00	0.00	0.00	70.0	180.0
		28.00	7.14	12.38				

1.17 Members

Mbr. No.	Line No.	Member	Rotation Type	β [°]	Cross-Section Start	End	Hinge No. Start	End	Ecc. No.	Div. No.	Length L [m]	
3	5	Beam	Angle	180.00	3	3	-	-	-	-	4.400	X
4	3	Beam	Angle	0.00	3	3	-	-	-	-	4.400	X
5	6	Beam	Angle	0.00	3	3	-	-	-	-	0.230	Y
6	14	Beam	Angle	0.00	3	3	-	-	-	-	0.230	Y
7	9	Beam	Angle	0.00	3	3	-	-	-	-	0.230	Y
8	15	Beam	Angle	0.00	3	3	-	-	-	-	0.230	Y
9	7	Beam	Angle	0.00	3	3	-	-	-	-	0.230	Y
10	8	Beam	Angle	0.00	3	3	-	-	-	-	0.230	Y
14	18	Beam	Angle	0.00	3	3	-	-	-	-	0.230	Y
15	2	Beam	Angle	0.00	1	1	-	-	-	-	4.810	Z
16	11	Beam	Angle	0.00	1	1	-	-	-	-	4.810	Z
17	4	Beam	Angle	0.00	2	2	-	-	-	-	2.050	Z
18	10	Beam	Angle	0.00	2	2	-	-	-	-	2.050	Z
19	13	Beam	Angle	0.00	2	2	-	-	-	-	2.050	Z

2.1 Load Cases

Load Case	Load Case Description	EN 1990 | LST Action Category	Self-Weight - Factor in Direction Active	X	Y	Z
LC1	Savasis svoris	Permanent	x	0.000	0.000	-1.000
LC2	Irenginiu svoris	Permanent	-			
LC3	Laidu svoris	Permanent	-			
LC4	Vejas X-X kryptimi	Wind	-			
LC5	Vejas Y-Y kryptimi	Wind	-			
LC6	Apsalas	Snow / ice	-			
LC7	Laidu isilginis tempimas	Temperature (non fire)	-			

2.1.1 Load Cases - Calculation Parameters

Load Case	Load Case Description	Calculation Parameters			
LC1	Savasis svoris	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC2	Irenginiu svoris	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC3	Laidu svoris	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC4	Vejas X-X kryptimi	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC5	Vejas Y-Y kryptimi	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson
		Activate stiffness factors of:	:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC6	Apsalas	Method of analysis	:	x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	:	x	Newton-Raphson

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.1.1 Load Cases - Calculation Parameters

Load Case	Load Case Description	Calculation Parameters		
		Activate stiffness factors of:	: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC7	Laidu isilginis tempimas	Method of analysis	: x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	: x	Newton-Raphson
		Activate stiffness factors of:	: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)

2.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
CO1	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
CO2	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
CO3	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
CO4	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
			5	0.78	LC7	Laidu isilginis tempimas
CO5	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
			5	0.78	LC7	Laidu isilginis tempimas
CO6	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
			5	0.91	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO7	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
			5	0.91	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO8	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
			5	0.91	LC6	Apsalas
CO9	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
			5	0.91	LC6	Apsalas
CO10	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC7	Laidu isilginis tempimas
CO11	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	1.30	LC7	Laidu isilginis tempimas

.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
CO12	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	1.30	LC7	Laidu isilginis tempimas
CO13	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 0.91*LC6 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	0.91	LC6	Apsalas
			6	1.30	LC7	Laidu isilginis tempimas
CO14	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 0.91*LC6 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	0.91	LC6	Apsalas
			6	1.30	LC7	Laidu isilginis tempimas
CO15	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.91*LC6 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.91	LC6	Apsalas
			5	1.30	LC7	Laidu isilginis tempimas
CO16	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC6	Apsalas
CO17	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	1.30	LC6	Apsalas
CO18	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	1.30	LC6	Apsalas
CO19	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	1.30	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO20	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	1.30	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO21	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC6	Apsalas
			5	0.78	LC7	Laidu isilginis tempimas
CO22	STR	LC1 + LC2 + LC3	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
CO23	STR	LC1 + LC2 + LC3 + 1.3*LC4	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
CO24	STR	LC1 + LC2 + LC3 + 1.3*LC5	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris

.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
			3	1.00	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
CO25	STR	LC1 + LC2 + LC3 + 1.3*LC4 + 0.78*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
			5	0.78	LC7	Laidu isilginis tempimas
CO26	STR	LC1 + LC2 + LC3 + 1.3*LC5 + 0.78*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
			5	0.78	LC7	Laidu isilginis tempimas
CO27	STR	LC1 + LC2 + LC3 + 1.3*LC4 + 0.91*LC6 + 0.78*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
			5	0.91	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO28	STR	LC1 + LC2 + LC3 + 1.3*LC5 + 0.91*LC6 + 0.78*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
			5	0.91	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO29	STR	LC1 + LC2 + LC3 + 1.3*LC4 + 0.91*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X kryptimi
			5	0.91	LC6	Apsalas
CO30	STR	LC1 + LC2 + LC3 + 1.3*LC5 + 0.91*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y kryptimi
			5	0.91	LC6	Apsalas
CO31	STR	LC1 + LC2 + LC3 + 1.3*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC7	Laidu isilginis tempimas
CO32	STR	LC1 + LC2 + LC3 + 0.78*LC4 + 1.3*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	1.30	LC7	Laidu isilginis tempimas
CO33	STR	LC1 + LC2 + LC3 + 0.78*LC5 + 1.3*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	1.30	LC7	Laidu isilginis tempimas
CO34	STR	LC1 + LC2 + LC3 + 0.78*LC4 + 0.91*LC6 + 1.3*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	0.91	LC6	Apsalas
			6	1.30	LC7	Laidu isilginis tempimas
CO35	STR	LC1 + LC2 + LC3 + 0.78*LC5 + 0.91*LC6 + 1.3*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	0.91	LC6	Apsalas
			6	1.30	LC7	Laidu isilginis tempimas
CO36	STR	LC1 + LC2 + LC3 + 0.91*LC6 + 1.3*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.91	LC6	Apsalas
			5	1.30	LC7	Laidu isilginis tempimas

.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
CO37	STR	LC1 + LC2 + LC3 + 1.3*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC6	Apsalas
CO38	STR	LC1 + LC2 + LC3 + 0.78*LC4 + 1.3*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	1.30	LC6	Apsalas
CO39	STR	LC1 + LC2 + LC3 + 0.78*LC5 + 1.3*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	1.30	LC6	Apsalas
CO40	STR	LC1 + LC2 + LC3 + 0.78*LC4 + 1.3*LC6 + 0.78*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X kryptimi
			5	1.30	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO41	STR	LC1 + LC2 + LC3 + 0.78*LC5 + 1.3*LC6 + 0.78*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y kryptimi
			5	1.30	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO42	STR	LC1 + LC2 + LC3 + 1.3*LC6 + 0.78*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.30	LC6	Apsalas
			5	0.78	LC7	Laidu isilginis tempimas
CO43	S Ch	LC1 + LC2 + LC3	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
CO44	S Ch	LC1 + LC2 + LC3 + LC4	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X kryptimi
CO45	S Ch	LC1 + LC2 + LC3 + LC5	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y kryptimi
CO46	S Ch	LC1 + LC2 + LC3 + LC4 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X kryptimi
			5	0.60	LC7	Laidu isilginis tempimas
CO47	S Ch	LC1 + LC2 + LC3 + LC5 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y kryptimi
			5	0.60	LC7	Laidu isilginis tempimas
CO48	S Ch	LC1 + LC2 + LC3 + LC4 + 0.7*LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X kryptimi
			5	0.70	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO49	S Ch	LC1 + LC2 + LC3 + LC5 + 0.7*LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y kryptimi
			5	0.70	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO50	S Ch	LC1 + LC2 + LC3 + LC4 + 0.7*LC6	1	1.00	LC1	Savasis svoris

.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor		Load Case
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X kryptimi
			5	0.70	LC6	Apsalas
CO51	S Ch	LC1 + LC2 + LC3 + LC5 + 0.7*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y kryptimi
			5	0.70	LC6	Apsalas
CO52	S Ch	LC1 + LC2 + LC3 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC7	Laidu isilginis tempimas
CO53	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X kryptimi
			5	1.00	LC7	Laidu isilginis tempimas
CO54	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y kryptimi
			5	1.00	LC7	Laidu isilginis tempimas
CO55	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + 0.7*LC6 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X kryptimi
			5	0.70	LC6	Apsalas
			6	1.00	LC7	Laidu isilginis tempimas
CO56	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + 0.7*LC6 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y kryptimi
			5	0.70	LC6	Apsalas
			6	1.00	LC7	Laidu isilginis tempimas
CO57	S Ch	LC1 + LC2 + LC3 + 0.7*LC6 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.70	LC6	Apsalas
			5	1.00	LC7	Laidu isilginis tempimas
CO58	S Ch	LC1 + LC2 + LC3 + LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC6	Apsalas
CO59	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X kryptimi
			5	1.00	LC6	Apsalas
CO60	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y kryptimi
			5	1.00	LC6	Apsalas
CO61	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X kryptimi
			5	1.00	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO62	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y kryptimi
			5	1.00	LC6	Apsalas

.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
			6	0.60	LC7	Laidu isilginis tempimas
CO63	S Ch	LC1 + LC2 + LC3 + LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC6	Apsalas
			5	0.60	LC7	Laidu isilginis tempimas

2.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters			
CO1	1.35*LC1 + 1.35*LC2 + 1.35*LC3	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO2	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO3	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO4	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.78*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO5	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.78*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T

Load Combin.	Description	Calculation Parameters		
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO6	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6 + 0.78*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO7	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6 + 0.78*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO8	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO9	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO10	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO11	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard

..5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO12	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO13	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 0.91*LC6 + 1.3*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO14	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 0.91*LC6 + 1.3*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO15	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.91*LC6 + 1.3*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO16	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO17	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO18	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO19	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO20	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO21	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO22	LC1 + LC2 + LC3	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters	
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO23	LC1 + LC2 + LC3 + 1.3*LC4	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO24	LC1 + LC2 + LC3 + 1.3*LC5	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO25	LC1 + LC2 + LC3 + 1.3*LC4 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO26	LC1 + LC2 + LC3 + 1.3*LC5 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO27	LC1 + LC2 + LC3 + 1.3*LC4 + 0.91*LC6 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO28	LC1 + LC2 + LC3 + 1.3*LC5 + 0.91*LC6 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension

..5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters	
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO29	LC1 + LC2 + LC3 + 1.3*LC4 + 0.91*LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO30	LC1 + LC2 + LC3 + 1.3*LC5 + 0.91*LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO31	LC1 + LC2 + LC3 + 1.3*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO32	LC1 + LC2 + LC3 + 0.78*LC4 + 1.3*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO33	LC1 + LC2 + LC3 + 0.78*LC5 + 1.3*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO34	LC1 + LC2 + LC3 + 0.78*LC4 + 0.91*LC6 + 1.3*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO35	LC1 + LC2 + LC3 + 0.78*LC5 + 0.91*LC6 + 1.3*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO36	LC1 + LC2 + LC3 + 0.91*LC6 + 1.3*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO37	LC1 + LC2 + LC3 + 1.3*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO38	LC1 + LC2 + LC3 + 0.78*LC4 + 1.3*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO39	LC1 + LC2 + LC3 + 0.78*LC5 + 1.3*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO40	LC1 + LC2 + LC3 + 0.78*LC4 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x	Second order analysis (P-Delta)

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO41	LC1 + LC2 + LC3 + 0.78*LC5 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO42	LC1 + LC2 + LC3 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO43	LC1 + LC2 + LC3	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO44	LC1 + LC2 + LC3 + LC4	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO45	LC1 + LC2 + LC3 + LC5	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
			x	Normal forces N
			x	Shear forces V_y and V_z
			x	Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
CO46	LC1 + LC2 + LC3 + LC4 + 0.6*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO47	LC1 + LC2 + LC3 + LC5 + 0.6*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO48	LC1 + LC2 + LC3 + LC4 + 0.7*LC6 + 0.6*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO49	LC1 + LC2 + LC3 + LC5 + 0.7*LC6 + 0.6*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO50	LC1 + LC2 + LC3 + LC4 + 0.7*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO51	LC1 + LC2 + LC3 + LC5 + 0.7*LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)

..5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters	
CO52	LC1 + LC2 + LC3 + LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO53	LC1 + LC2 + LC3 + 0.6*LC4 + LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO54	LC1 + LC2 + LC3 + 0.6*LC5 + LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO55	LC1 + LC2 + LC3 + 0.6*LC4 + 0.7*LC6 + LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO56	LC1 + LC2 + LC3 + 0.6*LC5 + 0.7*LC6 + LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO57	LC1 + LC2 + LC3 + 0.7*LC6 + LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters	
CO58	LC1 + LC2 + LC3 + LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO59	LC1 + LC2 + LC3 + 0.6*LC4 + LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO60	LC1 + LC2 + LC3 + 0.6*LC5 + LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO61	LC1 + LC2 + LC3 + 0.6*LC4 + LC6 + 0.6*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO62	LC1 + LC2 + LC3 + 0.6*LC5 + LC6 + 0.6*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO63	LC1 + LC2 + LC3 + LC6 + 0.6*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)

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2.7 Result Combinations

Result Combin	Description	Loading
RC1	ULS (STR/GEO) - Permanent / transient - Eq. 6.10	CO1/p or to CO42
RC2	SLS - Characteristic	CO43/p or to CO63

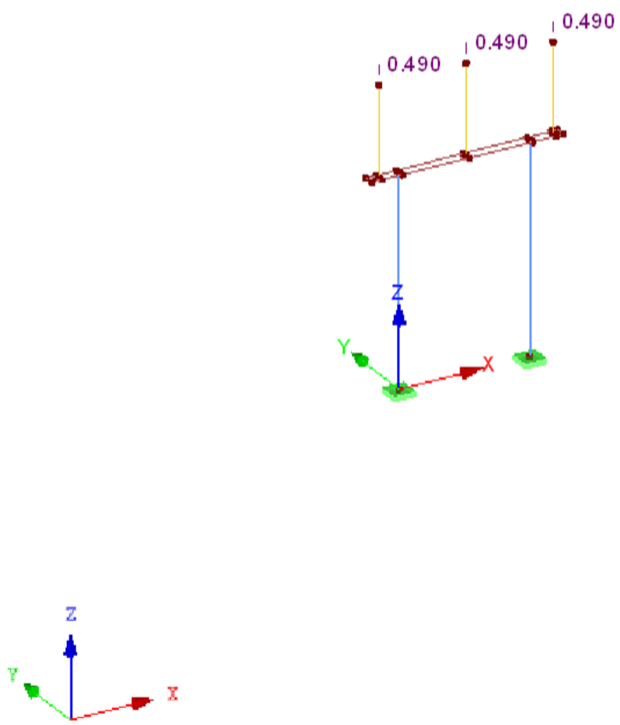
LC2
Irenginiu svoris

3.1 Nodal Loads - By Components - Coordinate System

LC2: Irenginiu svoris

No.	On Nodes No.	Coordinate System	Force [kN] P_X / P_U	P_Y / P_V	P_Z / P_W	Moment [kNm] M_X / M_U	M_Y / M_V	M_Z / M_W
1	26,28,29	0 | Global XYZ	0.000	0.000	-0.490	0.000	0.000	0.000

LC2 : Irenginiu svoris
Loads [kN]



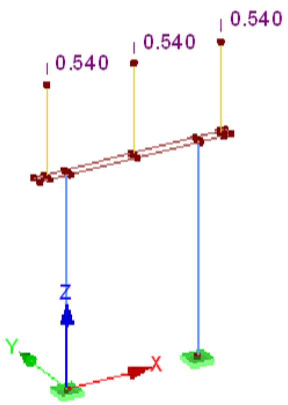
3.1 Nodal Loads - By Components - Coordinate System

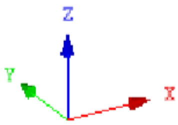
No.	On Nodes No.	Coordinate System	Force [kN] P_X / P_U	P_Y / P_V	P_Z / P_W	Moment [kNm] M_X / M_U	M_Y / M_V	M_Z / M_W
1	26,28,29	0 | Global XYZ	0.000	0.000	-0.540	0.000	0.000	0.000

LC3: Laidu svoris

…3 : Laidu svoris
…oads [kN]

…metric





LC4
Vejas X-X kryptimi

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	119	236	0

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.2 Member Loads

LC4: Vejas X-X k

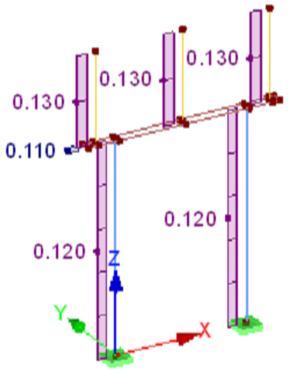
No.	Reference to	On Members No.	Load Type	Load Distribution	Load Direction	Reference Length	Load Parameters Symbol	Value	Unit
2	Members	5	Force	Uniform	y	True Length	p	0.110	kN/m
3	Members	16	Force	Uniform	z	True Length	p	-0.120	kN/m
4	Members	15	Force	Uniform	z	True Length	p	-0.120	kN/m
5	Members	17-19	Force	Uniform	z	True Length	p	-0.130	kN/m

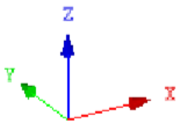
3.2/1 Member Loads - Load Eccentricity

LC4: Vejas X-X kryptimi

No.	Reference to	On Members No.	Absolute Offset Mbr. Start		Absolute Offset Mbr. End		Relative Offset Mbr. Start		Relative Offset Mbr. End	
			e_Y [mm]	e_Z [mm]	e_Y [mm]	e_Z [mm]	y-Axis	z-Axis	y-Axis	z-Axis
2	Members	5	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
3	Members	16	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
4	Members	15	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
5	Members	17-19	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle

LC4 : Vejas X-X kryptimi
Loads [kN/m]





ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	121	236	0

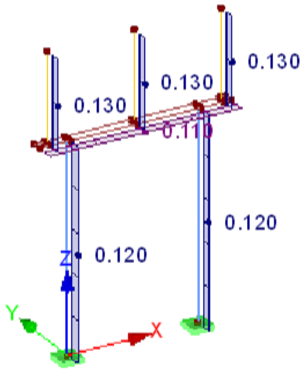
3.2 Member Loads

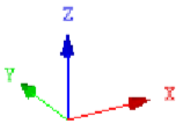
No.	Reference to	On Members No.	Load Type	Load Distribution	Load Direction	Reference Length	Load Parameters Symbol	Value	Unit
2	Members	4	Force	Uniform	y	True Length	p	-0.110	kN/m
3	Members	15,16	Force	Uniform	y	True Length	p	0.120	kN/m
4	Members	17-19	Force	Uniform	y	True Length	p	0.130	kN/m

3.2/1 Member Loads - Load Eccentricity

No.	Referenc e to	On Members No.	Absolute Offset Mbr. Start	Absolute Offset Mbr. Start	Absolute Offset Mbr. End	Absolute Offset Mbr. End	Relative Offset Mbr. Start	Relative Offset Mbr. Start	Relative Offset Mbr. End	Relative Offset Mbr. End
			e_Y [mm]	e_Z [mm]	e_Y [mm]	e_Z [mm]	y-Axis	z-Axis	y-Axis	z-Axis
2	Members	4	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
3	Members	15,16	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
4	Members	17-19	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle

LC5 : Vejas Y-Y kryptimi
Loads [kN/m]



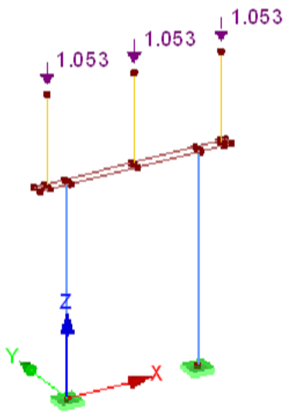


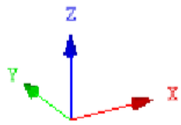
3.1 Nodal Loads - By Components - Coordinate System

No.	On Nodes No.	Coordinate System	Force [kN] P_X / P_U	P_Y / P_V	P_Z / P_W	Moment [kNm] M_X / M_U	M_Y / M_V	M_Z / M_W
1	26,28,29	0 | Global XYZ	0.000	0.000	-1.053	0.000	0.000	0.000

LC6: Apsalas

LC6 : Apsalas
Loads [kN]





LC7
Laidu isilginis tempimas

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	125	236	0

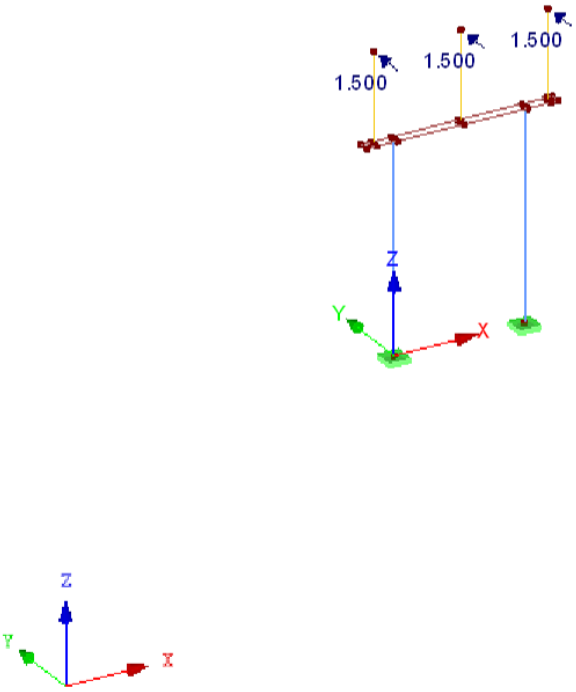
.1 Nodal Loads - By Components - Coordinate System

No.	On Nodes No.	Coordinate System	Force [kN] Px / Pu	Py / Pv	Pz / Pw	Moment [kNm] Mx / Mu	My / Mv	Mz / Mw
1	26,28,29	0 | Global XYZ	0.000	1.500	0.000	0.000	0.000	0.000

LC7: Laidu isilginis tempimas

LC7 : Laidu isilginis tempimas
Loads [kN]

Isometric

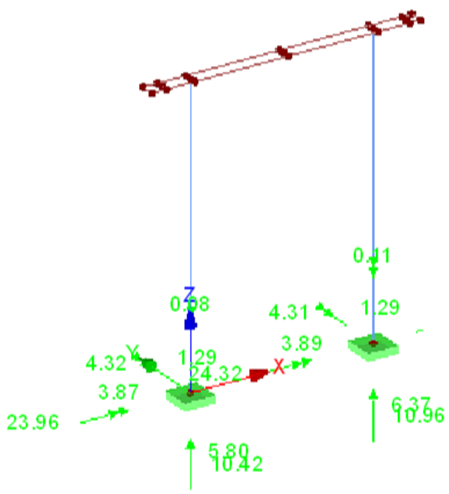


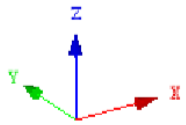
4.1 Nodes - Support Forces

Node No.	RC		Support Forces [kN] $P_{X'}$	$P_{Y'}$	$P_{Z'}$	Support Moments [kNm] $M_{X'}$	$M_{Y'}$	$M_{Z'}$	Result Combination
1	RC1	Max	1.29	3.87	-5.80	0.00	4.32	0.08	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	0.00	0.00	-10.42	-23.96	0.00	0.00	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	0.99	2.97	-5.90	0.00	3.32	0.06	SLS - Characteristic
		Min	0.00	0.00	-7.77	-18.38	0.00	0.00	SLS - Characteristic
2	RC1	Max	1.29	3.89	-6.37	0.00	4.31	0.11	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	0.00	0.00	-10.96	-24.32	0.00	0.00	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	0.99	2.99	-6.37	0.00	3.31	0.09	SLS - Characteristic
		Min	0.00	0.00	-8.18	-18.66	0.00	0.00	SLS - Characteristic

Support Reactions

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Support Reactions[kN], [kNm]
Result Combinations: Max and Min Values



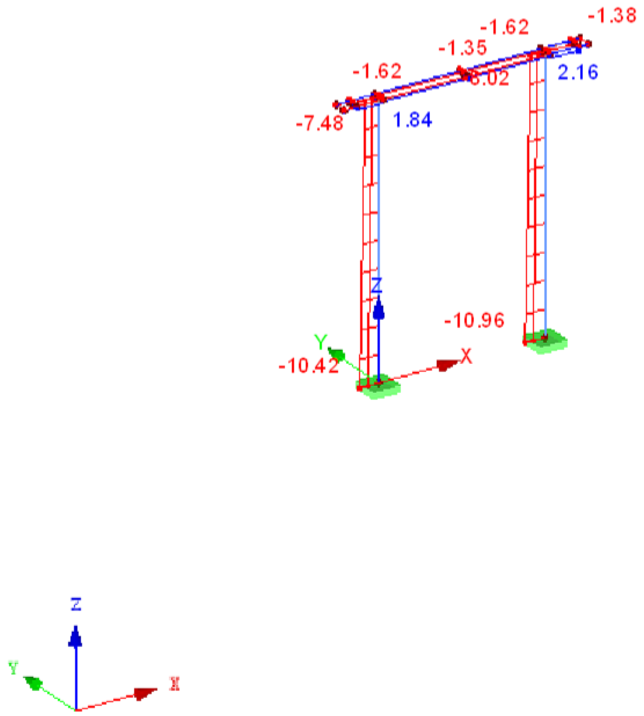


Max P-X': 1.29, Min P-X': 0.00 kN
Max P-Y': 3.89, Min P-Y': 0.00 kN
Max P-Z': -5.80, Min P-Z': -10.96 kN
Max M-X': 0.00, Min M-X': -24.32 kNm
Max M-Y': 4.32, Min M-Y': 0.00 kNm
Max M-Z': 0.11, Min M-Z': 0.00 kNm

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	128	236	0

ernal forces N

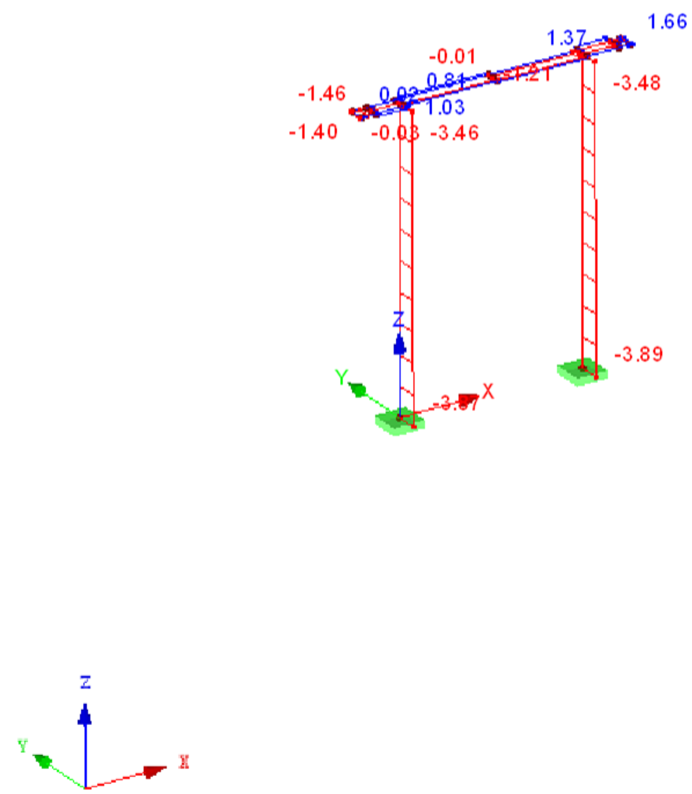
RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces N
Result Combinations: Max and Min Values



Max N: 2.16, Min N: -10.96 [kN]

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	129	236	0

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces V-y
Result Combinations: Max and Min Values

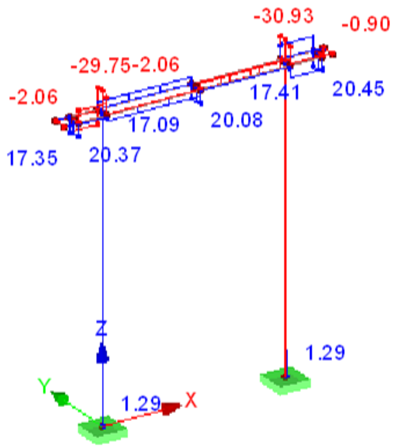


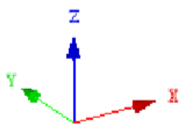
Max V-y: 1.66, Min V-y: -3.89 [kN]

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	130	236	0

ernal forces Vz

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces V-z
Result Combinations: Max and Min Values



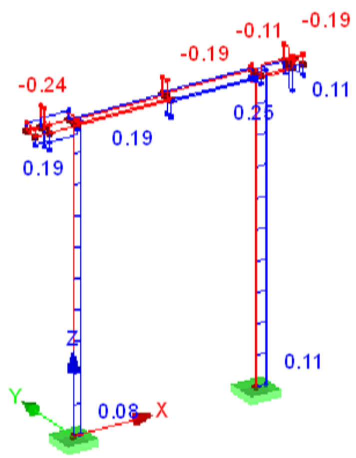


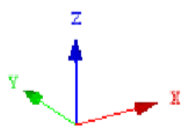
Max V-z: 20.45, Min V-z: -30.93 [kN]

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	131	236	0

ernal forces MT

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces M-T
Result Combinations: Max and Min Values



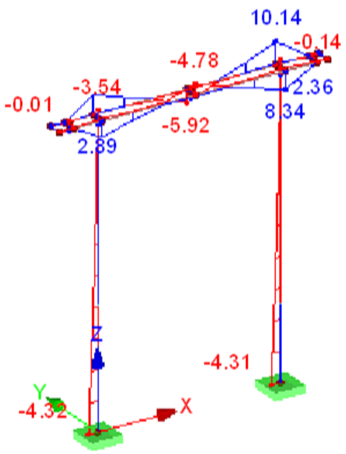


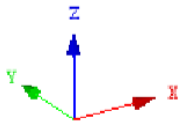
Max M-T: 0.25, Min M-T: -0.24 [kNm]

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	132	236	0

…ternal forces My

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces M-y
Result Combinations: Max and Min Values





Max M-y: 10.14, Min M-y: -5.92 [kNm]

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	133	236	0

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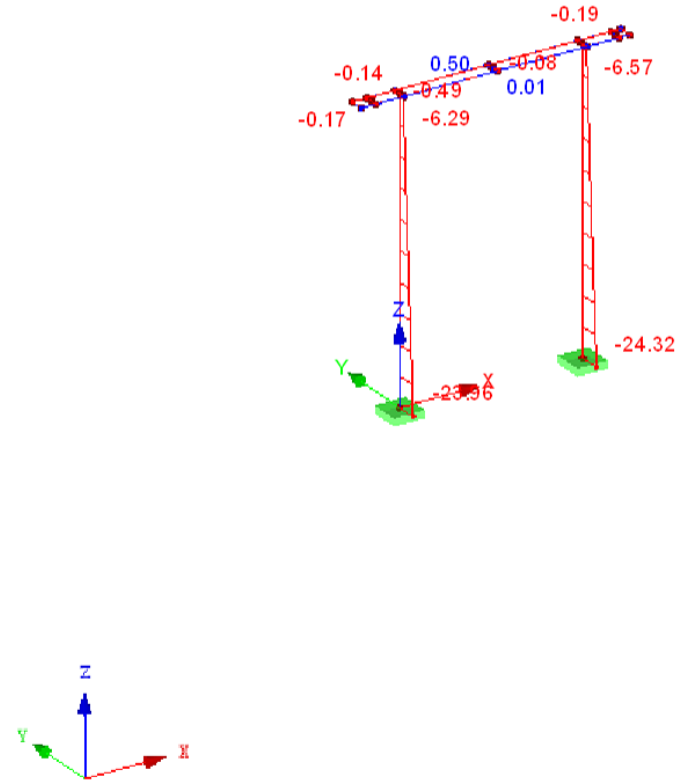
...ernal forces Mz

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces M-z
Result Combinations: Max and Min Values



Max M-z: 0.50, Min M-z: -24.32 [kNm]

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	134	236	0

Nodes -Displacements

Member No.	Node No.	Location x [m]		Displacements [mm] u_x	u_y	u_z	Cross-Section
3	9	0.000	Max u_x	**0.0**	13.7	1.5	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
		2.166	Min u_x	**-1.9**	0.0	0.1	
		2.166	Max u_y	0.0	**14.1**	1.0	
		3.189	Min u_y	-1.9	**0.0**	0.0	
	9	0.000	Max u_z	0.0	13.8	**1.6**	
		3.700	Min u_z	-1.9	0.0	**0.0**	
4		3.700	Max u_x	**0.0**	0.0	0.0	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
	7	0.000	Min u_x	**-1.9**	-7.1	0.7	
		1.189	Max u_y	-1.9	**0.0**	0.0	
		2.166	Min u_y	0.0	**-14.1**	0.8	
	7	0.000	Max u_z	0.0	-13.7	**1.4**	
	7	0.000	Min u_z	-1.2	0.0	**-0.1**	
5	8	0.000	Max u_x	**0.0**	1.9	0.0	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
	8	0.000	Min u_x	**-13.4**	0.0	-1.4	
	6	0.230	Max u_y	-6.9	**1.9**	0.7	
	8	0.000	Min u_y	-13.4	**0.0**	-1.3	
	6	0.230	Max u_z	-13.4	0.0	**1.2**	
	8	0.000	Min u_z	-13.4	0.0	**-1.4**	
6	16	0.230	Max u_x	**0.0**	1.9	-0.1	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
		0.115	Min u_x	**-13.4**	0.0	-0.1	
	16	0.230	Max u_y	-6.9	**1.9**	0.5	
	21	0.000	Min u_y	-13.4	**0.0**	-1.1	
	16	0.230	Max u_z	-13.4	0.0	**1.0**	
	21	0.000	Min u_z	-13.4	0.0	**-1.1**	
7	13	0.000	Max u_x	**0.0**	1.9	0.0	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
	12	0.230	Min u_x	**-13.4**	0.0	0.5	
	12	0.230	Max u_y	-6.9	**1.9**	0.3	
	13	0.000	Min u_y	-13.4	**0.0**	-0.6	
	12	0.230	Max u_z	-13.4	0.0	**0.5**	
	13	0.000	Min u_z	-13.4	0.0	**-0.6**	
8		0.115	Max u_x	**0.0**	1.9	-0.1	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
		0.115	Min u_x	**-14.1**	0.0	-0.1	
	22	0.230	Max u_y	-7.3	**1.9**	0.4	
	23	0.000	Min u_y	-14.0	**0.0**	-1.0	
	22	0.230	Max u_z	-14.0	0.0	**0.8**	
	23	0.000	Min u_z	-14.1	0.0	**-1.0**	
9		0.172	Max u_x	**0.0**	1.9	0.0	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
	10	0.230	Min u_x	**-13.7**	0.0	0.5	
	10	0.230	Max u_y	-7.1	**1.9**	0.3	
	11	0.000	Min u_y	-13.6	**0.0**	-0.6	
	10	0.230	Max u_z	-13.6	0.0	**0.5**	
	11	0.000	Min u_z	-13.7	0.0	**-0.6**	

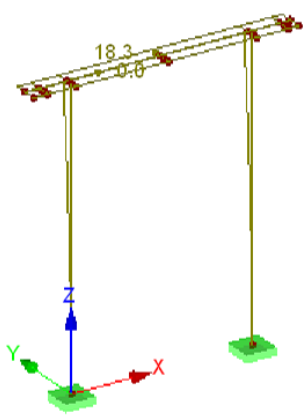
10	7	0.230	Max u_x	**0.0**	1.9	-0.1	3 - UPN 180 ; ArcelorMittal (E[illegible] 10365:2017)
		0.144	Min u_x	**-13.8**	0.0	0.3	
	7	0.230	Max u_y	-7.1	**1.9**	0.7	
	9	0.000	Min u_y	-13.7	**0.0**	-1.5	
	7	0.230	Max u_z	-13.7	0.0	**1.4**	
	9	0.000	Min u_z	-13.8	0.0	**-1.6**	
14	25	0.000	Max u_x	**0.0**	1.9	-0.1	3 - UPN 180 ; ArcelorMittal (EN 10365:2017)
		0.115	Min u_x	**-13.8**	0.0	-0.1	
	24	0.230	Max u_y	-7.1	**1.9**	0.6	
	25	0.000	Min u_y	-13.7	**0.0**	-1.3	
	24	0.230	Max u_z	-13.7	0.0	**1.2**	
	25	0.000	Min u_z	-13.8	0.0	**-1.3**	
15	1	0.000	Max u_x	**0.0**	0.0	0.0	1 - QRO 250x6 ; EN 10219-2:2006
	5	4.810	Min u_x	**0.0**	0.0	0.0	
	5	4.810	Max u_y	0.0	**13.4**	0.0	
	1	0.000	Min u_y	0.0	**0.0**	0.0	
	1	0.000	Max u_z	0.0	0.0	**0.0**	
	5	4.810	Min u_z	0.0	6.9	**-1.9**	
16	2	0.000	Max u_x	**0.0**	0.0	0.0	1 - QRO 250x6 ; EN 10219-2:2006
	17	4.810	Min u_x	**0.0**	0.0	-1.2	
	17	4.810	Max u_y	0.0	**13.7**	0.0	
	2	0.000	Min u_y	0.0	**0.0**	0.0	
		2.405	Max u_z	0.0	2.0	**0.0**	
	17	4.810	Min u_z	0.0	7.1	**-1.9**	
17	20	0.000	Max u_x	**0.0**	0.0	-1.9	2 - RO 244.5x8 ; EN 10219-2:2006
	26	2.050	Min u_x	**-0.1**	21.2	0.2	
	26	2.050	Max u_y	-0.1	**33.0**	0.2	
	20	0.000	Min u_y	0.0	**0.0**	0.0	
	26	2.050	Max u_z	-0.1	21.2	**0.2**	
	26	2.050	Min u_z	0.0	0.0	**-6.2**	
18	18	0.000	Max u_x	**-0.1**	7.3	-1.9	2 - RO 244.5x8 ; EN 10219-2:2006
	28	2.050	Min u_x	**-0.1**	0.0	0.0	
	28	2.050	Max u_y	-0.1	**30.6**	0.0	
	18	0.000	Min u_y	-0.1	**0.0**	0.0	
	28	2.050	Max u_z	-0.1	27.0	**0.0**	
	28	2.050	Min u_z	-0.1	0.0	**-6.3**	
19	15	0.000	Max u_x	**-0.1**	0.0	0.0	2 - RO 244.5x8 ; EN 10219-2:2006
	29	2.050	Min u_x	**-0.1**	19.9	-4.2	
	29	2.050	Max u_y	-0.1	**36.9**	-0.3	
	15	0.000	Min u_y	-0.1	**0.0**	0.0	
	15	0.000	Max u_z	-0.1	0.0	**0.0**	
	29	2.050	Min u_z	-0.1	19.9	**-6.7**	

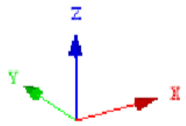
Global Deformations uY

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

Isometric

Cross-Sections
1: QRO 250x
3: UPN 180 |





Factor of deformations: 12.00
Max u-Y: 18.3, Min u-Y: 0.0 mm

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	137	236	0

1.5 Effective Lengths - Members

Member No.	Buckling Possible	Buckling About Axis y Possible	$k_{cr,y}$	$L_{cr,y}$ [m]	Buckling About Axis z Possible	$k_{cr,z}$	$L_{cr,z}$ [m]	Lateral-Torsional Buckling Possible	k_z	k_w	L_w [m]	L_T [m]
3	x	x	1.00	4.400	x	1.00	4.400	x	1.0	1.0	4.400	4.400
4	x	x	1.00	4.400	x	1.00	4.400	x	1.0	1.0	4.400	4.400
5	x	x	1.00	0.230	x	1.00	0.230	x	1.0	1.0	0.230	0.230
6	x	x	1.00	0.230	x	1.00	0.230	x	1.0	1.0	0.230	0.230
7	x	x	1.00	0.230	x	1.00	0.230	-	1.0	1.0	0.230	0.230
8	x	x	1.00	0.230	x	1.00	0.230	x	1.0	1.0	0.230	0.230
9	x	x	1.00	0.230	x	1.00	0.230	x	1.0	1.0	0.230	0.230
15	x	x	1.00	4.810	x	1.00	4.810	-	1.0	1.0	4.810	4.810
16	x	x	1.00	4.810	x	1.00	4.810	-	1.0	1.0	4.810	4.810

1.12 Parameters - Members

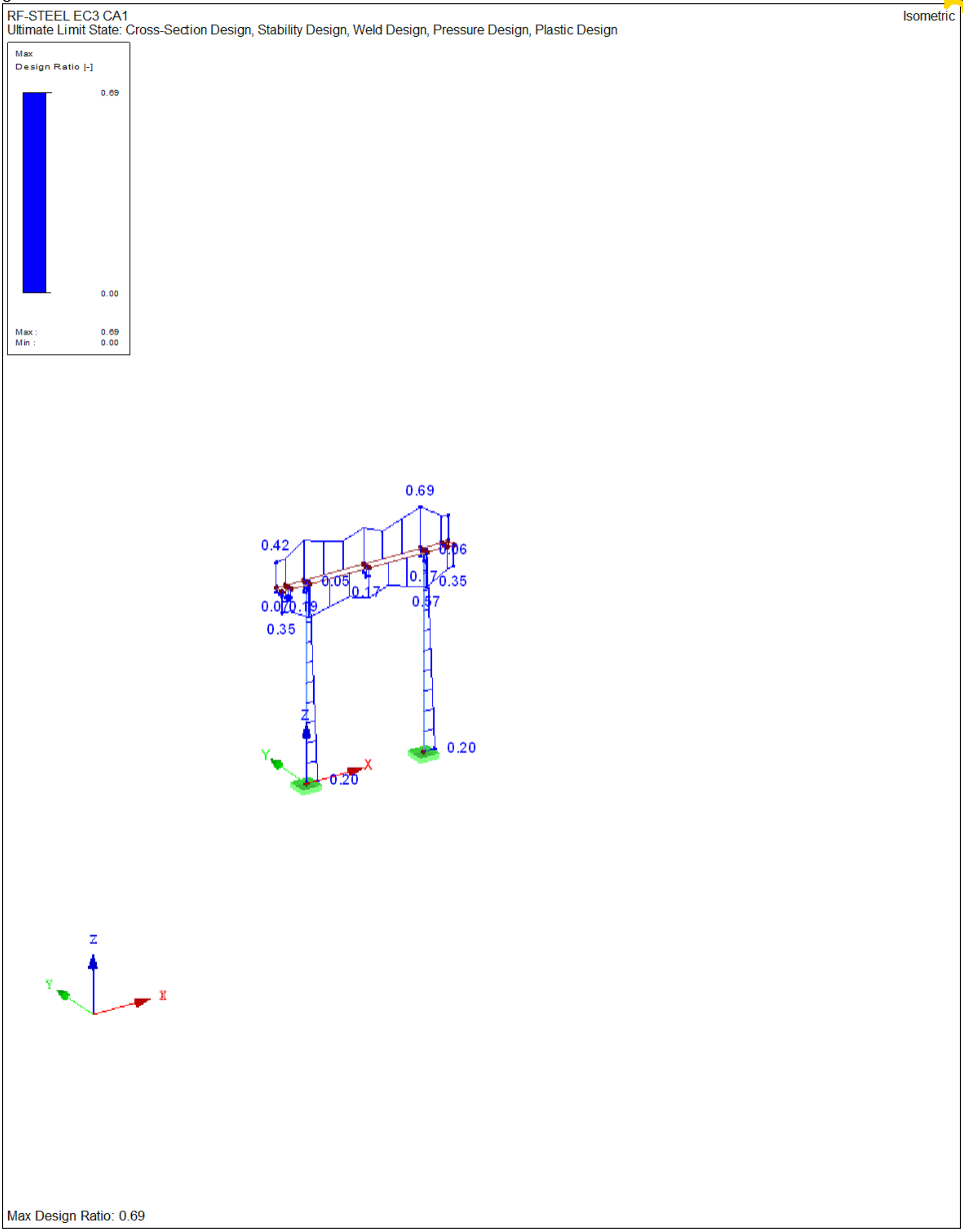
Member No.	Description	Parameter
3	Cross-Section	3 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
4	Cross-Section	3 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
5	Cross-Section	3 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
6	Cross-Section	3 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
7	Cross-Section	3 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
8	Cross-Section	3 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
9	Cross-Section	3 - UPN 180 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
15	Cross-Section	1 - QRO 250x6 | EN 10219-2:2006
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
16	Cross-Section	1 - QRO 250x6 | EN 10219-2:2006
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-

Design by cross-sections

Section No.	Member No.	Location x [m]	Load-ing	Design Ratio		Design According to Formula
1	QRO 250x6 | EN 10219-2:2006					
	16	3.848	LC1	0.00	≤ 1	CS100) Negligible internal forces
	16	0.000	CO19	0.01	≤ 1	CS102) Cross-section check - Compression acc. to 6.2.4
	15	0.000	LC4	0.03	≤ 1	CS112) Cross-section check - Bending about y-axis acc. to 6.2.5 - Class 3
	16	0.000	LC7	0.12	≤ 1	CS117) Cross-section check - Bending about z-axis acc. to 6.2.5 - Class 3
	15	0.000	CO6	0.00	≤ 1	CS122) Cross-section check - Shear force in z-axis acc. to 6.2.6(4) - Class 3 or 4
	16	4.329	CO9	0.00	≤ 1	CS123) Cross-section check - Shear force in y-axis acc. to 6.2.6
	16	0.000	CO33	0.01	≤ 1	CS124) Cross-section check - Shear force in y-axis acc. to 6.2.6(4) - Class 3 or 4
	15	0.000	LC4	0.00	≤ 1	CS126) Cross-section check - Shear buckling acc. to 6.2.6(6)
	15	0.000	LC4	0.03	≤ 1	CS142) Cross-section check - Bending and shear force acc. to 6.2.9.2 and 6.2.10 - Class 3
	16	0.000	LC7	0.12	≤ 1	CS152) Cross-section check - Bending about z-axis and shear force acc. to 6.2.9.2 and 6.2.10 - Class 3
	16	0.000	CO8	0.04	≤ 1	CS182) Cross-section check - Bending, shear and axial force acc. to 6.2.9.2 - Class 3
	16	3.367	CO18	0.01	≤ 1	CS201) Cross-section check - Bending about z-axis, shear and axial force acc. to 6.2.9.1
	16	0.000	CO14	0.20	≤ 1	CS202) Cross-section check - Bending about z-axis, shear and axial force acc. to 6.2.9.2 - Class 3
	16	0.000	CO13	0.19	≤ 1	CS222) Cross-section check - Biaxial bending, shear and axial force acc. to 6.2.10 and 6.2.9 - Class 3
3	UPN 180 | ArcelorMittal (EN 10365:2017)					
	4	1.189	CO9	0.00	≤ 1	CS100) Negligible internal forces
	4	0.166	CO33	0.00	≤ 1	CS101) Cross-section check - Tension acc. to 6.2.3
	3	0.700	CO33	0.00	≤ 1	CS102) Cross-section check - Compression acc. to 6.2.4
	7	0.115	CO55	0.06	≤ 1	CS111) Cross-section check - Bending about y-axis acc. to 6.2.5 - Class 1 or 2
	6	0.230	CO32	0.01	≤ 1	CS116) Cross-section check - Bending about z-axis acc. to 6.2.5 - Class 1 or 2
	9	0.115	CO14	0.13	≤ 1	CS121) Cross-section check - Shear force in z-axis acc. to 6.2.6
	9	0.230	CO14	0.01	≤ 1	CS123) Cross-section check - Shear force in y-axis acc. to 6.2.6
	3	0.000	LC7	0.00	≤ 1	CS126) Cross-section check - Shear buckling acc. to 6.2.6(6)
	6	0.115	CO6	0.17	≤ 1	CS131) Cross-section check - Torsion acc. to 6.2.7
	7	0.115	CO13	0.12	≤ 1	CS132) Cross-section check - Torsion and shear force acc. to 6.2.7(9)
	6	0.115	CO13	0.01	≤ 1	CS137) Cross-section check - Torsion and shear force acc. to 6.2.7(9)
	7	0.115	CO55	0.06	≤ 1	CS141) Cross-section check - Bending and shear force acc. to 6.2.5 and 6.2.8
	6	0.115	CO14	0.05	≤ 1	CS146) Cross-section check - Bending, shear force and torsion acc. to 6.2.5 to 6.2.8
	6	0.230	CO32	0.01	≤ 1	CS151) Cross-section check - Bending about z-axis and shear force acc. to 6.2.5 and 6.2.8

	6	0.000	CO33	0.01	≤ 1	CS156) Cross-section check - Bending about z-axis, shear force and torsion acc. to 6.2.5 to 6.2.8
	3	0.700	CO14	0.27	≤ 1	CS161) Cross-section check - Biaxial bending and shear force acc. to 6.2.6, 6.2.7 and 6.2.9
	3	0.700	CO55	0.19	≤ 1	CS166) Cross-section check - Biaxial bending, shear force and torsion acc. to 6.2.5 to 6.2.8
	7	0.115	CO13	0.08	≤ 1	CS186) Cross-section check - Bending, shear, torsion and axial force acc. to 6.2.9.1
	9	0.115	CO14	0.09	≤ 1	CS221) Cross-section check - Biaxial bending, shear and axial force acc. to 6.2.10 and 6.2.9
	3	0.700	CO14	0.26	≤ 1	CS226) Cross-section check - Biaxial bending, shear, torsion and axial force acc. to 6.2.10 and 6.2.9
	3	0.700	CO14	0.32	≤ 1	CS271) Cross-section check - Axial stress and torsion - Elastic design
	3	0.700	CO14	0.69	≤ 1	ST333) Stability analysis - Lateral torsional buckling acc. to 6.3.2.1 and 6.3.2.2 - General Section

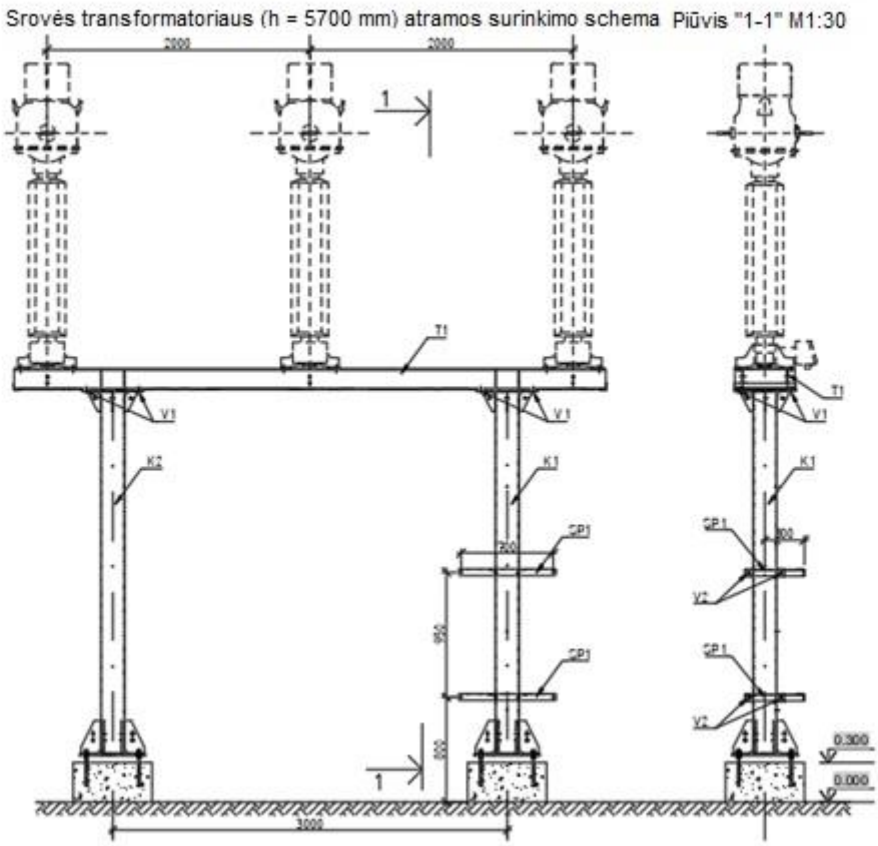
Design Ratio



Išvados:

- Įtampos transformatoriaus kolonos ribinis poslinkis lygus 49 mm, traversos – 15 mm. Pagal atliktus skaičiavimus kolonos poslinkis y kryptimi lygus 13,7 mm, traversos poslinkis z kryptimi – 1,6 mm. Gauti rezultatai neviršija ribinio poslinkio reikšmės.
- Viršįtempių ribotuvo atramos labiausiai pagal skerspjūvį išnaudojamas elemento profilis – UPN 180. Nustatytos reikšmės neviršija ribinių 0,69 ≤ 1.

2.4. Srovės transformatorius (h = 5700 mm)



Pav. 8 Srovės transformatoriaus atrama

Srovės transformatoriaus atramai priimtos:

- Dvi vamzdinio profilio kolonos rėmo plokštumoje standžiai sujungtos su pamatu per inkarinius varžtus;
- Sudvejinta traversa iš UPN profilių, kuri tarpusavyje sujungta standžiai IPE ar UPN tipo profiliais.
- Traversa su kolona jungiama varžtais – standžiai.
- Laikančiųjų konstrukcijų plienas S275J2.

Lentelė 1. Atviros skirstomosios įrangos konstrukcijų ribiniai poslinkiai ir įlinkiai

Konstrukcijos apibudinimas ir nuokrypio kryptis	Atramų santykinės nuokrypos	Santykiniai traversų įlinkiai (tarpatramio -1 arba gembės ilgiui -2)			
		Vertikalieji		Horizontalieji	
		Tarpatramyje	Gembėje	Tarpatramyje	Gembėje
Atviros skirstomosios įrangos atramos išilgai laidų	1/100 5,7/100=0,057 m	1/200 3/200=0,015	1/70 0,50/70=0,010	1/200 3/200=0,015	1/70 0,5/70=0,010
Atviros skirstomosios įrangos atramos skersai laidų	1/70 5,7/70=0,081 m	n/a	n/a	n/a	n/a

Pastabos:
1. Kai yra avariniai ir montažiniai režimai, atviros skirstomosios įrangos atramų ir oro linijų traversų atramų nuokrypiai nenormuojami.
2. Nuokrypiai ir įlinkiai, turi būti sumažinti, jei įrangos eksploatacijos techninės sąlygos numato griežtesnius apribojimus.

Srovės transformatoriaus atramą veikiančios nuolatinės ir kintamos apkrovos pateiktos žemiau esančioje lentelėje.

Lentelė 30. Atviros skirstomosios įrangos konstrukcijų ribiniai poslinkiai ir įlinkiai

Įrenginio apkrovų pasiskirstymas					
Eil. Nr.	Apkrovos pavadinimas	F, kN	q, kN/m	Jėgos veikimo kryptis	Pastaba
1.	**Nuolatinės apkrovos**				
1.1.	Konstrukcijos savasis svoris	BEM	-	↓	γ=78,50 kN/m^3
1.2.	Technologiniai įrenginiai	1,50	-	↓	-
1.3.	Laidų svoris	0,21	-	↓	-
2.	**Kintamos apkrovos**				
2.1.	*Vėjas x-x kryptimi*				
2.1.1.	Į koloną	-	0,087	→	X-X
2.1.2.	Į traversą	-	0,078	→	X-X
2.1.3.	Į technologinius įrenginius	-	0,34	→	X-X
2.1.4.	Nuo laidų	0,15	-	-	X-X
2.2.	*Vėjas y-y kryptimi*				
2.2.1.	Į koloną	-	0,087	→	Y-Y
2.2.2.	Į traversą	-	0,078	→	Y-Y
2.2.3.	Į technologinius įrenginius	-	0,34	→	Y-Y
2.2.4.	Nuo laidų	-	-	→	Vėjo kryptis išilgai laidų
2.3.	*Apšalas*				
2.3.1.	Nuo įrenginio	0,97		↓	Z-Z
2.3.2.	Nuo laidų	0,015		↓	Z-Z
2.4.	*Laidų išilginis tempimas*	1,5		→	X-X

Lentelė 31. Apkrovų eksplikacija

Apkrovos nr.	Apkrovos žymuo	Apkrovos pavadinimas
1	LC1	Savasis svoris
2	LC2	Įrenginių svoris
3	LC3	Laidų svoris
4	LC4	Vėjas X-X
5	LC5	Vėjas Y-Y
6	LC6	Apšalas
7	LC7	Laidų išilginis tempimas

1.3 Materials

Matl. No.	Modulus E [kN/cm²]	Modulus G [kN/cm²]	Poisson's Ratio ν [-]	Spec. Weight γ [kN/m³]	Coeff. of Th. Exp. α [1/°C]	Partial Factor γ_M [-]	Material Model
2	Steel S 275 J2 | BDS EN 10025-2:2004-11						
	21000.00	8076.92	0.300	78.50	1.20E-05	1.00	Isotropic Linear Elastic

1.7 Nodal Supports

Support No.	Nodes No.	Axis System	Column in Z	Support Conditions u_X	u_Y	u_Z	φ_X	φ_Y	φ_Z
1	1,3	Global X,Y,Z	-	x	x	x	x	x	x

1.13 Cross-Sections

Section No.	Matl. No.	J [cm⁴] / A [cm²]	I_y [cm⁴] / A_y [cm²]	I_z [cm⁴] / A_z [cm²]	Principal Axes α [°]	Rotation α' [°]	Overall Dimensions [mm] Width b	Height h
1	QRO 250x6 | EN 10219-2:2006							
	2	8843.00	5672.00	5672.00	0.00	0.00	250.0	250.0
		57.60	24.56	24.56				
2	UPN 160 | ArcelorMittal (EN 10365:2017)							
	2	7.39	925.00	85.30	0.00	0.00	65.0	160.0
		24.00	6.49	10.22				
3	HE A 160 | Euronorm 53-62							
	2	12.30	1670.00	616.00	0.00	0.00	160.0	152.0
		38.80	23.99	7.85				
4	RO 610x10 | EN 10219-2:2006							
	2	169700.00	84850.00	84850.00	0.00	0.00	610.0	610.0
		188.00	93.91	93.91				

1.17 Members

Mbr. No.	Line No.	Member	Rotation Type	Rotation β [°]	Cross-Section Start	Cross-Section End	Hinge No. Start	Hinge No. End	Ecc. No.	Div. No.	Length L [m]	
1	1	Beam	Angle	0.00	1	1	-	-	-	-	5.620	Z
2	2	Beam	Angle	0.00	1	1	-	-	-	-	5.620	Z
3	4	Beam	Angle	0.00	3	3	-	-	-	-	0.220	Y
9	13	Beam	Angle	180.00	2	2	-	-	-	-	4.500	X
10	15	Beam	Angle	180.00	2	2	-	-	-	-	4.500	X
13	33	Beam	Angle	0.00	3	3	-	-	-	-	0.220	Y
25	9	Beam	Angle	180.00	3	3	-	-	-	-	0.440	Y
28	29	Beam	Angle	0.00	3	3	-	-	-	-	0.220	Y
29	26	Beam	Angle	0.00	3	3	-	-	-	-	0.440	Y
30	17	Beam	Angle	0.00	3	3	-	-	-	-	0.220	Y
31	14	Beam	Angle	0.00	3	3	-	-	-	-	0.440	Y
33	24	Beam	Angle	0.00	3	3	-	-	-	-	0.220	Y
35	48	Beam	Angle	0.00	3	3	-	-	-	-	0.220	Y
50	34	Beam	Angle	0.00	4	4	-	-	-	-	2.100	Z
51	35	Beam	Angle	0.00	4	4	-	-	-	-	2.100	Z
55	23	Beam	Angle	0.00	3	3	-	-	-	-	0.220	Y
57	27	Beam	Angle	0.00	3	3	-	-	-	-	0.220	Y
58	45	Beam	Angle	0.00	4	4	-	-	-	-	2.100	Z

2.1 Load Cases

Load Case	Load Case Description	EN 1990 | LST Action Category	Self-Weight - Factor in Direction Active	X	Y	Z
LC1	Savasis svoris	Permanent	x	0.000	0.000	-1.000
LC2	Irenginiu svoris	Permanent	-			
LC3	Laidu svoris	Permanent	-			
LC4	Vejas X-X	Wind	-			
LC5	Vejas Y-Y	Wind	-			
LC6	Apsalas	Snow / ice	-			
LC7	Laidu isilginis tempimas	Temperature (non fire)	-			

2.1.1 Load Cases - Calculation Parameters

Load Case	Load Case Description	Calculation Parameters		
LC1	Savasis svoris	Method of analysis	: x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	: x	Newton-Raphson
		Activate stiffness factors of:	: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC2	Irenginiu svoris	Method of analysis	: x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	: x	Newton-Raphson
		Activate stiffness factors of:	: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC3	Laidu svoris	Method of analysis	: x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	: x	Newton-Raphson
		Activate stiffness factors of:	: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC4	Vejas X-X	Method of analysis	: x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	: x	Newton-Raphson
		Activate stiffness factors of:	: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC5	Vejas Y-Y	Method of analysis	: x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	: x	Newton-Raphson
		Activate stiffness factors of:	: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
LC6	Apsalas	Method of analysis	: x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	: x	Newton-Raphson
		Activate stiffness factors of:	: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)

.1.1 Load Cases - Calculation Parameters

Load Case	Load Case Description	Calculation Parameters		
LC7	Laidu isilginis tempimas	Method of analysis	: x	Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	: x	Newton-Raphson
		Activate stiffness factors of:	: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)

2.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
CO1	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
CO2	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X
CO3	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y
CO4	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X
			5	0.91	LC6	Apsalas
CO5	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y
			5	0.91	LC6	Apsalas
CO6	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X
			5	0.91	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO7	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y
			5	0.91	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO8	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC4	Vejas X-X
			5	0.78	LC7	Laidu isilginis tempimas
CO9	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC5	Vejas Y-Y
			5	0.78	LC7	Laidu isilginis tempimas
CO10	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC6	Apsalas
CO11	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X
			5	1.30	LC6	Apsalas
CO12	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris

.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y
			5	1.30	LC6	Apsalas
CO13	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X
			5	1.30	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO14	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y
			5	1.30	LC6	Apsalas
			6	0.78	LC7	Laidu isilginis tempimas
CO15	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6 + 0.78*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC6	Apsalas
			5	0.78	LC7	Laidu isilginis tempimas
CO16	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	1.30	LC7	Laidu isilginis tempimas
CO17	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X
			5	1.30	LC7	Laidu isilginis tempimas
CO18	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y
			5	1.30	LC7	Laidu isilginis tempimas
CO19	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 0.91*LC6 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC4	Vejas X-X
			5	0.91	LC6	Apsalas
			6	1.30	LC7	Laidu isilginis tempimas
CO20	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 0.91*LC6 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.78	LC5	Vejas Y-Y
			5	0.91	LC6	Apsalas
			6	1.30	LC7	Laidu isilginis tempimas
CO21	STR	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.91*LC6 + 1.3*LC7	1	1.35	LC1	Savasis svoris
			2	1.35	LC2	Irenginiu svoris
			3	1.35	LC3	Laidu svoris
			4	0.91	LC6	Apsalas
			5	1.30	LC7	Laidu isilginis tempimas
CO22	S Ch	LC1 + LC2 + LC3	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
CO23	S Ch	LC1 + LC2 + LC3 + LC4	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X
CO24	S Ch	LC1 + LC2 + LC3 + LC5	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y

.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
CO25	S Ch	LC1 + LC2 + LC3 + LC4 + 0.7*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X
			5	0.70	LC6	Apsalas
CO26	S Ch	LC1 + LC2 + LC3 + LC5 + 0.7*LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y
			5	0.70	LC6	Apsalas
CO27	S Ch	LC1 + LC2 + LC3 + LC4 + 0.7*LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X
			5	0.70	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO28	S Ch	LC1 + LC2 + LC3 + LC5 + 0.7*LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y
			5	0.70	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO29	S Ch	LC1 + LC2 + LC3 + LC4 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC4	Vejas X-X
			5	0.60	LC7	Laidu isilginis tempimas
CO30	S Ch	LC1 + LC2 + LC3 + LC5 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC5	Vejas Y-Y
			5	0.60	LC7	Laidu isilginis tempimas
CO31	S Ch	LC1 + LC2 + LC3 + LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC6	Apsalas
CO32	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X
			5	1.00	LC6	Apsalas
CO33	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + LC6	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y
			5	1.00	LC6	Apsalas
CO34	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X
			5	1.00	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO35	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y
			5	1.00	LC6	Apsalas
			6	0.60	LC7	Laidu isilginis tempimas
CO36	S Ch	LC1 + LC2 + LC3 + LC6 + 0.6*LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	1.00	LC6	Apsalas
			5	0.60	LC7	Laidu isilginis tempimas
CO37	S Ch	LC1 + LC2 + LC3 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris

2.5 Load Combinations

Load Combin.	DS	Load Combination Description	No.	Factor	Load Case	
			3	1.00	LC3	Laidu svoris
			4	1.00	LC7	Laidu isilginis tempimas
CO38	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X
			5	1.00	LC7	Laidu isilginis tempimas
CO39	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y
			5	1.00	LC7	Laidu isilginis tempimas
CO40	S Ch	LC1 + LC2 + LC3 + 0.6*LC4 + 0.7*LC6 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC4	Vejas X-X
			5	0.70	LC6	Apsalas
			6	1.00	LC7	Laidu isilginis tempimas
CO41	S Ch	LC1 + LC2 + LC3 + 0.6*LC5 + 0.7*LC6 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.60	LC5	Vejas Y-Y
			5	0.70	LC6	Apsalas
			6	1.00	LC7	Laidu isilginis tempimas
CO42	S Ch	LC1 + LC2 + LC3 + 0.7*LC6 + LC7	1	1.00	LC1	Savasis svoris
			2	1.00	LC2	Irenginiu svoris
			3	1.00	LC3	Laidu svoris
			4	0.70	LC6	Apsalas
			5	1.00	LC7	Laidu isilginis tempimas

2.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
CO1	1.35*LC1 + 1.35*LC2 + 1.35*LC3	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO2	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO3	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T

..5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters			
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO4	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO5	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO6	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.91*LC6 + 0.78*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO7	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.91*LC6 + 0.78*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO8	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC4 + 0.78*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO9	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC5 + 0.78*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard

5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters	
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO10	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO11	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO12	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO13	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO14	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC6 + 0.78*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters			
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO15	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC6 + 0.78*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO16	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 1.3*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO17	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 1.3*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO18	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 1.3*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO19	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC4 + 0.91*LC6 + 1.3*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:
					x Normal forces N
					x Shear forces V_y and V_z
					x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x	Materials (partial factor γM)
			:	x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO20	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.78*LC5 + 0.91*LC6 + 1.3*LC7	Method of analysis	:	x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x	Picard
		Options	:	x	Consider favorable effects due to tension
			:	x	Refer internal forces to deformed system for:

..5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x Materials (partial factor γM)
			:	x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO21	1.35*LC1 + 1.35*LC2 + 1.35*LC3 + 0.91*LC6 + 1.3*LC7	Method of analysis	:	x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x Picard
		Options	:	x Consider favorable effects due to tension
			:	x Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x Materials (partial factor γM)
			:	x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO22	LC1 + LC2 + LC3	Method of analysis	:	x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x Picard
		Options	:	x Consider favorable effects due to tension
			:	x Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x Materials (partial factor γM)
			:	x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO23	LC1 + LC2 + LC3 + LC4	Method of analysis	:	x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x Picard
		Options	:	x Consider favorable effects due to tension
			:	x Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x Materials (partial factor γM)
			:	x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO24	LC1 + LC2 + LC3 + LC5	Method of analysis	:	x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x Picard
		Options	:	x Consider favorable effects due to tension
			:	x Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x Materials (partial factor γM)
			:	x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO25	LC1 + LC2 + LC3 + LC4 + 0.7*LC6	Method of analysis	:	x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x Picard
		Options	:	x Consider favorable effects due to tension
			:	x Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	:	x Materials (partial factor γM)
			:	x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			:	x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO26	LC1 + LC2 + LC3 + LC5 + 0.7*LC6	Method of analysis	:	x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	:	x Picard
		Options	:	x Consider favorable effects due to tension

..5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters		
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO27	LC1 + LC2 + LC3 + LC4 + 0.7*LC6 + 0.6*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO28	LC1 + LC2 + LC3 + LC5 + 0.7*LC6 + 0.6*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO29	LC1 + LC2 + LC3 + LC4 + 0.6*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO30	LC1 + LC2 + LC3 + LC5 + 0.6*LC7	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO31	LC1 + LC2 + LC3 + LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension
			: x	Refer internal forces to deformed system for:
				x Normal forces N
				x Shear forces V_y and V_z
				x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x	Materials (partial factor γM)
			: x	Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x	Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO32	LC1 + LC2 + LC3 + 0.6*LC4 + LC6	Method of analysis	: x	Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x	Picard
		Options	: x	Consider favorable effects due to tension

Load Combin.	Description	Calculation Parameters	
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO33	LC1 + LC2 + LC3 + 0.6*LC5 + LC6	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO34	LC1 + LC2 + LC3 + 0.6*LC4 + LC6 + 0.6*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO35	LC1 + LC2 + LC3 + 0.6*LC5 + LC6 + 0.6*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO36	LC1 + LC2 + LC3 + LC6 + 0.6*LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO37	LC1 + LC2 + LC3 + LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO38	LC1 + LC2 + LC3 + 0.6*LC4 + LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension

.5.2 Load Combinations - Calculation Parameters

Load Combin.	Description	Calculation Parameters	
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO39	LC1 + LC2 + LC3 + 0.6*LC5 + LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO40	LC1 + LC2 + LC3 + 0.6*LC4 + 0.7*LC6 + LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO41	LC1 + LC2 + LC3 + 0.6*LC5 + 0.7*LC6 + LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_z, EA, GA_y, GA_z)
CO42	LC1 + LC2 + LC3 + 0.7*LC6 + LC7	Method of analysis	: x Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: x Picard
		Options	: x Consider favorable effects due to tension
			: x Refer internal forces to deformed system for:
			x Normal forces N
			x Shear forces V_y and V_z
			x Moments M_y, M_z and M_T
		Activate stiffness factors of:	: x Materials (partial factor γM)
			: x Cross-sections (factor for J, I_y, I_z, A, A_y, A_z)
			: x Members (factor for GJ, EI_y, EI_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 to CO21
RC2	SLS - Characteristic	CO22/p or to CO42

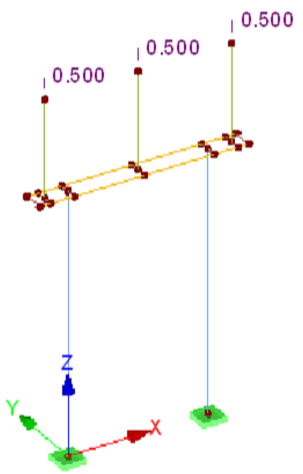
LC2
renginiu svoris

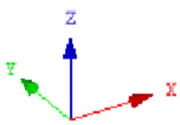
ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	155	236	0

.1 Nodal Loads - By Components - Coordinate System

No.	On Nodes No.	Coordinate System	Force [kN] P_X / P_U	P_Y / P_V	P_Z / P_W	Moment [kNm] M_X / M_U	M_Y / M_V	M_Z / M_W
1	29,31,33	0 | Global XYZ	0.000	0.000	-0.500	0.000	0.000	0.000

LC2 : Irenginiu svoris
Loads [kN]





ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	157	236	0

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LC3
Laidu svoris

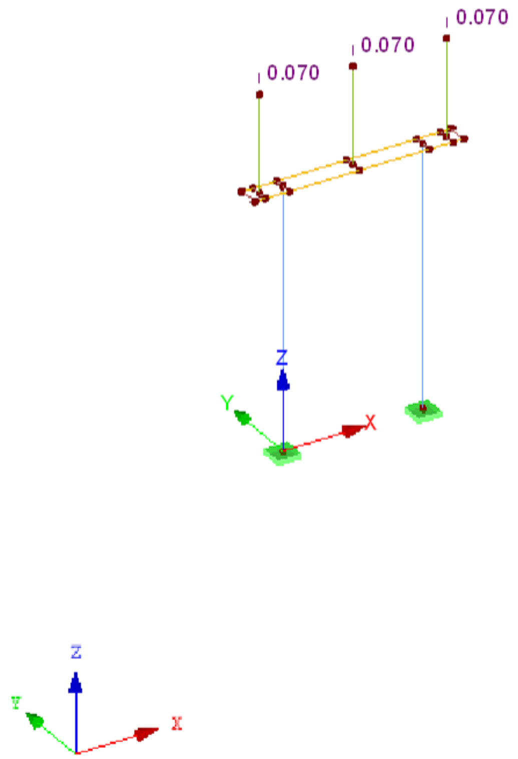
3.1 Nodal Loads - By Components - Coordinate System

No.	On Nodes No.	Coordinate System	Force [kN] P_X / P_U	P_Y / P_V	P_Z / P_W	Moment [kNm] M_X / M_U	M_Y / M_V	M_Z / M_W
1	29,31,33	0 | Global XYZ	0.000	0.000	-0.070	0.000	0.000	0.000

LC3: Laidu svoris

LC3 : Laidu svoris
Loads [kN]

Isometric



LC4
Vejas X-X

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	159	236	0

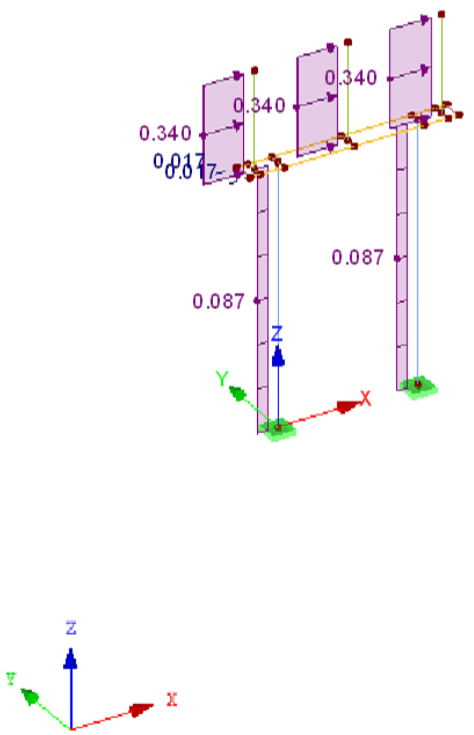
.2 Member Loads

No.	Reference to	On Members No.	Load Type	Load Distribution	Load Direction	Reference Length	Load Parameters Symbol	Value	Unit
1	Members	1,2	Force	Uniform	z	True Length	p	-0.087	kN/m
3	Members	50,51,58	Force	Uniform	z	True Length	p	-0.340	kN/m

3.2/1 Member Loads - Load Eccentricity

No.	Reference to	On Members No.	Absolute Offset Mbr. Start		Absolute Offset Mbr. End		Relative Offset Mbr. Start		Relative Offset Mbr. End	
			e_Y [mm]	e_Z [mm]	e_Y [mm]	e_Z [mm]	y-Axis	z-Axis	y-Axis	z-Axis
1	Members	1,2	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
3	Members	50,51,58	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle

LC4 : Vejas X-X
Loads [kN/m], [kN]



LC5
Vejas Y-Y

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	161	236	0

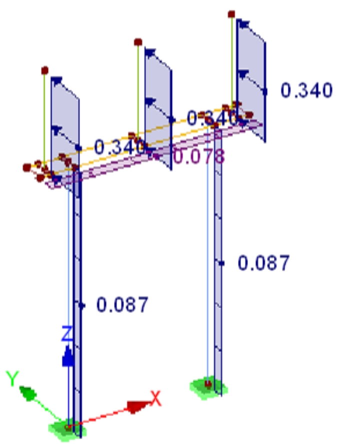
3.2 Member Loads

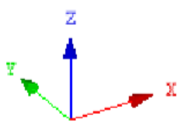
No.	Reference to	On Members No.	Load Type	Load Distribution	Load Direction	Reference Length	Load Parameters Symbol	Value	Unit
1	Members	1,2	Force	Uniform	y	True Length	p	0.087	kN/m
2	Members	9	Force	Uniform	y	True Length	p	-0.078	kN/m
3	Members	50,51,58	Force	Uniform	y	True Length	p	0.340	kN/m

3.2/1 Member Loads - Load Eccentricity

No.	Reference to	On Members No.	Absolute Offset Mbr. Start	Absolute Offset Mbr. Start	Absolute Offset Mbr. End	Absolute Offset Mbr. End	Relative Offset Mbr. Start	Relative Offset Mbr. Start	Relative Offset Mbr. End	Relative Offset Mbr. End
			e_Y [mm]	e_Z [mm]	e_Y [mm]	e_Z [mm]	y-Axis	z-Axis	y-Axis	z-Axis
1	Members	1,2	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
2	Members	9	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle
3	Members	50,51,58	0.0	0.0	0.0	0.0	Middle	Middle	Middle	Middle

LC5 : Vejas Y-Y
Loads [kN/m]



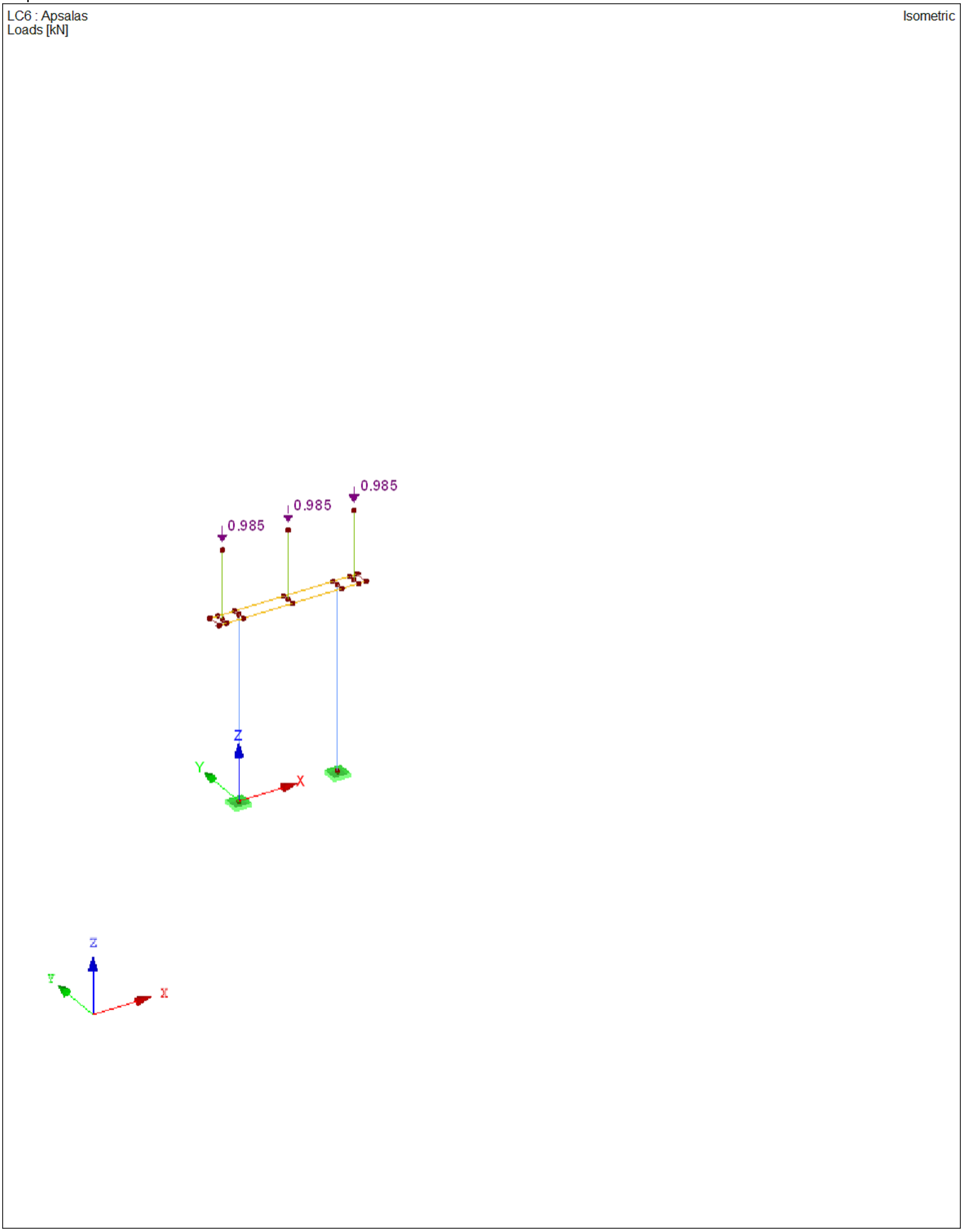


ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	163	236	0

3.1 Nodal Loads - By Components - Coordinate System

No.	On Nodes No.	Coordinate System	Force [kN] P_X / P_U	P_Y / P_V	P_Z / P_W	Moment [kNm] M_X / M_U	M_Y / M_V	M_Z / M_W
1	29,31,33	0 | Global XYZ	0.000	0.000	-0.985	0.000	0.000	0.000

LC6: Apsalas

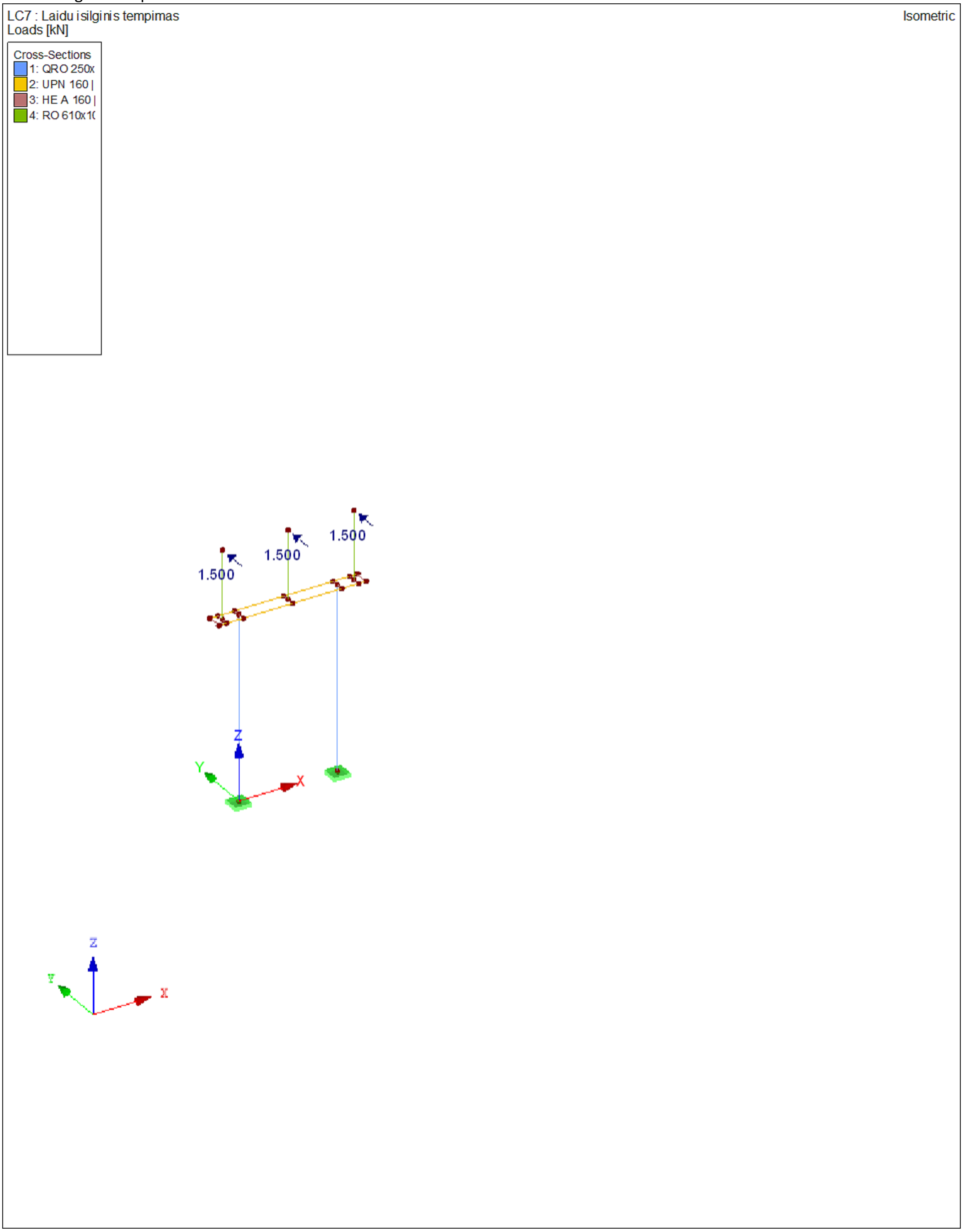


ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	164	236	0

3.1 Nodal Loads - By Components - Coordinate System

No.	On Nodes No.	Coordinate System	Force [kN] P_X / P_U	P_Y / P_V	P_Z / P_W	Moment [kNm] M_X / M_U	M_Y / M_V	M_Z / M_W
1	29,31,33	0 | Global XYZ	0.000	1.500	0.000	0.000	0.000	0.000

LC7: Laidu isilginis tempimas

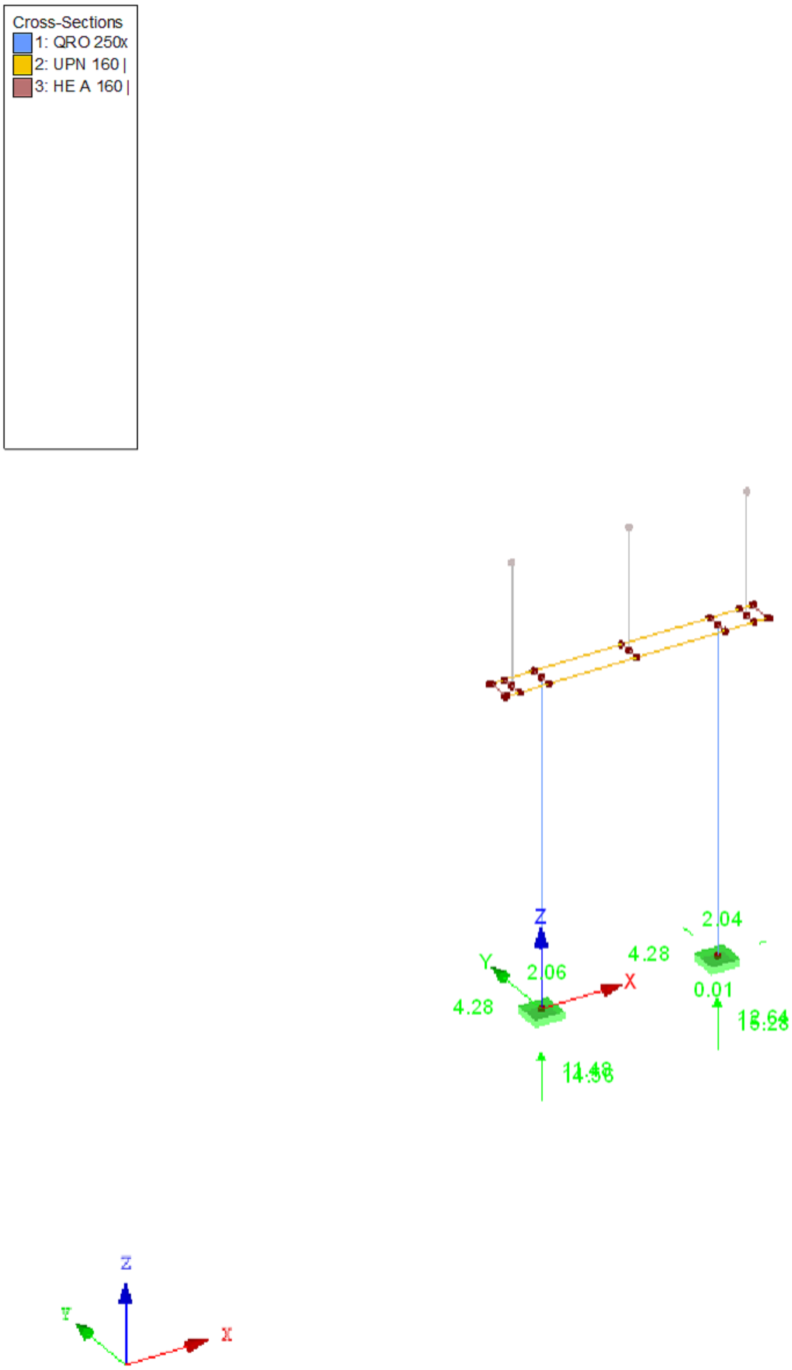


.1 Nodes - Support Forces

Node	RC		Support Forces [kN]			Support Moments [kNm]			
No.			$P_{X'}$	$P_{Y'}$	$P_{Z'}$	$M_{X'}$	$M_{Y'}$	$M_{Z'}$	
1	RC1	Max	2.06	4.28	-11.48	0.00	9.67	0.00	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	0.00	0.00	-14.56	-30.50	0.01	-0.01	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	1.58	3.29	-8.48	0.00	7.42	0.00	SLS - Characteristic
		Min	0.00	0.00	-10.84	-23.36	0.01	-0.01	SLS - Characteristic
3	RC1	Max	2.04	4.28	-12.64	0.00	9.64	0.01	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-0.01	0.00	-15.28	-30.50	-0.01	0.00	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	1.57	3.29	-9.36	0.00	7.40	0.01	SLS - Characteristic
		Min	0.00	0.00	-11.38	-23.36	-0.01	0.00	SLS - Characteristic

Support Reactions

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Support Reactions[kN]
Result Combinations: Max and Min Values

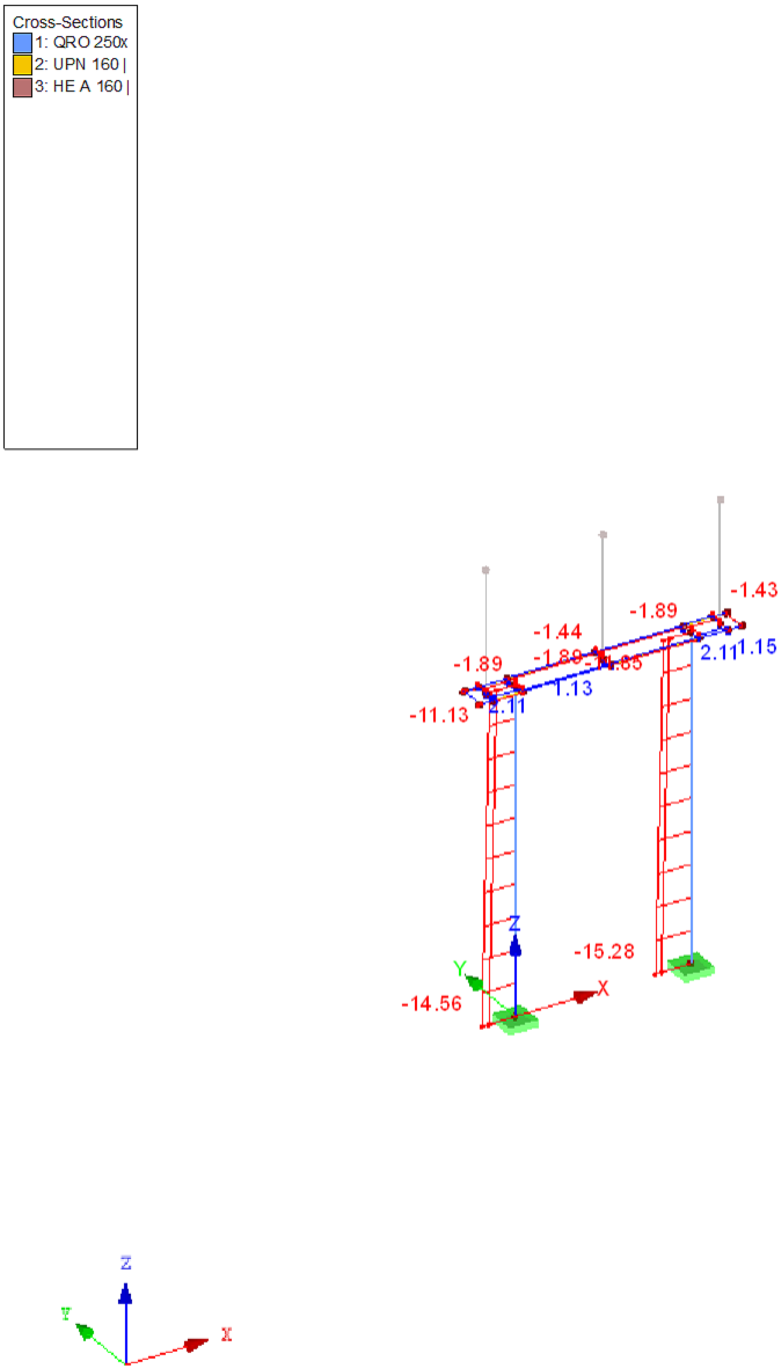


Max P-X': 2.06, Min P-X': -0.01 kN
Max P-Y': 4.28, Min P-Y': 0.00 kN
Max P-Z': -11.48, Min P-Z': -15.28 kN

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	167	236	0

ernal forces N

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Internal Forces N
Result Combinations: Max and Min Values



Max N: 2.11, Min N: -15.28 [kN]

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	168	236	0

Nodes - displacements

Member No.	Node No.	Location x [m]		Displacements [mm] u_x	u_y	u_z	Cross-Section
1	1	0.000	Max u_x	**0.0**	0.0	0.0	1 - QRO 250x6 ; EN 10219-2:2006
	2	5.620	Min u_x	**0.0**	0.0	0.0	
	2	5.620	Max u_y	0.0	**23.0**	0.0	
	1	0.000	Min u_y	0.0	**0.0**	0.0	
	2	5.620	Max u_z	0.0	8.8	**0.0**	
	2	5.620	Min u_z	0.0	0.0	**-6.2**	
2	3	0.000	Max u_x	**0.0**	0.0	0.0	1 - QRO 250x6 ; EN 10219-2:2006
	4	5.620	Min u_x	**0.0**	0.0	-3.7	
	4	5.620	Max u_y	0.0	**23.0**	0.0	
	3	0.000	Min u_y	0.0	**0.0**	0.0	
		3.934	Max u_z	0.0	5.7	**0.0**	
	4	5.620	Min u_z	0.0	0.0	**-6.2**	
3	32	0.000	Max u_x	**0.0**	0.0	-0.1	3 - HE A 160 ; Euronorm 53-62
	32	0.000	Min u_x	**-23.8**	0.0	-0.1	
	32	0.000	Max u_y	0.0	**6.2**	-0.1	
	32	0.000	Min u_y	0.0	**0.0**	-0.1	
	43	0.220	Max u_z	-23.8	0.0	**1.6**	
	32	0.000	Min u_z	0.0	3.7	**-0.1**	
9		4.473	Max u_x	**6.2**	-10.7	-0.7	2 - UPN 160 ; ArcelorMittal (EN 10365:2017)
	9	0.000	Min u_x	**0.0**	-23.1	-2.1	
		3.000	Max u_y	6.2	**0.0**	0.0	
		2.250	Min u_y	0.0	**-23.8**	-1.6	
	10	4.500	Max u_z	6.2	0.0	**0.4**	
	9	0.000	Min u_z	0.0	-23.0	**-2.1**	
10	5	0.000	Max u_x	**6.2**	-10.7	1.3	2 - UPN 160 ; ArcelorMittal (EN 10365:2017)
		4.473	Min u_x	**0.0**	-23.0	2.6	
		1.500	Max u_y	6.2	**0.0**	0.1	
		2.250	Min u_y	0.0	**-23.8**	1.9	
	5	0.000	Max u_z	0.0	-23.1	**2.7**	
		3.000	Min u_z	6.2	0.0	**0.0**	
13	46	0.220	Max u_x	**0.0**	6.2	-0.1	3 - HE A 160 ; Euronorm 53-62
	30	0.000	Min u_x	**-23.1**	0.0	-0.2	
	30	0.000	Max u_y	0.0	**6.2**	-0.1	
	46	0.220	Min u_y	-23.1	**0.0**	1.9	
	46	0.220	Max u_z	-23.0	0.0	**1.9**	
	30	0.000	Min u_z	-16.0	0.0	**-0.2**	
25	35	0.000	Max u_x	**0.0**	-6.2	0.1	3 - HE A 160 ; Euronorm 53-62
	35	0.000	Min u_x	**-23.1**	0.0	2.6	
	36	0.440	Max u_y	-23.1	**0.0**	-2.0	
	35	0.000	Min u_y	-10.7	**-6.2**	1.3	
	35	0.000	Max u_z	-23.1	0.0	**2.6**	
	36	0.440	Min u_z	-23.0	0.0	**-2.1**	
28	42	0.000	Max u_x	**0.0**	0.0	-0.1	3 - HE A 160 ; Euronorm 53-62

	32	0.220	Min u_x	**-23.8**	0.0	-0.1	
	32	0.220	Max u_y	0.0	**6.2**	-0.1	
	42	0.000	Min u_y	0.0	**0.0**	-0.1	
	42	0.000	Max u_z	0.0	0.0	**-0.1**	
	42	0.000	Min u_z	-23.8	0.0	**-1.9**	
29	12	0.440	Max u_x	**0.0**	6.2	-0.1	3 - HE A 160 ; Euronorm 53-62
	12	0.440	Min u_x	**-23.0**	0.0	1.5	
	12	0.440	Max u_y	-10.7	**6.2**	0.7	
	25	0.000	Min u_y	-23.0	**0.0**	-1.6	
	12	0.440	Max u_z	-23.0	0.0	**1.5**	
	25	0.000	Min u_z	-23.0	0.0	**-1.6**	
30	45	0.000	Max u_x	**0.0**	6.2	-0.3	3 - HE A 160 ; Euronorm 53-62
	34	0.220	Min u_x	**-23.1**	0.0	-0.2	
	34	0.220	Max u_y	0.0	**6.2**	-0.3	
	45	0.000	Min u_y	-23.0	**0.0**	-2.3	
	45	0.000	Max u_z	0.0	0.0	**-0.2**	
	45	0.000	Min u_z	-23.1	0.0	**-2.3**	
31	18	0.440	Max u_x	**0.0**	6.2	-0.4	3 - HE A 160 ; Euronorm 53-62
	17	0.000	Min u_x	**-23.1**	0.0	-2.6	
	18	0.440	Max u_y	-10.7	**6.2**	0.7	
	17	0.000	Min u_y	-23.0	**0.0**	-2.6	
	18	0.440	Max u_z	-23.0	0.0	**2.1**	
	17	0.000	Min u_z	-23.1	0.0	**-2.6**	
33	2	0.000	Max u_x	**0.0**	0.0	0.0	3 - HE A 160 ; Euronorm 53-62
	11	0.220	Min u_x	**-23.0**	0.0	1.5	
	11	0.220	Max u_y	0.0	**6.2**	-0.1	
	11	0.220	Min u_y	-23.0	**0.0**	1.5	
	11	0.220	Max u_z	-23.0	0.0	**1.5**	
	11	0.220	Min u_z	0.0	0.0	**-0.1**	
35	34	0.000	Max u_x	**0.0**	0.0	-0.2	3 - HE A 160 ; Euronorm 53-62
	34	0.000	Min u_x	**-23.1**	0.0	-0.2	
	47	0.220	Max u_y	-10.7	**6.2**	0.7	
	34	0.000	Min u_y	0.0	**0.0**	-0.2	
	47	0.220	Max u_z	-23.0	0.0	**1.9**	
	34	0.000	Min u_z	-10.7	6.2	**-0.3**	
50	32	0.000	Max u_x	**-0.1**	23.8	0.0	4 - RO 610x10 ; EN 10219-2:2006
	31	2.100	Min u_x	**-0.1**	0.0	-15.0	
	31	2.100	Max u_y	-0.1	**40.7**	0.0	
	32	0.000	Min u_y	-0.1	**0.0**	0.0	
	32	0.000	Max u_z	-0.1	0.0	**0.0**	
	31	2.100	Min u_z	-0.1	0.0	**-24.9**	
51	34	0.000	Max u_x	**-0.2**	0.0	0.0	4 - RO 610x10 ; EN 10219-2:2006
	33	2.100	Min u_x	**-0.3**	20.5	-26.1	
	33	2.100	Max u_y	-0.2	**43.3**	-0.8	
	34	0.000	Min u_y	-0.2	**0.0**	0.0	
	34	0.000	Max u_z	-0.2	0.0	**0.0**	

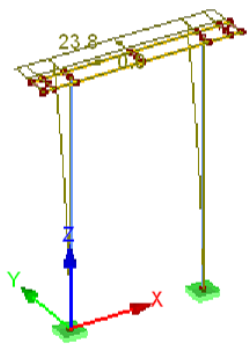
	33	2.100	Min u_z	-0.3	20.5	**-26.1**	
55	39	0.000	Max u_x	**0.0**	6.2	0.0	3 - HE A 160 ; Euronorm 53-62
	39	0.000	Min u_x	**-23.0**	0.0	-1.6	
	39	0.000	Max u_y	-10.7	**6.2**	-0.8	
	2	0.220	Min u_y	-8.8	**0.0**	0.0	
	2	0.220	Max u_z	0.0	6.2	**0.0**	
	39	0.000	Min u_z	-23.0	0.0	**-1.6**	
57	7	0.000	Max u_x	**0.0**	0.0	-0.2	3 - HE A 160 ; Euronorm 53-62
	30	0.220	Min u_x	**-23.1**	0.0	-0.2	
	30	0.220	Max u_y	0.0	**6.2**	-0.1	
	30	0.220	Min u_y	-8.8	**0.0**	-0.2	
	7	0.000	Max u_z	0.0	6.2	**-0.1**	
	7	0.000	Min u_z	-23.1	0.0	**-2.3**	
58	30	0.000	Max u_x	**-0.1**	0.0	-6.2	4 - RO 610x10 ; EN 10219-2:2006
	29	2.100	Min u_x	**-0.2**	29.7	0.8	
	29	2.100	Max u_y	-0.2	**43.3**	0.8	
	30	0.000	Min u_y	-0.2	**0.0**	0.0	
	29	2.100	Max u_z	-0.2	29.7	**0.8**	
	29	2.100	Min u_z	-0.1	0.0	**-24.6**	

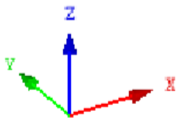
Global Deformations u_Y

RC2 : SLS - Characteristic
Global Deformations u-Y [mm]
Result Combinations: Max and Min Values

Isometric

Cross-Sections
1: QRO 250x
2: UPN 160 |
3: HE A 160 |





Factor of deformations: 26.00
Max u-Y: 23.8, Min u-Y: 0.0 mm

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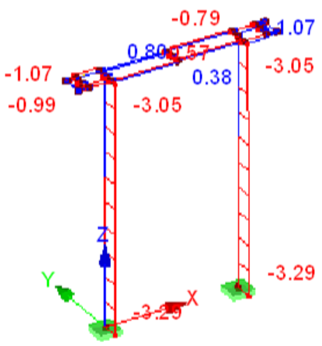
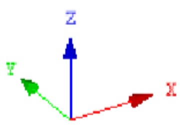
	172	236	0

...ernal forces Vy

RC2 : SLS - Characteristic
Internal Forces V-y
Result Combinations: Max and Min Values



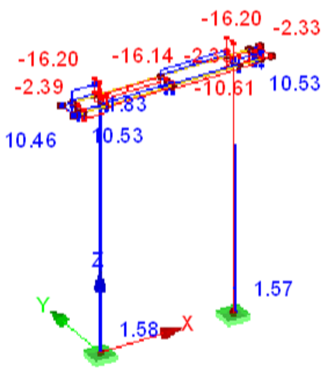


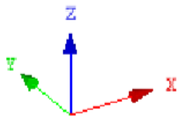
Max V-y: 1.07, Min V-y: -3.29 [kN]

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	173	236	0

ernal forces Vz

RC2 : SLS - Characteristic
Internal Forces V-z
Result Combinations: Max and Min Values



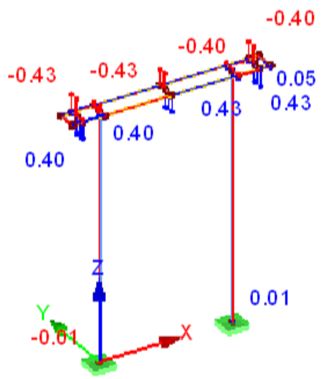


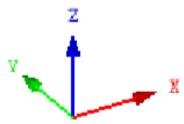
Max V-z: 10.61, Min V-z: -16.20 [kN]

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	174	236	0

...ernal forces M_T

RC2 : SLS - Characteristic
Internal Forces M-T
Result Combinations: Max and Min Values

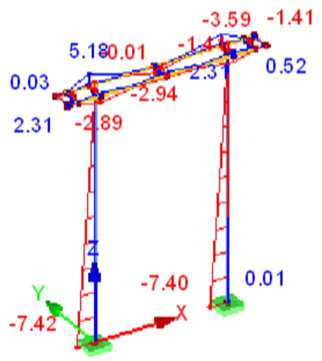


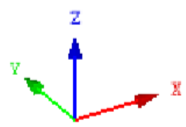


Max M-T: 0.43, Min M-T: -0.43 [kNm]

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	175	236	0

RC2 : SLS - Characteristic
Internal Forces M-y
Result Combinations: Max and Min Values

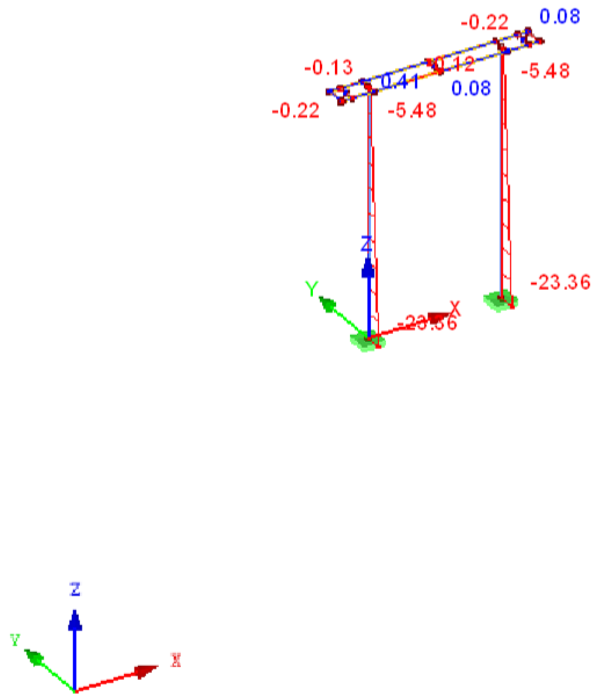




Max M-y: 5.18, Min M-y: -7.42 [kNm]

ernal forces M_z

RC2 : SLS - Characteristic
Internal Forces M-z
Result Combinations: Max and Min Values



Max M-z: 0.41, Min M-z: -23.36 [kNm]

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	177	236	0

.5 Effective Lengths - Members

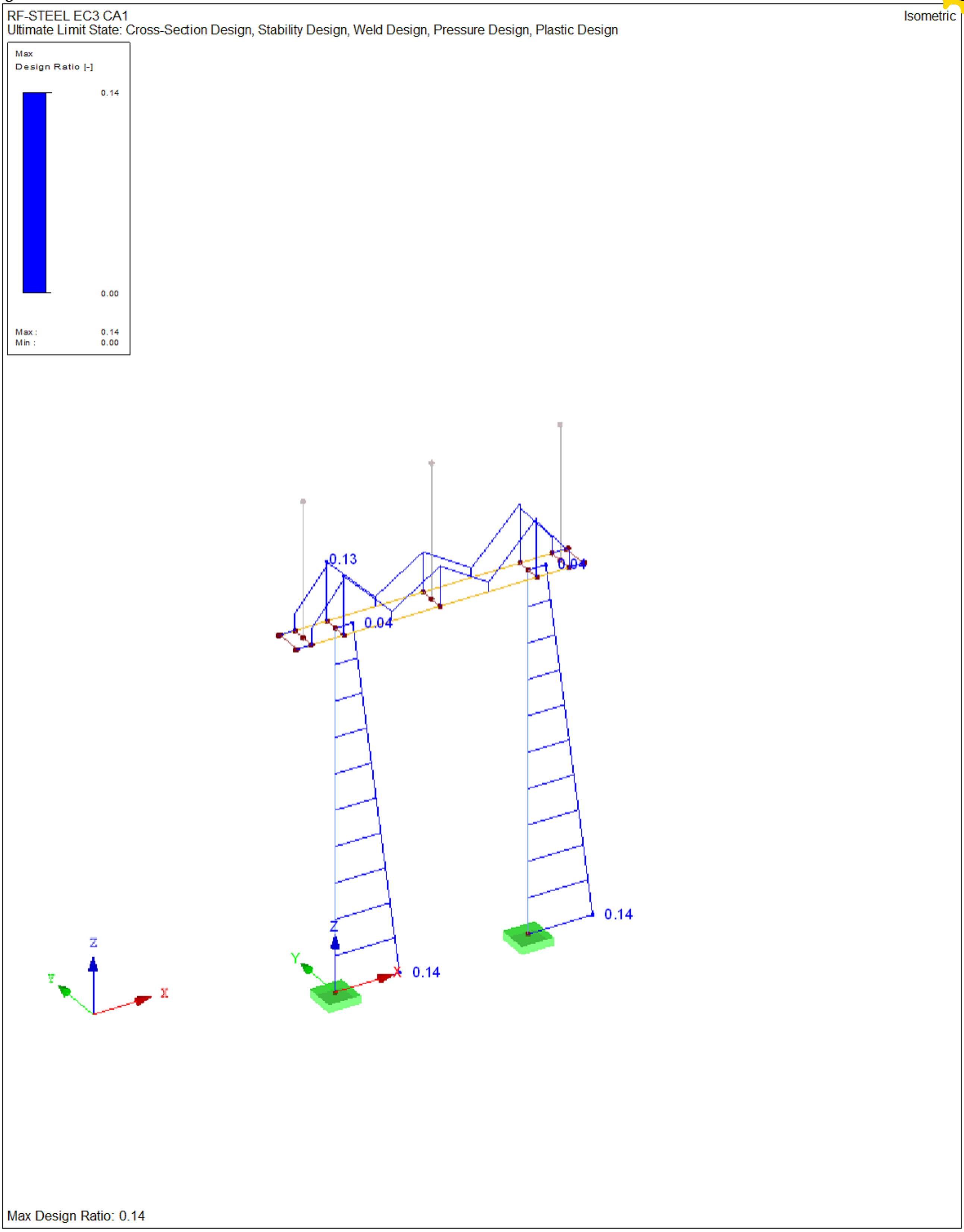
Member No.	Buckling Possible	Buckling About Axis y			Buckling About Axis z			Lateral-Torsional Buckling				
		Possible	$k_{cr,y}$	$L_{cr,y}$ [m]	Possible	$k_{cr,z}$	$L_{cr,z}$ [m]	Possible	k_z	k_w	L_w [m]	L_T [m]
1	x	x	2.00	11.240	x	2.00	11.240	-	1.0	1.0	5.620	5.620
2	x	x	2.00	11.240	x	2.00	11.240	-	1.0	1.0	5.620	5.620
9	x	x	1.00	4.500	x	1.00	4.500	x	1.0	1.0	4.500	4.500
10	x	x	1.00	4.500	x	1.00	4.500	x	1.0	1.0	4.500	4.500

1.12 Parameters - Members

Member No.	Description	Parameter
1	Cross-Section	1 - QRO 250x6 | EN 10219-2:2006
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
2	Cross-Section	1 - QRO 250x6 | EN 10219-2:2006
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
9	Cross-Section	2 - UPN 160 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-
10	Cross-Section	2 - UPN 160 | ArcelorMittal (EN 10365:2017)
	Shear panel	-
	Rotational restraint	-
	Cross-sectional area for tension design	-

Design by cross-sections

Section No.	Member No.	Location x [m]	Load-ing	Design Ratio		Design According to Formula
1	QRO 250x6 | EN 10219-2:2006					
	1	0.000	LC6	0.00	≤ 1	CS100) Negligible internal forces
	1	0.000	LC1	0.01	≤ 1	CS102) Cross-section check - Compression acc. to 6.2.4
	1	0.000	LC4	0.06	≤ 1	CS112) Cross-section check - Bending about y-axis acc. to 6.2.5 - Class 3
	1	0.000	LC7	0.14	≤ 1	CS117) Cross-section check - Bending about z-axis acc. to 6.2.5 - Class 3
	1	0.000	LC4	0.00	≤ 1	CS122) Cross-section check - Shear force in z-axis acc. to 6.2.6(4) - Class 3 or 4
	1	0.000	LC7	0.01	≤ 1	CS124) Cross-section check - Shear force in y-axis acc. to 6.2.6(4) - Class 3 or 4
	1	0.000	LC4	0.00	≤ 1	CS126) Cross-section check - Shear buckling acc. to 6.2.6(6)
	1	0.000	LC4	0.06	≤ 1	CS142) Cross-section check - Bending and shear force acc. to 6.2.9.2 and 6.2.10 - Class 3
	1	0.000	LC7	0.14	≤ 1	CS152) Cross-section check - Bending about z-axis and shear force acc. to 6.2.9.2 and 6.2.10 - Class 3
2	UPN 160 | ArcelorMittal (EN 10365:2017)					
	9	2.250	LC2	0.00	≤ 1	CS100) Negligible internal forces
	9	0.750	LC1	0.03	≤ 1	CS111) Cross-section check - Bending about y-axis acc. to 6.2.5 - Class 1 or 2
	10	0.250	LC5	0.01	≤ 1	CS116) Cross-section check - Bending about z-axis acc. to 6.2.5 - Class 1 or 2
	9	0.250	LC7	0.04	≤ 1	CS121) Cross-section check - Shear force in z-axis acc. to 6.2.6
	9	0.250	LC7	0.00	≤ 1	CS123) Cross-section check - Shear force in y-axis acc. to 6.2.6
	9	0.250	LC1	0.00	≤ 1	CS126) Cross-section check - Shear buckling acc. to 6.2.6(6)
	9	0.750	LC1	0.03	≤ 1	CS141) Cross-section check - Bending and shear force acc. to 6.2.5 and 6.2.8
	10	0.250	LC5	0.01	≤ 1	CS151) Cross-section check - Bending about z-axis and shear force acc. to 6.2.5 and 6.2.8
	9	0.750	LC7	0.13	≤ 1	CS161) Cross-section check - Biaxial bending and shear force acc. to 6.2.6, 6.2.7 and 6.2.9



Išvados:

- Viršįtampių ribotuvo kolonos ribinis poslinkis lygus 57 mm, traversos – 15 mm. Pagal atliktus skaičiavimus kolonos poslinkis y kryptimi lygus 23 mm, traversos poslinkis z kryptimi – 2,7 mm. Gauti rezultatai neviršija ribinio poslinkio reikšmės.
- Viršįtempių ribotuvo atramos labiausiai pagal skerspjūvį išnaudojamas elemento profilis – 250x250x6 kvadratinio skerspjūvio kolona. Nustatytos reikšmės neviršija ribinių 0,14 ≤ 1.

3. AS PAMATŲ PROJEKTAVIMAS

Pamatai skaičiuoti ir parinkti pagal nepalankiausių apkrovų derinius. Pamatai parinkti priklausomai nuo pamatą veikiančių rovimo, gniuždymo ir skersinių jėgų reikšmių bei geologinių ir hidrogeologinių sąlygų.

3.1. AS pamato laikomosios galios skaičiavimas (po atrama 101, IGS 1)

Pile verification

Input data

Project

Date : 5/9/2022

Settings

Standard - safety factors

Materials and standards

Concrete structures :	EN 1992-1-1 (EC2)
Coefficients EN 1992-1-1 :	standard
Steel structures :	EN 1993-1-1 (EC3)
Partial factor on bearing capacity of steel cross section :	γ_{M0} = 1.00
Timber structures :	EN 1995-1-1 (EC5)
Partial factor for timber property :	γ_{M} = 1.30
Modif. factor of load duration and moisture content :	k_{mod} = 0.50
Coeff. of effective width for shear stress :	k_{cr} = 0.67

Pile

Verification methodology :	Safety factors (ASD)
Analysis for drained conditions :	NAVFAC DM 7.2
Load settlement curve :	linear (Poulos)
Horizontal bearing capacity :	Elastic subsoil (p-y method)

4.

Safety factors			
Permanent design situation			
Safety factor for compressive pile :	SF_{cp} =	2.00	[–]
Safety factor for tensile pile :	SF_{tp} =	3.00	[–]

Basic soil parameters

No.	Name	Pattern	γ [kN/m³]	ν [–]
1	Planingai supiltas vidutinio rupumo smėlis		4.30	0.28
2	Purus vidutinio rupumo smėlis		3.50	0.28
3	Tankus, vidutinio rupumo smėlis, mažai drėgnas, geltonas		14.90	0.28
4	Labai tankus, žvyringas smėlis		34.50	0.30
5	Tankus, vidutinio rupumo smėlis		19.00	0.28
6	Ypatingai tankus žvyringas smėlis		43.70	0.30
7	Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas		14.30	0.28
8	Tankus, vidutinio rupumo smėlis, mažai drėgnas		12.00	0.28

No.	Name	Pattern	γ [kN/m³]	ν [–]
9	Tankus, žvyringas smėlis		17.70	0.28

5.

No.	Name	Pattern	E_{oed} [MPa]	E_{def} [MPa]	γ_{sat} [kN/m³]	γ_s [kN/m³]	n [–]
1	Planingai supiltas vidutinio rupumo smėlis		57.50	-	4.30	-	-
2	Purus vidutinio rupumo smėlis		57.50	-	3.50	-	-
3	Tankus, vidutinio rupumo smėlis, mažai drėgnas, geltonas		96.00	-	14.90	-	-
4	Labai tankus, žvyringas smėlis		28.50	-	34.50	-	-
5	Tankus, vidutinio rupumo smėlis		96.00	-	19.00	-	-
6	Ypatingai tankus žvyringas smėlis		28.50	-	43.70	-	-
7	Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas		96.00	-	14.30	-	-
8	Tankus, vidutinio rupumo smėlis, mažai drėgnas		57.50	-	12.00	-	-
9	Tankus, žvyringas smėlis		57.50	-	17.70	-	-

6.

No.	Name	Pattern	φ_{ef} [°]	δ [°]	K [–]	c_u [kPa]	α [–]
1	Planingai supiltas vidutinio rupumo smėlis		0.00	-	-	-	-
2	Purus vidutinio rupumo smėlis		0.00	-	-	-	-
3	Tankus, vidutinio rupumo smėlis, mažai drėgnas, geltonas		38.00	-	-	-	-
4	Labai tankus, žvyringas smėlis		42.00	-	-	-	-
5	Tankus, vidutinio rupumo smėlis		38.00	-	-	-	-
6	Ypatingai tankus žvyringas smėlis		42.00	-	-	-	-
7	Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas		38.00	-	-	-	-
8	Tankus, vidutinio rupumo smėlis, mažai drėgnas		38.00	-	-	-	-
9	Tankus, žvyringas smėlis		38.00	-	-	-	-

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Soil parameters

Planingai supiltas vidutinio rupumo smėlis
Unit weight : γ = 4.30 kN/m^3
Saturated unit weight : γ_{sat} = 4.30 kN/m^3
Angle of internal friction : φ_{ef} = 0.00 °

Purus vidutinio rupumo smėlis
Unit weight : γ = 3.50 kN/m^3
Saturated unit weight : γ_{sat} = 3.50 kN/m^3
Angle of internal friction : φ_{ef} = 0.00 °

Tankus, vidutinio rupumo smėlis, mažai drėgnas, geltonas
Unit weight : γ = 14.90 kN/m^3
Saturated unit weight : γ_{sat} = 14.90 kN/m^3
Angle of internal friction : φ_{ef} = 38.00 °

Labai tankus, žvyringas smėlis
Unit weight : γ = 34.50 kN/m^3
Saturated unit weight : γ_{sat} = 34.50 kN/m^3
Angle of internal friction : φ_{ef} = 42.00 °

Tankus, vidutinio rupumo smėlis
Unit weight : γ = 19.00 kN/m^3
Saturated unit weight : γ_{sat} = 19.00 kN/m^3
Angle of internal friction : φ_{ef} = 38.00 °

Ypatingai tankus žvyringas smėlis
Unit weight : γ = 43.70 kN/m^3
Saturated unit weight : γ_{sat} = 43.70 kN/m^3
Angle of internal friction : φ_{ef} = 42.00 °

Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas
Unit weight : γ = 14.30 kN/m^3
Saturated unit weight : γ_{sat} = 14.30 kN/m^3
Angle of internal friction : φ_{ef} = 38.00 °

Tankus, vidutinio rupumo smėlis, mažai drėgnas
Unit weight : γ = 12.00 kN/m^3
Saturated unit weight : γ_{sat} = 12.00 kN/m^3
Angle of internal friction : φ_{ef} = 38.00 °

Tankus, žvyringas smėlis
Unit weight : γ = 17.70 kN/m^3
Saturated unit weight : γ_{sat} = 17.70 kN/m^3
Angle of internal friction : φ_{ef} = 38.00 °

Geometry

Pile profile: circular

Dimensions
Diameter d = 0.40 m
Length l = 2.00 m

Calculated cross-sectional characteristics
Area A = 1.26E-01 m^2
Moment of inertia I = 1.26E-03 m^4

Location
Off ground height h = -0.60 m
Depth of finished grade h_z = 0.00 m

Technology: CFA piles

Material of structure

Unit weight γ = 23.00 kN/m^3
Analysis of concrete structures carried out according to the standard EN 1992-1-1 (EC2).

Concrete: C 25/30

Cylinder compressive strength	f_{ck}	=	25.00	MPa
Tensile strength	f_{ctm}	=	2.60	MPa
Elasticity modulus	E_{cm}	=	31000.00	MPa
Shear modulus	G	=	12917.00	MPa

Longitudinal steel: B500A

Yield strength f_{yk} = 500.00 MPa

Transverse steel: B500A

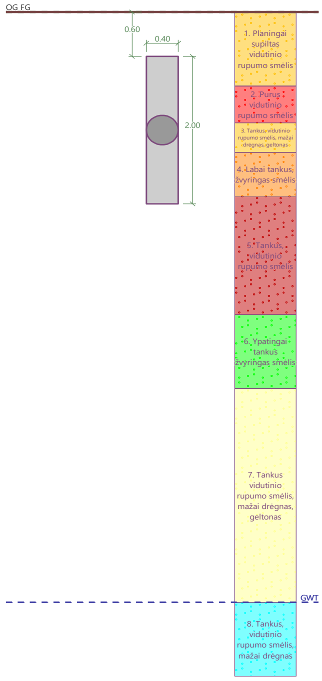
Yield strength f_{yk} = 500.00 MPa

Geological profile and assigned soils

No.	Thickness of layer t [m]	Depth z [m]	Assigned soil	Pattern
1	1.00	0.00 .. 1.00	Planingai supiltas vidutinio rupumo smėlis	
2	0.50	1.00 .. 1.50	Purus vidutinio rupumo smėlis	
3	0.40	1.50 .. 1.90	Tankus, vidutinio rupumo smėlis, mažai drėgnas, geltonas	
4	0.60	1.90 .. 2.50	Labai tankus, žvyringas smėlis	
5	1.60	2.50 .. 4.10	Tankus, vidutinio rupumo smėlis	
6	1.00	4.10 .. 5.10	Ypatingai tankus žvyringas smėlis	
7	2.90	5.10 .. 8.00	Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas	
8	1.60	8.00 .. 9.60	Tankus, vidutinio rupumo smėlis, mažai drėgnas	
9	-	9.60 .. ∞	Planingai supiltas vidutinio rupumo smėlis	

7.

ame : Gręžinys Nr. 1	Stage - analysis : 1 - 0



Load

No.	Load new	Load change	Name	Type	N [kN]	M_x [kNm]	M_y [kNm]	H_x [kN]	H_y [kN]
1	Yes		Viršįtempių ribotuvas 2700 mm (didžiausia ašinė jėga)	Design	12.10	13.01	1.03	0.00	0.00
2	Yes		Viršįtempių ribotuvas 2700 mm (didžiausias momentas)	Design	11.31	25.69	0.00	0.00	0.00
3	Yes		Viršįtempių ribotuvas 2700 mm	Design	10.87	12.82	2.99	0.00	0.00

Ground water table

The ground water table is at a depth of 8.00 m from the original terrain.

Global settings

Analysis of vertical bearing capacity : analytical solution
Analysis type : analysis for drained conditions

Settings of the stage of construction

Design situation : permanent
Verification methodology : without reduction of soil parameters

Verification No. 1

Verification of pile bearing capacity according to NAVFAC DM 7.2 - partial results

Pile base bearing capacity:
The soil under the base is cohesionless
Coefficient of bearing capacity N_q = 43.00
Area of pile transverse cross-section A_p = 1.26E-01 m^2

Pile shaft resistance:

Depth [m]	Thickness [m]	c_{ud} [kPa]	α [–]	K [–]	δ [°]	σ_{or} [kPa]	R_{si} [kN]
0.00	-	-	-	-	-	-	-
0.40	0.40	-	-	1.00	0.00	0.86	0.00
0.40	-	-	-	-	-	-	-
0.90	0.50	-	-	1.00	0.00	1.72	0.00
0.90	-	-	-	-	-	-	-
1.30	0.40	-	-	1.61	28.50	1.72	0.76
1.30	-	-	-	-	-	-	-

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Depth [m]	Thickness [m]	c_{ud} [kPa]	α [–]	K [–]	δ [°]	σ_{or} [kPa]	[illegible] [kN]
1.90	0.60	-	-	1.86	31.50	1.72	1.48
1.90	-	-	-	-	-	-	-
2.00	0.10	-	-	1.61	28.50	1.72	0.19

Verification of bearing capacity : NAVFAC DM 7.2

Analysis carried out with automatic selection of the most unfavourable load cases.
Factor determining critical depth k_{dc} = 1.00

Verification of compressive pile:
Most unfavorable load case No. 1. (Viršįtempių ribotuvas 2700 mm (didžiausia ašinė jėga))
Pile skin bearing capacity R_s = 2.42 kN
Pile base bearing capacity R_b = 187.02 kN

Pile bearing capacity R_c = 189.44 kN
Ultimate vertical force V_d = 12.10 kN

Safety factor = 15.66 > 2.00

Pile bearing capacity is SATISFACTORY

Verification No. 1

Analysis of load settlement curve - input data

Layer No.	E_s [MPa]
1	15.00
2	15.00
3	15.00
4	15.00
5	15.00

Maximum pile settlement s_{lim} = 25.0 mm

Analysis of load settlement curve - partial results

Correction factor for pile compressibility C_k = 0.99
Correction factor for Poisson's ratio of soil C_v = 0.80
Correction factor for stiffness of bearing stratum C_b = 1.44
Base-load proportion for incompressible pile β_0 = 0.18
Proportion of applied load transferred to pile base β = 0.20

Influence coefficients of settlement :
Basic - dependent on ratio l/d I_0 = 0.20
Correction factor for pile compressibility R_k = 1.00
Correction factor for finite depth of layer on a rigid base R_h = 1.00
Correction factor for Poisson's ratio of soil R_v = 0.90

Analysis of load settlement curve - results

Load at the onset of mobilization of skin friction R_{yu} = 3.04 kN
The settlement for the force R_{yu} s_y = 0.1 mm
Total resistance R_c = 170.27 kN
Maximum settlement s_{lim} = 25.0 mm

3.2. AS pamato laikomosios galios skaičiavimas (po atrama 104, IGS 4)

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Pile verification

Input data

Project

Date : 5/9/2022

Settings

Standard - safety factors

Materials and standards

Concrete structures :	EN 1992-1-1 (EC2)
Coefficients EN 1992-1-1 :	standard
Steel structures :	EN 1993-1-1 (EC3)
Partial factor on bearing capacity of steel cross section :	γ_{M0} = 1.00
Timber structures :	EN 1995-1-1 (EC5)
Partial factor for timber property :	γ_{M} = 1.30
Modif. factor of load duration and moisture content :	k_{mod} = 0.50
Coeff. of effective width for shear stress :	k_{cr} = 0.67

Pile

Verification methodology :	Safety factors (ASD)
Analysis for drained conditions :	NAVFAC DM 7.2
Load settlement curve :	linear (Poulos)
4. Horizontal bearing capacity :	Elastic subsoil (p-y method)

Safety factors			
Permanent design situation			
Safety factor for compressive pile :	SF_{cp} =	2.00	[–]
Safety factor for tensile pile :	SF_{tp} =	3.00	[–]

Basic soil parameters

No.	Name	Pattern	γ [kN/m³]	ν [–]
1	Planingai supiltas vidutinio rupumo smėlis		5.50	0.28
2	Purus vidutinio rupumo smėlis		3.80	0.28
3	Labai tankus, žvyringas smėlis, mažai drėgnas		29.40	0.28
4	Tankus, vidutinio rupumo smėlis		22.30	0.28
5	Labai tankus žvyringas smėlis		25.60	0.30
6	Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas		12.40	0.28
7	Labai tankus, vidutinio rupumo smėlis, mažai drėgnas		24.20	0.28
8	Tankus, vidutinio rupumo smėlis, vandeningas		13.80	0.28

5.

No.	Name	Pattern	E_{oed} [MPa]	E_{def} [MPa]	γ_{sat} [kN/m^3]	γ_s [kN/m^3]	n [–]
1	Planingai supiltas vidutinio rupumo smėlis		57.50	-	5.50	-	-
2	Purus vidutinio rupumo smėlis		57.50	-	3.80	-	-
3	Labai tankus, žvyringas smėlis, mažai drėgnas		96.00	-	29.40	-	-
4	Tankus, vidutinio rupumo smėlis		96.00	-	22.30	-	-
5	Labai tankus žvyringas smėlis		28.50	-	25.60	-	-
6	Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas		96.00	-	12.40	-	-
7	Labai tankus, vidutinio rupumo smėlis, mažai drėgnas		57.50	-	24.20	-	-
8	Tankus, vidutinio rupumo smėlis, vandeningas		57.50	-	13.80	-	-

6.

No.	Name	Pattern	φ_{ef} [°]	δ [°]	K [–]	c_u [kPa]	α [–]
1	Planingai supiltas vidutinio rupumo smėlis		0.00	-	-	-	-
2	Purus vidutinio rupumo smėlis		0.00	-	-	-	-
3	Labai tankus, žvyringas smėlis, mažai drėgnas		42.00	-	-	-	-
4	Tankus, vidutinio rupumo smėlis		38.00	-	-	-	-
5	Labai tankus žvyringas smėlis		42.00	-	-	-	-
6	Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas		38.00	-	-	-	-
7	Labai tankus, vidutinio rupumo smėlis, mažai drėgnas		42.00	-	-	-	-
8	Tankus, vidutinio rupumo smėlis, vandeningas		38.00	-	-	-	-

Soil parameters

Planingai supiltas vidutinio rupumo smėlis

Unit weight : γ = 5.50 kN/m^3
Saturated unit weight : γ_{sat} = 5.50 kN/m^3
Angle of internal friction : φ_{ef} = 0.00 °

Purus vidutinio rupumo smėlis

Unit weight : γ = 3.80 kN/m^3
Saturated unit weight : γ_{sat} = 3.80 kN/m^3
Angle of internal friction : φ_{ef} = 0.00 °

Labai tankus, žvyringas smėlis, mažai drėgnas

Unit weight : γ = 29.40 kN/m^3

Saturated unit weight : γ_{sat} = 29.40 kN/m^3
Angle of internal friction : φ_{ef} = 42.00 °

Tankus, vidutinio rupumo smėlis
Unit weight : γ = 22.30 kN/m^3
Saturated unit weight : γ_{sat} = 22.30 kN/m^3
Angle of internal friction : φ_{ef} = 38.00 °

Labai tankus žvyringas smėlis
Unit weight : γ = 25.60 kN/m^3
Saturated unit weight : γ_{sat} = 25.60 kN/m^3
Angle of internal friction : φ_{ef} = 42.00 °

Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas
Unit weight : γ = 12.40 kN/m^3
Saturated unit weight : γ_{sat} = 12.40 kN/m^3
Angle of internal friction : φ_{ef} = 38.00 °

Labai tankus, vidutinio rupumo smėlis, mažai drėgnas
Unit weight : γ = 24.20 kN/m^3
Saturated unit weight : γ_{sat} = 24.20 kN/m^3
Angle of internal friction : φ_{ef} = 42.00 °

Tankus, vidutinio rupumo smėlis, vandeningas
Unit weight : γ = 13.80 kN/m^3
Saturated unit weight : γ_{sat} = 13.80 kN/m^3
Angle of internal friction : φ_{ef} = 38.00 °

Geometry

Pile profile: circular

Dimensions
Diameter d = 0.40 m
Length l = 2.00 m

Calculated cross-sectional characteristics
Area A = 1.26E-01 m^2
Moment of inertia I = 1.26E-03 m^4

Location
Off ground height h = -0.60 m
Depth of finished grade h_z = 0.00 m

Technology: CFA piles

Material of structure

Unit weight γ = 23.00 kN/m^3
Analysis of concrete structures carried out according to the standard EN 1992-1-1 (EC2).

Concrete: C 25/30
Cylinder compressive strength f_{ck} = 25.00 MPa
Tensile strength f_{ctm} = 2.60 MPa
Elasticity modulus E_{cm} = 31000.00 MPa
Shear modulus G = 12917.00 MPa

Longitudinal steel: B500A
Yield strength f_{yk} = 500.00 MPa

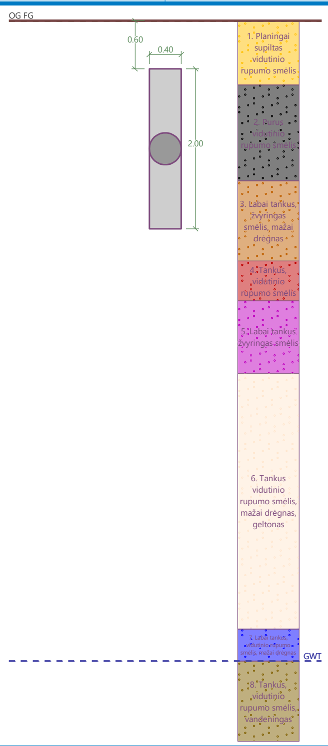
Transverse steel: B500A
Yield strength f_{yk} = 500.00 MPa

Geological profile and assigned soils

No.	Thickness of layer t [m]	Depth z [m]	Assigned soil	Pat
1	0.80	0.00 .. 0.80	Planingai supiltas vidutinio rupumo smėlis	
2	1.20	0.80 .. 2.00	Purus vidutinio rupumo smėlis	
3	1.00	2.00 .. 3.00	Labai tankus, žvyringas smėlis, mažai drėgnas	
4	0.50	3.00 .. 3.50	Tankus, vidutinio rupumo smėlis	
5	0.90	3.50 .. 4.40	Labai tankus žvyringas smėlis	
6	3.20	4.40 .. 7.60	Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas	
7	0.40	7.60 .. 8.00	Labai tankus, vidutinio rupumo smėlis, mažai drėgnas	
8	1.60	8.00 .. 9.60	Tankus, vidutinio rupumo smėlis, vandeningas	
9	-	9.60 .. ∞	Planingai supiltas vidutinio rupumo smėlis	

7.

Name : Gręžinys Nr. 4 | **Stage - analysis : 1 - 0**



Load

No.	Load new	Load change	Name	Type	N [kN]	M_x [kNm]	M_y [kNm]	H_x [kN]	H_y [kN]
1	Yes		Tripolis skyriklis 2400 mm (didžiausia ašinė jėga)	Design	13.31	0.00	5.74	0.00	0.00
2	Yes		Tripolis skyriklis 2400 mm (didžiausias momentas)	Design	13.00	23.25	0.02	0.00	0.00

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	190	236	0

Ground water table
The ground water table is at a depth of 8.00 m from the original terrain.
Global settings
Analysis of vertical bearing capacity : analytical solution
Analysis type : analysis for drained conditions
Settings of the stage of construction
Design situation : permanent
Verification methodology : without reduction of soil parameters

Verification No. 1
Verification of pile bearing capacity according to NAVFAC DM 7.2 - partial results
Pile base bearing capacity:
The soil under the base is cohesionless
Coefficient of bearing capacity N_q = 72.00
Area of pile transverse cross-section A_p = 1.26E-01 m^2

Pile shaft resistance:

Depth [m]	Thickness [m]	c_{ud} [kPa]	α [–]	K [–]	δ [°]	σ_{or} [kPa]	R_{si} [kN]
0.00	-	-	-	-	-	-	-
0.20	0.20	-	-	1.00	0.00	1.10	0.00
0.20	-	-	-	-	-	-	-
1.40	1.20	-	-	1.00	0.00	2.20	0.00
1.40	-	-	-	-	-	-	-
2.00	0.60	-	-	1.86	31.50	2.20	1.89

Verification of bearing capacity : NAVFAC DM 7.2
Analysis carried out with automatic selection of the most unfavourable load cases.
Factor determining critical depth k_{dc} = 1.00

Verification of compressive pile:
Most unfavorable load case No. 1. (Tripolis skyriklis 2400 mm (didžiausia ašinė jėga))
Pile skin bearing capacity R_s = 1.89 kN
Pile base bearing capacity R_b = 240.67 kN

Pile bearing capacity R_c = 242.56 kN
Ultimate vertical force V_d = 13.31 kN

Safety factor = 18.22 > 2.00

Pile bearing capacity is SATISFACTORY
Verification No. 1
Analysis of load settlement curve - input data

Layer No.	E_s [MPa]
1	15.00
2	15.00
3	15.00

Maximum pile settlement s_{lim} = 25.0 mm
Analysis of load settlement curve - partial results
Correction factor for pile compressibility C_k = 0.99
Correction factor for Poisson's ratio of soil C_v = 0.79
Correction factor for stiffness of bearing stratum C_b = 1.29
Base-load proportion for incompressible pile β_0 = 0.18
Proportion of applied load transferred to pile base β = 0.18

Influence coefficients of settlement :

Basic - dependent on ratio l/d	I_0	=	0.20
Correction factor for pile compressibility	R_k	=	1.00
Correction factor for finite depth of layer on a rigid base	R_h	=	1.00
Correction factor for Poisson's ratio of soil	R_v	=	0.90

Analysis of load settlement curve - results

Load at the onset of mobilization of skin friction	R_{yu}	=	2.31	kN
The settlement for the force R_{yu}	s_y	=	0.1	mm
Total resistance	R_c	=	152.45	kN
Maximum settlement	s_{lim}	=	25.0	mm

Išvados:

- Atliktus skaičiavimus gauta, kad viršįtempių ribotuvo (atrama Nr. 101) polio laikomoji galia R_c = 189,44 kN. Skaičiuotinė skersinė jėga lygi 12,10 kN. Saugumo koeficientas 15,66 >2, laikomosios galiso sąlyga yra tenkinama. Parenkamas polis 400 mm skersmens ir 2 m ilgio.
- Tripolio skyriklio (atrama Nr. 104) polio laikomoji galia R_c = 242,56 kN. Skaičiuotinė skersinė jėga lygi 13,31 kN. Saugumo koeficientas 18,22 >2, laikomosios galiso sąlyga yra tenkinama. Parenkamas polis 400 mm skersmens ir 2 m ilgio.

3.3. AS pamatų inkarinių varžtų laikomosios galios skaičiavimas labiausiai apkrautai atramai (srovės transformatorius 5700 mm)

Pamatų inkariniai varžtai parenkami remiantis gautomis didžiausiomis plieninių atramų įražomis t. y. srovės transformatorius. Inkariniai varžtai „Peikko“ HPM 20L.

Skaičiavimams naudojamos įražos:

Nd = -11,38 kN; Mxd = 0,00 kNm; Myd = 4,44 kNm; Vxd = 0,0 kN; Vyd = 0,0 kN;

Nd = -10,84 kN; Mxd = 23,36 kNm; Myd = 0,01 kNm; Vxd = 0,0 kN; Vyd = 0,0 kN;

Nd = -9,50 kN; Mxd = 10,56 kNm; Myd = 7,42 kNm; Vxd = 0,0 kN; Vyd = 0,0 kN.

Designer:
Company:
Address:
Phone:
E-Mail:
Name:

Project:
Title: New Project
Location:
Contact Person:
Comments:
Design Norm: EN Eurocodes (without NA)
Unit system: SI

This design applies exclusively to proprietary PEIKKO products and can't be used to validate properties of third party products, might they appear to be identical.

Summary

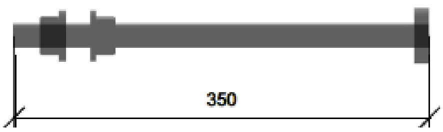
Name	Stage	#	Load Case	Page No.	Max Utilization	Status
Column 1	Final	1	Nd=-11.4, Mxd=0.0, Myd=4.4, Vxd=0.0, Vyd=0.0	4	8%	OK
	Final	2	Nd=-10.8, Mxd=23.4, Myd=0.0, Vxd=0.0, Vyd=0.0	5	64%	OK
	Final	3	Nd=-9.5, Mxd=10.6, Myd=7.4, Vxd=0.0, Vyd=0.0	6	21%	OK

Column 1

Note: Number of Columns: 1

Peikko Products

Bolts: 4 x HPM20L



Totals

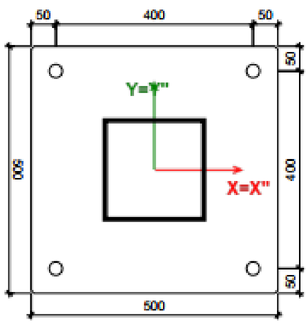
Product	Amount
HPM20L	4

Minimum required torque value of nuts : T_{min} = 150 Nm
Maximum allowed torque value of nuts : T_{max} = 250 Nm
Bolt installation template: PPL20-4 400x400

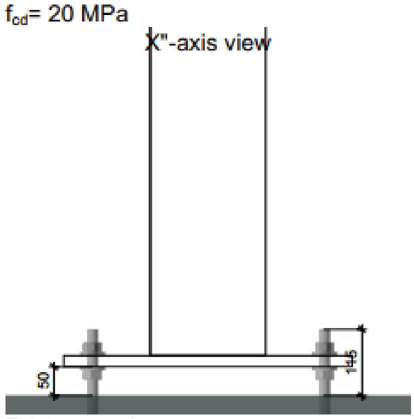
Materials and Geometry
Column: 200x200

f_{cd}= 20 MPa

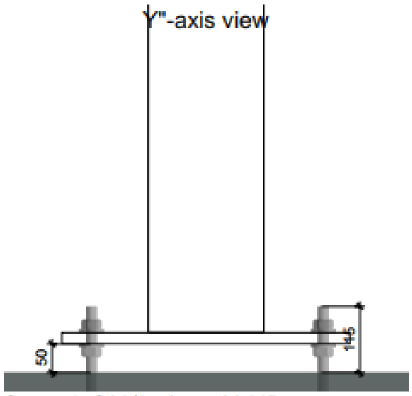
Plane View



X"-axis view



Y"-axis view



Grouting: Thickness: 50 mm Strength C30/37 f_{cd} = 20 MPa

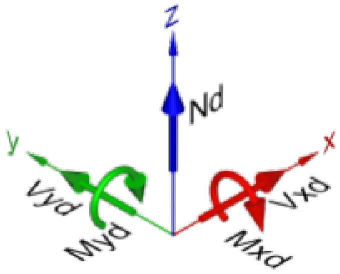
X; Y = local coordinate system of profile
X"; Y" = local coordinate system of anchors

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	193	236	0

Load Cases

NOTE: Loads are defined in the local coordinate system of the profile.

(Design loads)



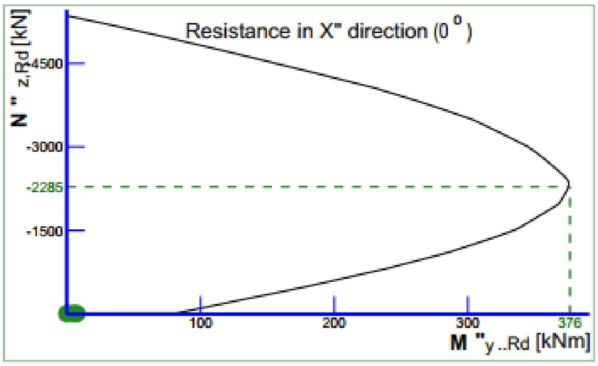
Final Stage

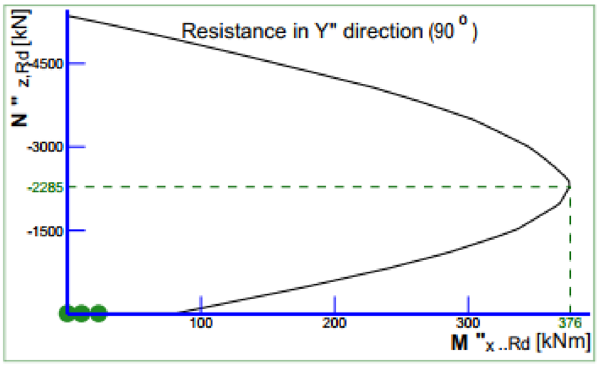
#	Name	N_d [kN]	M_{xd} [kNm]	M_{yd} [kNm]	V_{xd} [kN]	V_{yd} [kN]
1		-11.4	0.0	4.4	0.0	0.0
2		-10.8	23.4	0.0	0.0	0.0
3		-9.5	10.6	7.4	0.0	0.0

Erection stage

No load case for this stage defined

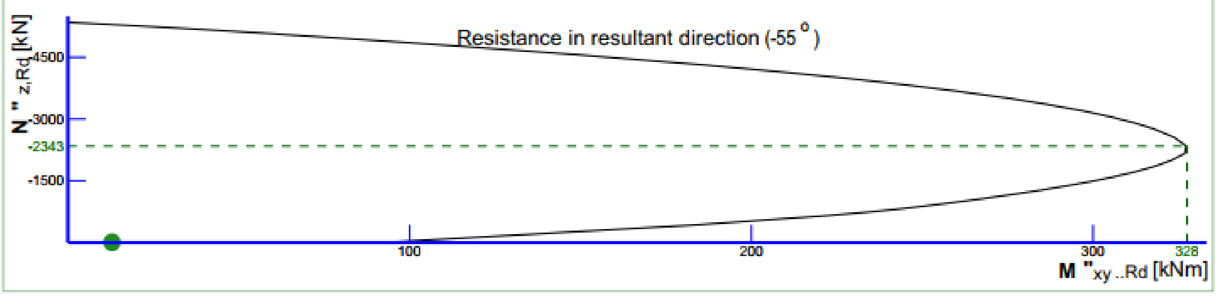
Resistance Diagrams





Resultant Diagrams per Load

Nd=-9.5, Mxd=10.6, Myd=7.4, Vxd=0.0, Vyd=0.0
(loads in coordinate system of profile)
N"d=-9.5, M"xd=10.6, M"yd=7.4, V"xd=0.0, V"yd=0.0
(loads in coordinate system of anchors)



Base Structure

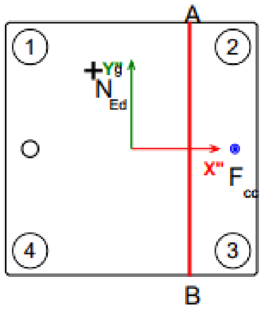
Concrete	C25/30
Uncracked	No
Aggregate size	16 mm
Footing dimension X-axis direction (b)	700 mm
Footing dimension Y-axis direction (h)	700 mm
Height of Footing	800 mm
Eccentricity of bolted column (e_x)	0 mm
Eccentricity of bolted column (e_y)	0 mm

Load Case #1 : Nd=-11.4, Mxd=0.0, Myd=4.4, Vxd=0.0, Vyd=0.0

Steel Failure: Sufficient capacity **Concrete failure: Sufficient capacity**

Steel failure verification

Design value of normal compressive force in the column	$N_{c,Ed}$	-11.4	kN
Friction coefficient (between base plate and grout layer)	C_{fd}	0.2	
Joint friction resistance	$F_{f,Rd}$	2.28	kN
Resultant shear force	V_{sd}	0	kN
Resultant shear force taking account friction contribution	$V_{sd,f}$	0	kN



Neutral axis in (X"/Y") = A(113.5 / 250.0); B(113.5 / -250.0)
Resultant tension force in (X"/Y") = N ^{g}Ed(-200.0/0.0)
Resultant compression force (concrete) in (X"/Y") = F $_{cc}$(203.9/0.0)

Bolt Pos.	Acting axial force [kN]	Design tension resistance [kN]	Axial capacity usage [%]	Acting shear force [kN]	Design shear resistance [kN]	Shear capacity usage [%]	Interaction [%]
1	2.63	88.2	3.0	0.0	31.3	0.0	n/r
2	-0.726	88.2	0.8	0.0	31.3	0.0	n/r
3	-0.726	88.2	0.8	0.0	31.3	0.0	n/r
4	2.63	88.2	3.0	0.0	31.3	0.0	n/r

Concrete failure verifications

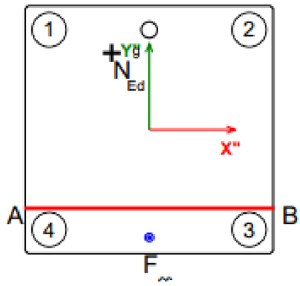
Proof	Load [kN]	Capacity [kN]	Utilization [%]	Status
Pull-Out Failure	2.6	161.7	1.6	Ok
Cone failure				Ok
Covered with reinforcement:				
1) Foundation (Plain Concrete)	5.3	34.0	15.5	
2) Assigned Hanger Reinforcement	2.6	74.1	3.5	
3) Requirement of Strut and Tie Model	12.6	43.7	28.8	
Splitting Failure				Ok
Concrete decisive:				
1) Foundation (Plain Concrete)	5.3	62.7	8.4	
2)Assigned Splitting Reinforcement || X	0.0	87.4	n/r	
3)Assigned Splitting Reinforcement || Y	0.0	87.4	n/r	
Blow-Out Failure	0.0	0.0	n/r	Ok
Pry-out failure	0.0	0.0	n/r	Ok
Edge failure				Ok
Concrete decisive:				
1) -X (Left) Edge (Plain Concrete)	0.0	0.0	n/r	
2) +X (Right) Edge (Plain Concrete)	0.0	0.0	n/r	
3) +Y (Top) Edge (Plain Concrete)	0.0	0.0	n/r	
4) -Y (Bottom) Edge (Plain Concrete)	0.0	0.0	n/r	
5)Assigned Edge Reinforcement (-X)	0.0	0.0	n/r	
6)Assigned Edge Reinforcement (+X)	0.0	0.0	n/r	
7)Assigned Edge Reinforcement (+Y)	0.0	0.0	n/r	
8)Assigned Edge Reinforcement (-Y)	0.0	0.0	n/r	
Combined Resistance	$\beta_N \leq 1$		8.4	Ok

Load Case #2 : Nd=-10.8, Mxd=23.4, Myd=0.0, Vxd=0.0, Vyd=0.0

Steel Failure: Sufficient capacity **Concrete failure: Sufficient capacity**

Steel failure verification

Design value of normal compressive force in the column	$N_{c,Ed}$	-10.8	kN
Friction coefficient (between base plate and grout layer)	C_{fd}	0.2	
Joint friction resistance	$F_{f,Rd}$	2.16	kN
Resultant shear force	V_{sd}	0	kN
Resultant shear force taking account friction contribution	$V_{sd,f}$	0	kN



Neutral axis in (X"/Y") = A(-250.0 / -158.6); B(250.0 / -158.5)
Resultant tension force in (X"/Y") = N^{g}_{Ed}(0.0/200.0)
Resultant compression force (concrete) in (X"/Y") = F_{cc}(0.1/-215.8)

Bolt Pos.	Acting axial force [kN]	Design tension resistance [kN]	Axial capacity usage [%]	Acting shear force [kN]	Design shear resistance [kN]	Shear capacity usage [%]	Interaction [%]
1	25.4	88.2	28.8	0.0	31.3	0.0	n/r
2	25.4	88.2	28.8	0.0	31.3	0.0	n/r
3	-2.94	88.2	3.3	0.0	31.3	0.0	n/r
4	-2.93	88.2	3.3	0.0	31.3	0.0	n/r

Concrete failure verifications

Proof	Load [kN]	Capacity [kN]	Utilization [%]	Status
Pull-Out Failure	25.4	161.7	15.7	Ok
Cone failure				Ok
Covered with reinforcement:				
1) Foundation (Plain Concrete)	50.8	47.0	108.1	
2) Assigned Hanger Reinforcement	25.4	74.1	34.3	
3) Requirement of Strut and Tie Model	12.6	43.7	28.8	
Splitting Failure				Ok
Concrete decisive:				
1) Foundation (Plain Concrete)	50.8	79.1	64.2	
2)Assigned Splitting Reinforcement || X	0.0	87.4	n/r	
3)Assigned Splitting Reinforcement || Y	0.0	87.4	n/r	
Blow-Out Failure	0.0	0.0	n/r	Ok
Pry-out failure	0.0	0.0	n/r	Ok
Edge failure				Ok
Concrete decisive:				
1) -X (Left) Edge (Plain Concrete)	0.0	0.0	n/r	
2) +X (Right) Edge (Plain Concrete)	0.0	0.0	n/r	
3) +Y (Top) Edge (Plain Concrete)	0.0	0.0	n/r	
4) -Y (Bottom) Edge (Plain Concrete)	0.0	0.0	n/r	
5)Assigned Edge Reinforcement (-X)	0.0	0.0	n/r	
6)Assigned Edge Reinforcement (+X)	0.0	0.0	n/r	
7)Assigned Edge Reinforcement (+Y)	0.0	0.0	n/r	
8)Assigned Edge Reinforcement (-Y)	0.0	0.0	n/r	
Combined Resistance	$\beta_N \leq 1$		64.2	Ok

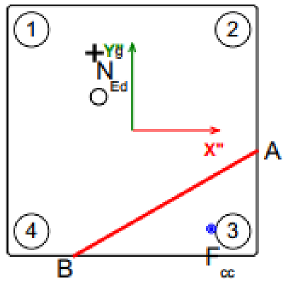
Load Case #3 : Nd=-9.5, Mxd=10.6, Myd=7.4, Vxd=0.0, Vyd=0.0

Steel Failure: Sufficient capacity

Concrete failure: Sufficient capacity

Steel failure verification

Design value of normal compressive force in the column	$N_{c,Ed}$	-9.5	kN
Friction coefficient (between base plate and grout layer)	C_{fd}	0.2	
Joint friction resistance	$F_{f,Rd}$	1.9	kN
Resultant shear force	V_{sd}	0	kN
Resultant shear force taking account friction contribution	$V_{sd,f}$	0	kN



Neutral axis in (X"/Y") = A(250.0 / -38.8); B(-118.1 / -250.0)
Resultant tension force in (X"/Y") = N^{g}_{Ed}(-75.8/155.0)
Resultant compression force (concrete) in (X"/Y") = F_{cc}(157.1/-195.1)

Bolt Pos.	Acting axial force [kN]	Design tension resistance [kN]	Axial capacity usage [%]	Acting shear force [kN]	Design shear resistance [kN]	Shear capacity usage [%]	Interaction [%]
1	14.3	88.2	16.2	0.0	31.3	0.0	n/r
2	7.71	88.2	8.7	0.0	31.3	0.0	n/r
3	-3.82	88.2	4.3	0.0	31.3	0.0	n/r
4	2.80	88.2	3.2	0.0	31.3	0.0	n/r

Concrete failure verifications

Proof	Load [kN]	Capacity [kN]	Utilization [%]	Status
Pull-Out Failure	14.3	161.7	8.9	Ok
Cone failure				Ok
Covered with reinforcement:				
1) Foundation (Plain Concrete)	24.8	70.3	35.3	
2) Assigned Hanger Reinforcement	14.3	74.1	19.3	
3) Requirement of Strut and Tie Model	12.6	43.7	28.8	
Splitting Failure				Ok
Concrete decisive:				
1) Foundation (Plain Concrete)	24.8	118.4	21.0	
2)Assigned Splitting Reinforcement || X	0.0	87.4	n/r	
3)Assigned Splitting Reinforcement || Y	0.0	87.4	n/r	
Blow-Out Failure	0.0	0.0	n/r	Ok
Pry-out failure	0.0	0.0	n/r	Ok
Edge failure				Ok
Concrete decisive:				
1) -X (Left) Edge (Plain Concrete)	0.0	0.0	n/r	
2) +X (Right) Edge (Plain Concrete)	0.0	0.0	n/r	
3) +Y (Top) Edge (Plain Concrete)	0.0	0.0	n/r	
4) -Y (Bottom) Edge (Plain Concrete)	0.0	0.0	n/r	
5)Assigned Edge Reinforcement (-X)	0.0	0.0	n/r	
6)Assigned Edge Reinforcement (+X)	0.0	0.0	n/r	
7)Assigned Edge Reinforcement (+Y)	0.0	0.0	n/r	
8)Assigned Edge Reinforcement (-Y)	0.0	0.0	n/r	
Combined Resistance		$\beta_N \leq 1$	21.0	Ok

Supplementary Bolt Reinforcement

Concrete side cover	20 mm
Concrete top cover	20 mm

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Concrete bottom cover	50 mm
Rebar Material	B500B
f_{yd}= 434.8	

Hanger reinforcement for tension force

Calculated stirrups per bolt	2 Ø10
The stirrups are located with a radial distance to the leg not further than R	75 mm
Splitting reinforcement parallel to X ($A_{sp,x}$)	302 mm²
Splitting reinforcement parallel to Y ($A_{sp,y}$)	302 mm²

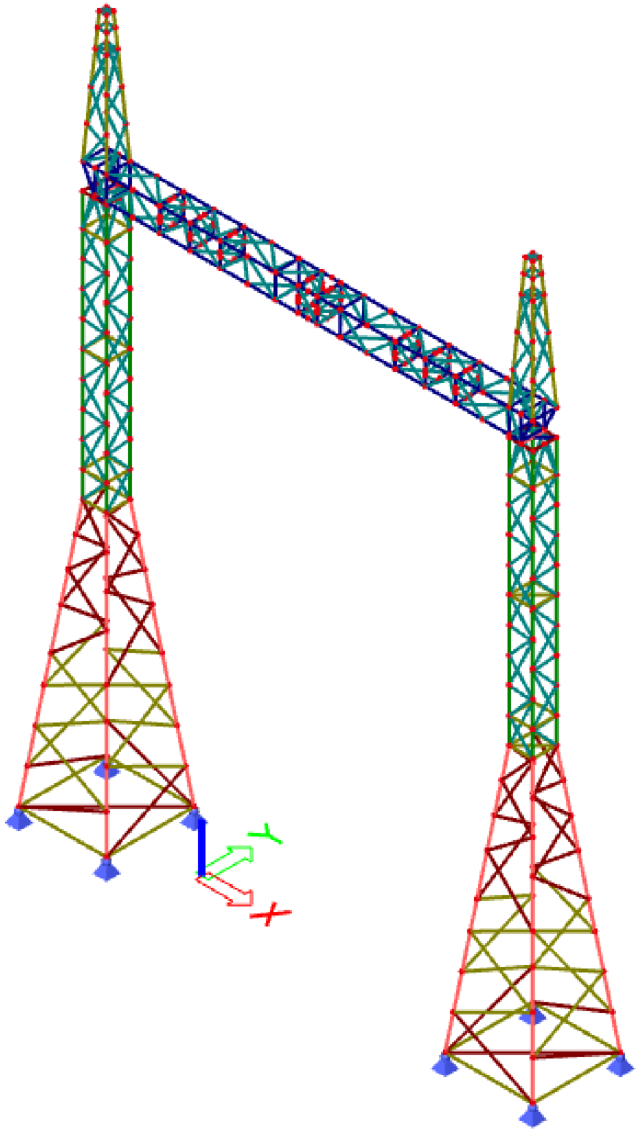
Detailing of required reinforcement must be executed according to product technical manual. See also CEN/TS 1992-4-2, Figure 2

Išvados:

- Parenkami pamatų inkariniai varžtai HPM20L.
- Nepalankiausiu apkrovų derinių apkrautų inkarinių varžtų išnaudojimas 64%.

4. 110 KV PORTALO PL110-11.5-9-71-1-1Ž SKAIČIAVIMAI

Portalo plieninės konstrukcijos suprojektuotos naudojant europinį plieną ir europinio tipo profilius. Naudojamas S355J2 stiprumo klasės plienas. Konstrukcijų elementai tarpusavyje jungiami virintiniais sujungimais ir varžtais. Linijiniai portalai montuojami statmenai linijai. Portalas skirtas atlaikyti laidų tempimus nuo inkarinės - galinės atramos į skirstyklą. Portalas suprojektuotas, darant prielaidą, kad atstumas portalas-inkarinė atrama neviršys – 71 m. Portalas skaičiuojamos kaip erdvinis spragotinis elementas. Konstrukcija sudaryta iš įvairaus skerspjūvio kampuočių, kurie tarpusavyje jungiamai varžtais – lankstu. Spyriai- elementai skaičiuojami nuo ašinės jėgos.



Pav. 9 Portalo konstrukcijos skaičiuojamasis modelis

Name	Type Detailed	Item material	Fabrication	A [m²]	A_y [m²] A_z [m²]	I_y [m⁴] I_z [m⁴]	$W_{el,y}$ [m³] $W_{el,z}$ [m³]	$W_{pl,y}$ [m³] $W_{pl,z}$ [m³]	Colour
CS2	L100X8	S 355	rolled	1,5500e-03	1,2908e-03 1,3112e-03	2,3000e-06 5,9900e-07	3,2485e-05 1,5470e-05	5,1212e-05 2,6414e-05	
CS3	L70X7	S 355	rolled	9,4000e-04	7,8961e-04 7,9525e-04	6,7100e-07 1,7600e-07	1,3548e-05 6,2796e-06	2,1545e-05 1,1097e-05	
CS4	L50X5	S 355	rolled	4,8000e-04	4,0263e-04 4,0726e-04	1,7400e-07 4,5900e-08	4,9135e-06 2,2908e-06	7,8284e-06 4,0454e-06	
CS5	L90X7	S 355	rolled	1,2200e-03	1,0167e-03 1,0349e-03	1,4700e-06 3,8300e-07	2,3056e-05 1,1043e-05	3,6335e-05 1,8770e-05	
CS6	L35X5	S 355	rolled	3,2800e-04	2,8196e-04 2,7825e-04	5,6300e-08 1,4900e-08	2,2761e-06 1,0118e-06	3,6891e-06 1,9035e-06	
CS7	L65X7	S 355	rolled	8,7000e-04	7,3284e-04 7,3731e-04	5,3000e-07 1,3800e-07	1,1525e-05 5,3102e-06	1,8409e-05 9,4975e-06	

Pav. Portalo konstrukcijos elementų skerspjūviai

Lentelė 32. Apkrovos veikiančios portalo konstrukciją

Eil. Nr.	Apkrovos pavadinimas	Fx, kN	Fy, kN	Fz, kN	Pastaba
1.	**Nuolatinės apkrovos**				
1.1.	**Laidų apkrovos poveikis į AS pusę**				
1.1.1.	AS-243/39, d=21,8mm, g=0,01 kN/m, l_{max}=25 m į AS pusę	-	-	-0,125	
1.2.	**Laidų apkrovos poveikis į OL pusę**				
1.2.1.	AS-243/39, d=21,8mm, g=0,01 kN/m, l_{max}=37,5m į OL pusę	-	-	-0,200	
1.2.2.	TK-70, d=12 mm, g=0,0061 kN/m, l_{max}=37,5 m tik į OL pusę	-	-	-0,115	
1.3.	**Tvirtinimo armatūros (girliandų) savasis svoris**				
1.4.	Fazinių laidų tempiama girlianda	-	-	-0,500	
1.5.	Troso tvirtinimo armatūra	-	-	-0,200	
2.	**Kintamos apkrovos**				
2.1.	**Vėjas I-as raj. 24 m/s, q_{ref}=0,36 kN/m²**				
2.2.	**Laidų poveikis į AS pusę, kai L=25 m**				
2.2.1.	Vėjo poveikis statmenai laidams	0,305	-	-	X-X
2.2.2.	Vėjo poveikis α=45⁰ laidams	0,385	-	-	X-Y
2.2.3.	Vėjo poveikis nuo tempiamos girliandos	0,550	-	-	X-X
2.3.	**Laidų poveikis į OL pusę, kai L=37,5m**				
2.3.1.	Vėjo poveikis statmenai laidams	0,458	-	-	X-X
2.3.2.	Vėjo poveikis α=45⁰ laidams	0,572	-	-	X-Y
2.3.3.	Vėjo poveikis nuo tempiamos girliandos	0,550	-	-	X-X
2.3.4.	Vėjo poveikis nuo troso	0,252	-	-	X-X
2.3.5.	Vėjo poveikis α=45⁰ trosui	0,315	-	-	X-Y
2.4.	**Apledėjimas I-as raj. 14,5 m aukštyje RSN 156-94 (8.6 lentelė), t_{led}=6,2 mm**				
2.4.1.	**Laidų poveikis į AS pusę, kai L=25 m**				
2.4.2.	Ledo svoris nuo tempiamos girliandos	-	-	-0,245	
2.4.3.	Ledo svoris nuo laidų	-	-	-0,185	
2.4.4.	**Laidų poveikis į OL pusę, kai L=71m**				
2.4.5.	Ledo svoris nuo tempiamos girliandos	-	-	-0,245	
2.4.6.	Ledo svoris nuo laidų	-	-	-0,275	
2.4.7.	Ledo svoris nuo troso tvirtinimo armat.	-	-	-0,100	
2.4.8.	Ledo svoris nuo troso	-	-	-0,180	
2.5.	**Laidų, trosų tempimo poveikis į atrama**				
4.5.1.	Laido tempimas portalas-atrama	-	1,40	-	
4.5.2.	Laido tempimas portalas-skirstykla	-	-	-	
4.5.3	Troso tempimas portalas-atrama	-	1,50	-	

Lentelė 33. Portalų poslinkiai

Statiniai	Pagrindo ir statinio ribiniai poslinkiai		
	santykinis nuosėdis $(\Delta s / L)_u$	posvyris i_u	vidutinės $s_{m,u}$ (skliausteliuose maksimaliosios) $s_{max,u}$ nuosėdžių reikšmės, cm
8. Elektros perdavimo oro linijų atramos:			
atskirų skirstomųjų įrenginių portalai	0,0025	0,0025	–

Pastabos.
a. Žymuo L, nustatant santykinį nuosėdį pagal 8 p., nustato atstumą tarp pamatų blokų ašių horizontalios jėgos veikimo kryptimi, o atramoms su atotampomis – atstumą tarp suspausto pamato ir inkaro ašių.
b. Kai pagrindo grunto sluoksniai horizontalūs (nuolydis ne didesnis negu 0,1) ir vienodo storio, ribines nuosėdžių vidutines ir maksimaliąsias vertes galima didinti 20 %.

Lentelė 34. Poveikių vertinimas į portalą

Apkrovos nr.	**Apkrovos žymuo**	**Apkrovos pavadinimas**
1	K.s.sv.	Konstrukcijos savasis svoris
2	Laid.s.sv.	Laidų savasis svoris
3	Tvirt. girliandų s.sv.	Tvirtinimo girliandų savasis svoris
4	Laid. Temp.	Laidų ir trosų tempimas
5	Vėjas X-X	Vėjas X-X
6	Vėjas Y-Y	Vėjas Y-Y
7	Vėjas X-Y	Vėjas X-Y
8	Apšalas	Apšalas nuo įrenginių ir laidų

Lentelė 35. Maksimalios atraminės reakcijos (SRB)

Name	**Case**	**Rx [kN]**	**Ry [kN]**	**Rz [kN]**	**Mx [kNm]**	**My [kNm]**	**Mz [kNm]**
Sn1/N15	ULS/1	7,82	-8,03	66,01	0,00	0,00	0,00
Sn8/N278	ULS/1	8,23	-7,71	67,45	0,00	0,00	0,00
Sn1/N15	ULS/2	-5,04	2,34	-19,66	0,00	0,00	0,00
Sn8/N278	ULS/2	-2,73	3,58	-18,88	0,00	0,00	0,00
Sn2/N13	ULS/3	-12,73	-12,76	-100,61	0,00	0,00	0,00
Sn2/N13	ULS/4	-1,45	0,04	-12,24	0,00	0,00	0,00
Sn5/N273	ULS/5	-1,05	-0,92	-8,19	0,00	0,00	0,00
Sn2/N13	ULS/5	-1,07	0,04	-9,03	0,00	0,00	0,00
Sn5/N273	ULS/6	**-16,68**	**-12,96**	**-104,18**	**0,00**	**0,00**	**0,00**
Sn2/N13	ULS/6	-13,11	-12,76	-103,82	0,00	0,00	0,00
Sn3/N17	ULS/7	-2,03	-0,71	16,51	0,00	0,00	0,00
Sn7/N276	ULS/7	-1,86	-1,93	15,88	0,00	0,00	0,00
Sn7/N276	ULS/8	-16,84	-14,03	113,32	0,00	0,00	0,00
Sn3/N17	ULS/8	**-14,20**	**-12,91**	**114,87**	**0,00**	**0,00**	**0,00**
Sn6/N274	ULS/9	6,90	-7,01	-57,36	0,00	0,00	0,00
Sn4/N11	ULS/9	6,99	-7,17	-55,98	0,00	0,00	0,00
Sn4/N11	ULS/10	-5,67	3,35	27,93	0,00	0,00	0,00
Sn6/N274	ULS/10	-3,21	4,38	25,34	0,00	0,00	0,00
Sn6/N274	ULS/11	6,50	-7,03	-54,08	0,00	0,00	0,00
Sn6/N274	ULS/12	-2,82	4,40	22,05	0,00	0,00	0,00

Lentelė 36. Nepalankiausi atraminių reakcijų derinai (SRB)

Name	Combination key
ULS/1	1.35*K.s.sv + 1.35*Laidų s.sv. + 1.35*Tvirt. girliandų s.sv. + 1.30*Vejas Y-Y + 1.35*Laid. temp. + 0.78*Apsalas
ULS/2	K.s.sv + Laidų s.sv. + Tvirt. girliandų s.sv. + 1.30*Vejas X-X + Laid. temp.
ULS/3	K.s.sv + Laidų s.sv. + Tvirt. girliandų s.sv. + Laid. temp. + 1.30*Vejas X-Y
ULS/4	1.35*K.s.sv + 1.35*Laidų s.sv. + 1.35*Tvirt. girliandų s.sv. + 1.35*Laid. temp. + 1.30*Apsalas
ULS/5	K.s.sv + Laidų s.sv. + Tvirt. girliandų s.sv. + Laid. temp. + 1.30*Apsalas
ULS/6	1.35*K.s.sv + 1.35*Laidų s.sv. + 1.35*Tvirt. girliandų s.sv. + 1.35*Laid. temp. + 1.30*Vejas X-Y
ULS/7	K.s.sv + Laidų s.sv. + Tvirt. girliandų s.sv. + Laid. temp.
ULS/8	1.35*K.s.sv + 1.35*Laidų s.sv. + 1.35*Tvirt. girliandų s.sv. + 1.35*Laid. temp. + 1.30*Vejas X-Y + 0.78*Apsalas
ULS/9	1.35*K.s.sv + 1.35*Laidų s.sv. + 1.35*Tvirt. girliandų s.sv. + 1.30*Vejas Y-Y + 1.35*Laid. temp.
ULS/10	K.s.sv + Laidų s.sv. + Tvirt. girliandų s.sv. + 1.30*Vejas X-X + Laid. temp. + 0.78*Apsalas
ULS/11	K.s.sv + Laidų s.sv. + Tvirt. girliandų s.sv. + 1.30*Vejas Y-Y + Laid. temp.
ULS/12	1.35*K.s.sv + 1.35*Laidų s.sv. + 1.35*Tvirt. girliandų s.sv. + 1.30*Vejas X-X + 1.35*Laid. temp. + 0.78*Apsalas

Lentelė 37. Maksimalūs poslinkiai ir posūkiai (TRB)

Name	Case	ux [mm]	uy [mm]	uz [mm]	φx [mrad]	φy [mrad]	φz [mrad]	Utotal [mm]
B503	SLS/1	-2,1	37,9	0,3	-5,1	-0,6	-0,7	38,0
B743	SLS/2	16,3	19,3	-0,1	-2,8	1,3	0,0	25,3
B188	SLS/3	2,8	-0,6	1,2	-0,1	0,3	0,1	3,1
B19	SLS/3	11,1	43,9	-4,0	-7,6	0,0	0,3	45,4
B458	SLS/4	11,2	36,2	2,1	-7,0	1,7	1,6	37,9
B717	SLS/3	13,7	58,3	0,8	-8,6	1,2	1,4	59,9
B458	SLS/3	1,2	-0,2	-0,6	2,4	1,0	4,1	1,4
B743	SLS/2	12,5	9,1	-0,3	-2,1	2,7	-0,3	15,5
B818	SLS/3	0,1	0,3	0,1	0,6	-3,5	-5,7	0,3
B20	SLS/3	0,2	0,2	-0,2	-2,8	-0,3	5,4	0,3
B293	SLS/3	14,2	62,7	0,4	-8,0	1,3	0,9	64,3

Lentelė 38. Nepalankiausi aprkovų deriniai (TRB)

Name	Combination key
SLS/1	K.s.sv + Laidų s.sv. + Tvirt. girliandų s.sv. + 0.60*Vejas Y-Y + Laid. temp. + Apsalas
SLS/2	K.s.sv + Laidų s.sv. + Tvirt. girliandų s.sv. + Vejas X-X + Laid. temp. + 0.60*Apsalas
SLS/3	K.s.sv + Laidų s.sv. + Tvirt. girliandų s.sv. + Laid. temp. + Vejas X-Y + 0.60*Apsalas
SLS/4	K.s.sv + Laidų s.sv. + Tvirt. girliandų s.sv. + Laid. temp. + Vejas X-Y

Lentelė 39. Maksimalios elementus veikiančios įražos (SRB)

Name	Case	N [kN]	Vy [kN]	Vz [kN]	Mx [kNm]	My [kNm]	Mz [kNm]
B58	ULS/1	0,64	-2,17	-9,73	0,00	0,48	0,05
B58	ULS/1	0,64	-2,16	-9,70	0,00	-1,95	-0,49
B876	ULS/1	**-154,10**	0,85	-1,44	0,00	0,20	0,08
B60	ULS/1	-0,37	2,25	8,68	0,00	-0,39	-0,09
B877	ULS/2	106,31	-0,19	-0,95	-0,04	0,47	0,10
B293	ULS/2	-2,29	-4,96	0,66	0,00	0,20	-0,45
B873	ULS/2	**151,08**	0,78	1,39	0,00	1,15	0,38
B291	ULS/2	-0,58	5,74	0,59	0,00	-0,04	0,55
B873	ULS/3	100,37	-0,30	0,94	0,04	-0,33	0,13
B616	ULS/4	-21,43	2,14	3,85	0,00	1,75	1,62

Name	Case	N [kN]	Vy [kN]	Vz [kN]	Mx [kNm]	My [kNm]	Mz [kNm]
B618	ULS/4	12,26	0,80	2,40	0,00	1,92	1,45
B764	ULS/5	9,93	-1,24	-2,71	0,02	-0,97	-1,04

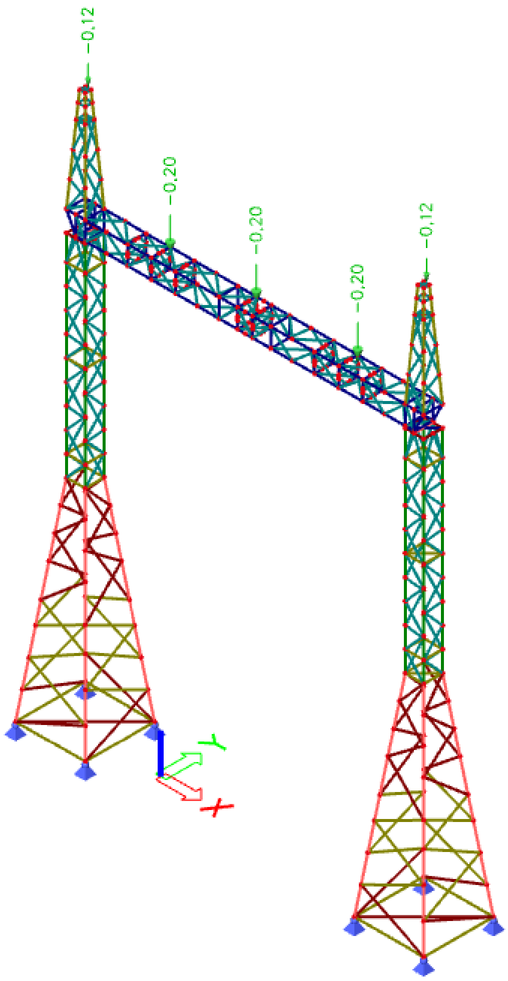
Lentelė 40. Elementus veikiančių pavojingiausių įražų deriniai (SRB)

Name	Combination key
ULS/1	1.35*K.s.sv + 1.35*Laidų s.sv. + 1.35*Tvirt. girliandų s.sv. + 1.35*Laid. temp. + 1.30*Vejas X-Y + 0.78*Apsalas
ULS/2	1.35*K.s.sv + 1.35*Laidų s.sv. + 1.35*Tvirt. girliandų s.sv. + 1.35*Laid. temp. + 1.30*Vejas X-Y
ULS/3	K.s.sv + Laidų s.sv. + Tvirt. girliandų s.sv. + Laid. temp. + 1.30*Vejas X-Y
ULS/4	1.35*K.s.sv + 1.35*Laidų s.sv. + 1.35*Tvirt. girliandų s.sv. + 1.30*Vejas X-X + 1.35*Laid. temp. + 0.78*Apsalas
ULS/5	K.s.sv + Laidų s.sv. + Tvirt. girliandų s.sv. + 1.30*Vejas X-X + Laid. temp.

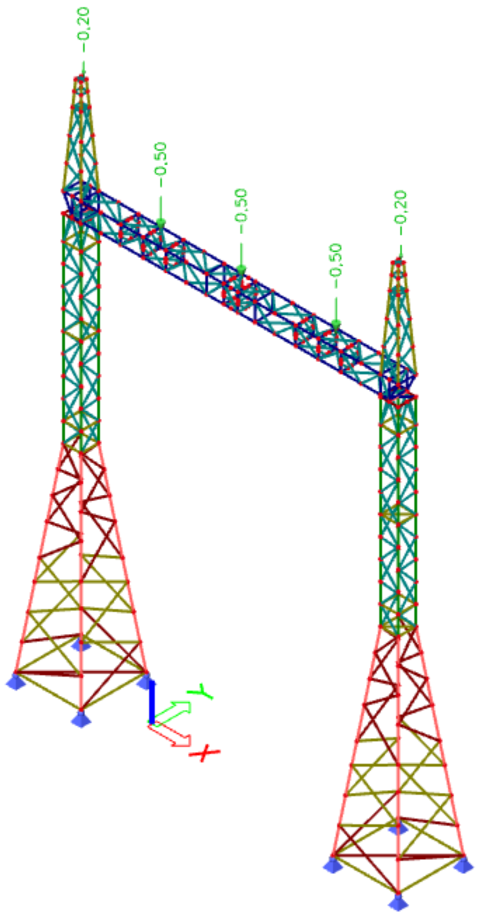
Lentelė 41. Vėjo apkrovų į portalo konstrukciją suvestinė lentelė

Vėjo kryptis	Veikiamo elemento pavadinimas	Vėjo rajonas	K-jos aukštis, m	Vėjo apkrova į išorinį paviršių, kN/m²	Vėjo apkrova į vidinį paviršių, kN/m²
X-X	1 dalis (apatinė dalis)	I-as	5,65	0,983	0,393
	2 dalis (vidurinė dalis)	I-as	11,50	0,999	0,399
	3 dalis (traversa)	I-as	11,75	-	-
	4 dalis (viršutinė dalis)	I-as	14,50	1,076	0,430
Y-Y	1 dalis (apatinė dalis)	I-as	5,65	0,983	0,393
	2 dalis (vidurinė dalis)	I-as	11,50	0,999	0,399
	3 dalis (traversa)	I-as	11,75	1,488	0,595
	4 dalis (viršutinė dalis)	I-as	14,50	1,076	0,430
X-Y	1 dalis (apatinė dalis)	I-as	5,65	1,174	0,469
	2 dalis (vidurinė dalis)	I-as	11,50	1,208	0,483
	3 dalis (traversa)	I-as	11,75	1,760	0,704
	4 dalis (viršutinė dalis)	I-as	14,50	1,296	0,518

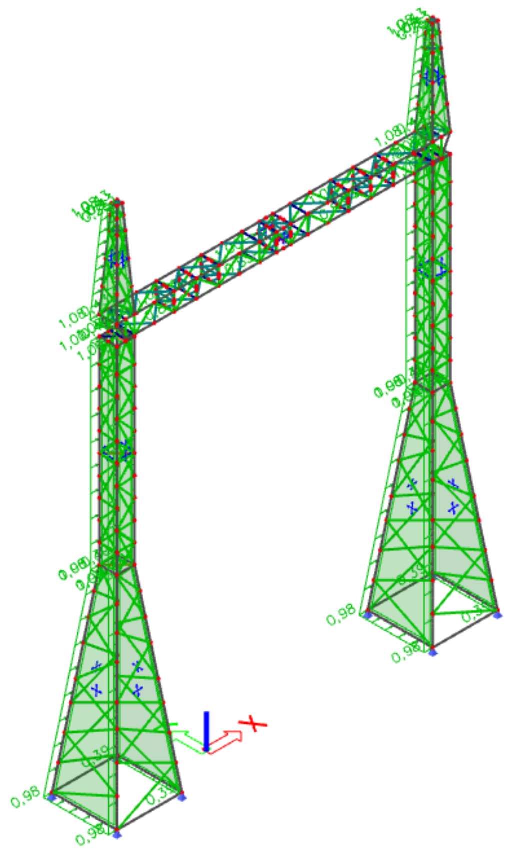
Detalūs vėjo apkrovų skaičiavimai pateikti 5 skyriuje „Portalo vėjo apkrovos skaičiavimas“.



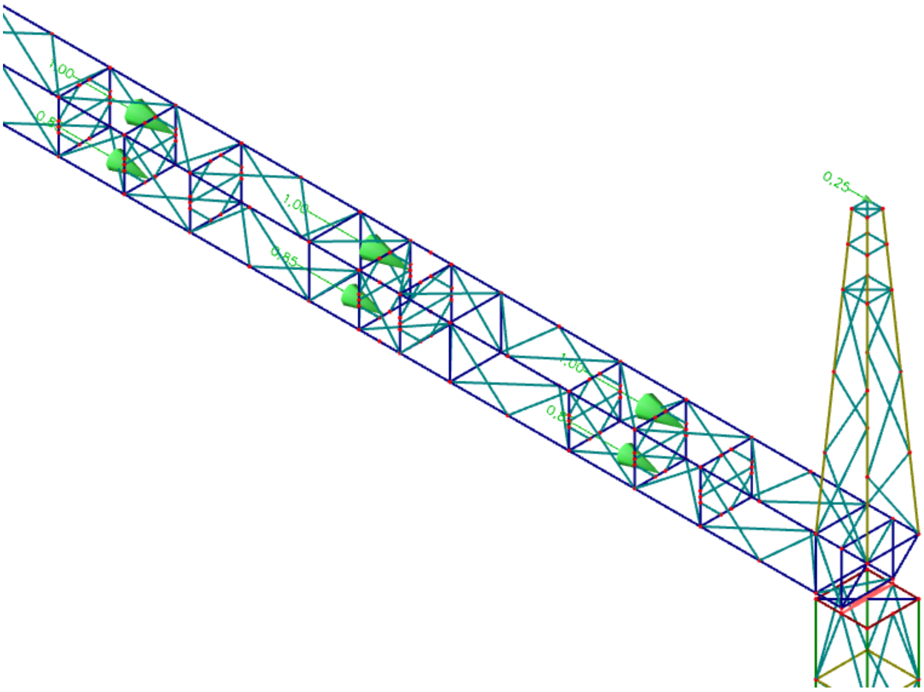
Pav. 10 Laidų ir trosų apkrova



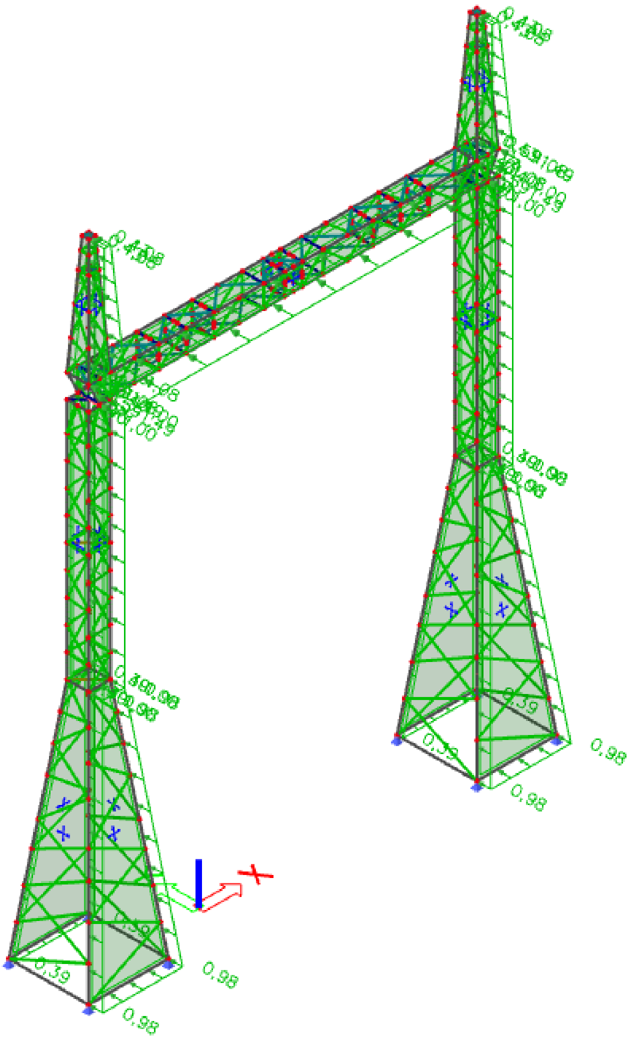
Pav. 11 Technologinių įrenginių (tvirtinimo armatūros) apkrova



Pav. 12 Apkrova nuo vėjo poveikio X-X kryptimi

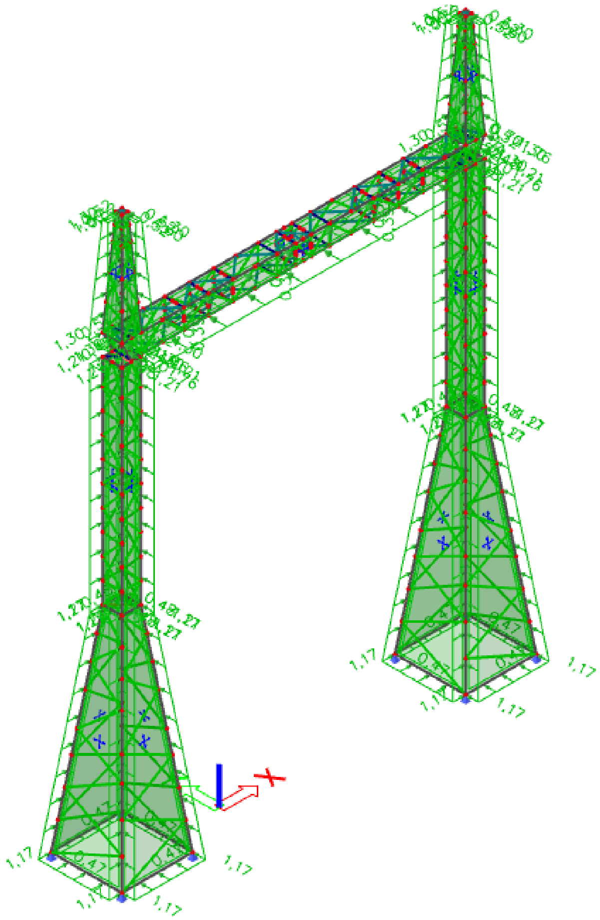


Pav. 13 Apkrova nuo X-X kryptimi vėjo veikiamų laidų (fragmentas)

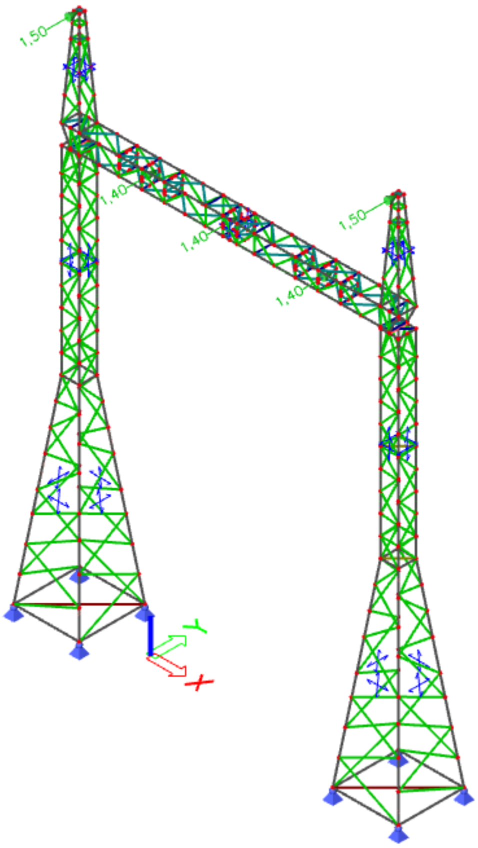


Pav. 14 Apkrova nuo vėjo poveikio Y-Y kryptimi

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	206	236	0

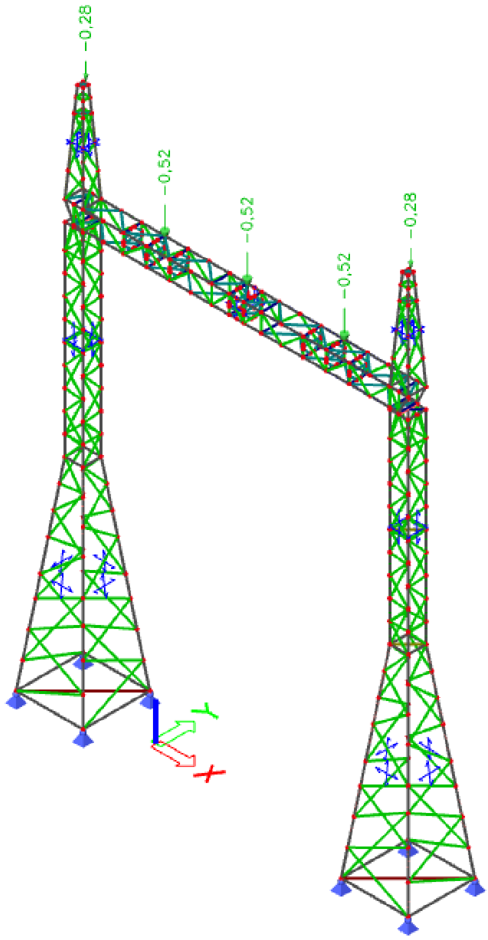


Pav. 15 Apkrova nuo vėjo poveikio X-Y kryptimi

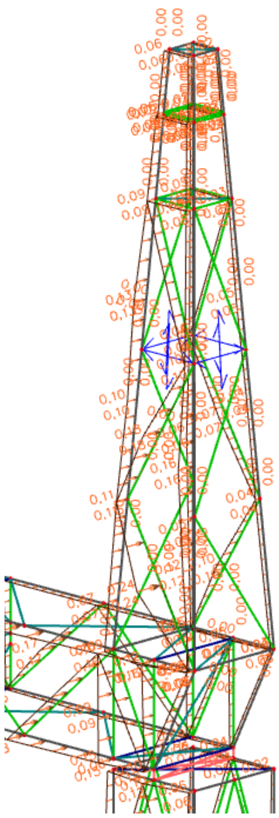


Pav. 16 Poveikiai nuo laidų ir trosų tempimo

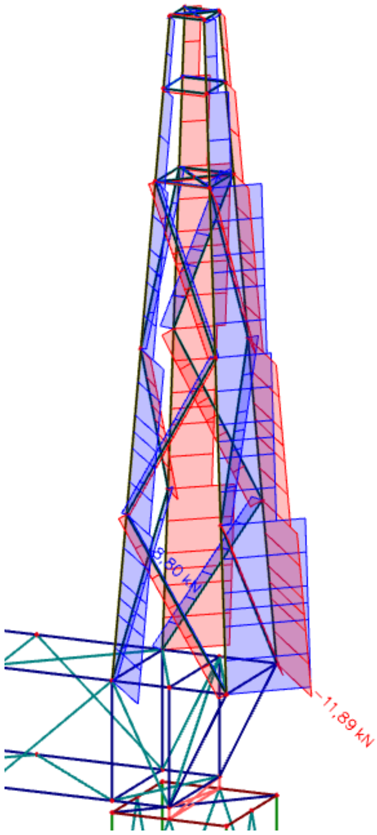
	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	207	236	0



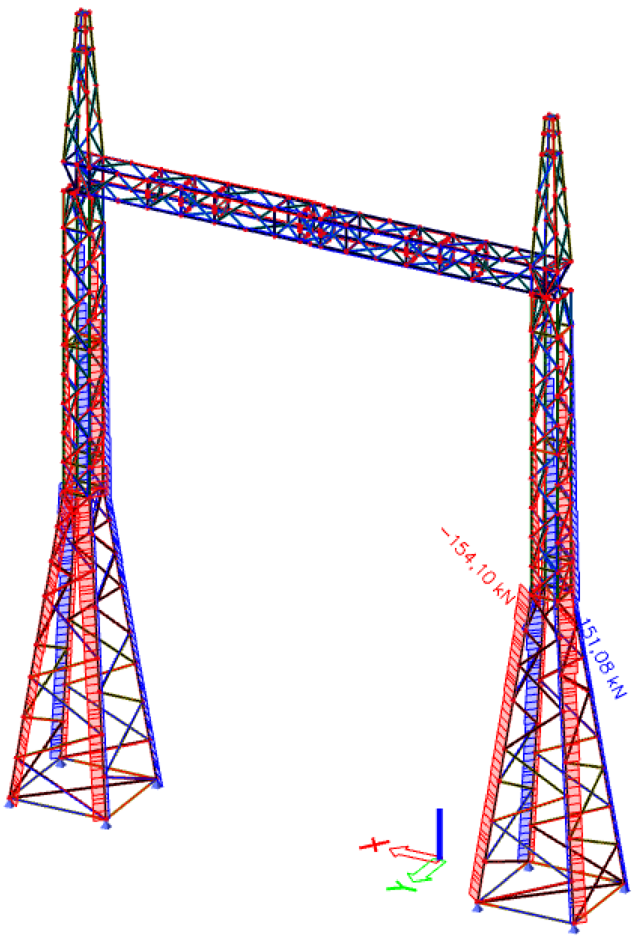
Pav. 17 Poveikiai nuo įrenginių ir laidų apšalo



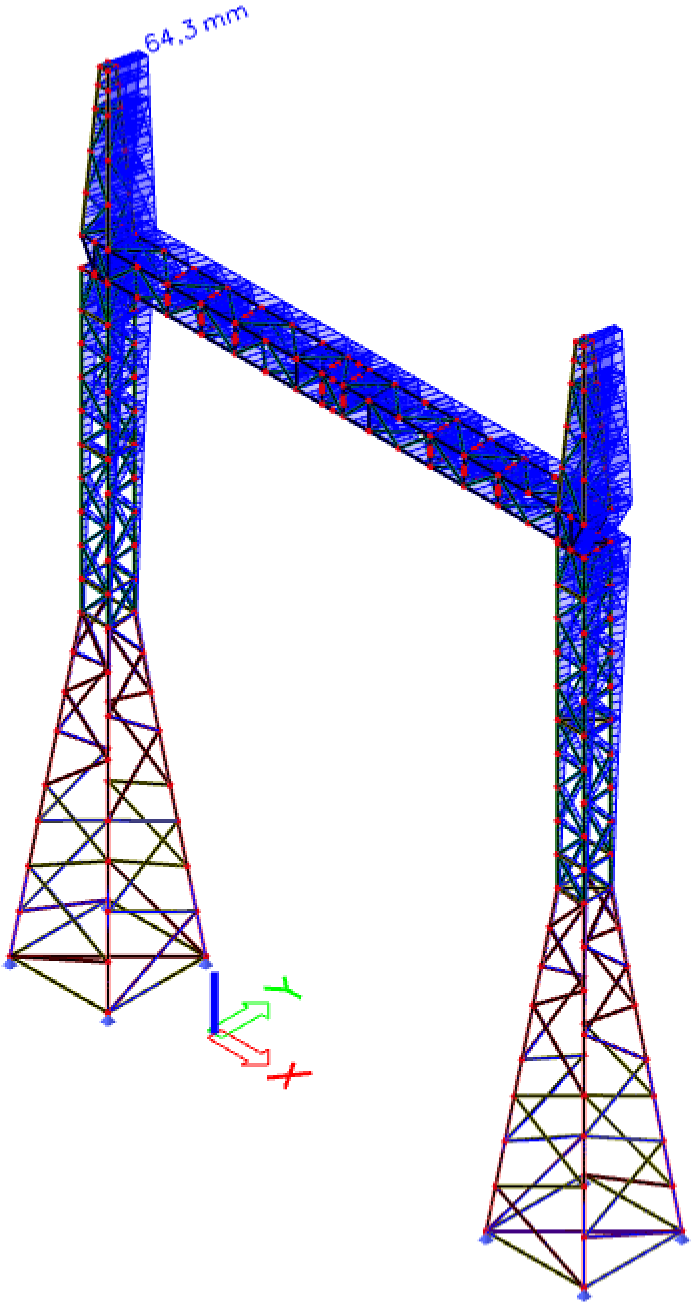
Pav. 18 Vėjo apkrovos pasiskirstymas į portalo konstrukcinius elementus



Pav. 19 Ašinių jėgų pasiskirstymas portalo konstrukciniuose elementuose

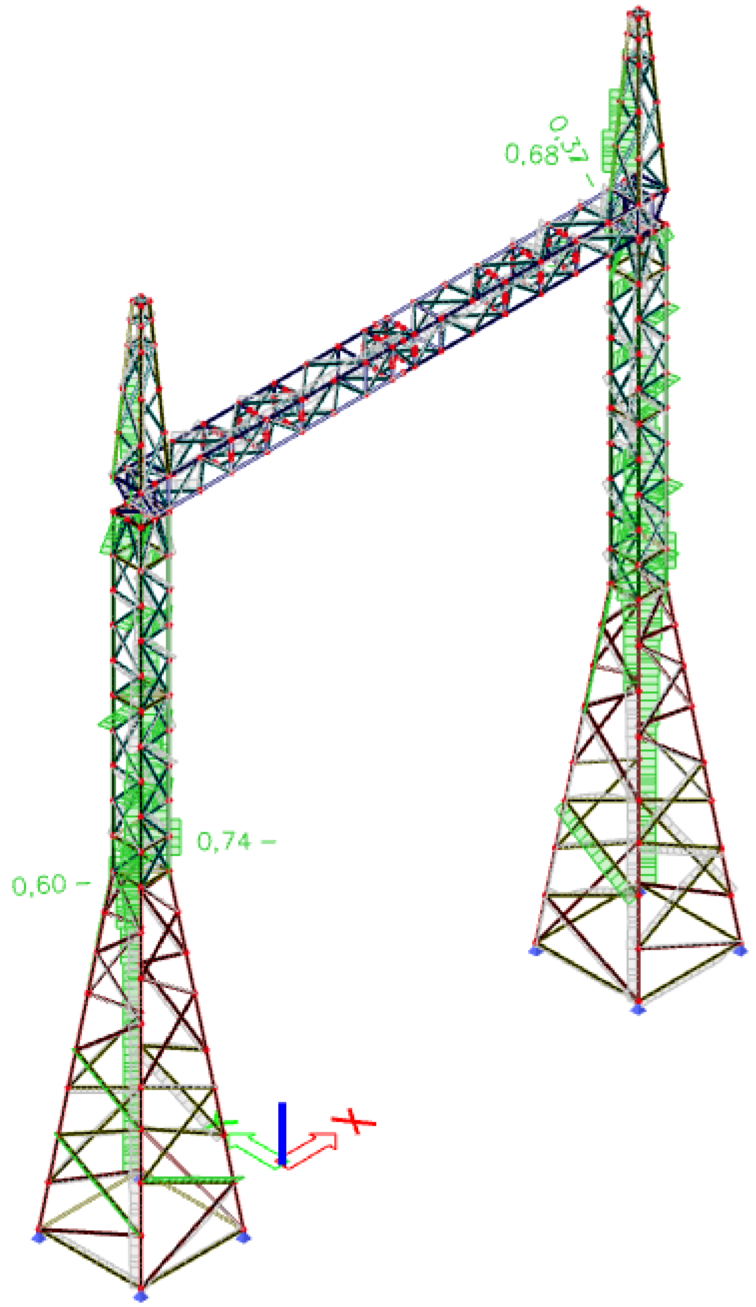


Pav. 20 Maksimalios įražos veikiančios portalo konstrukcinius elementus



Pav. 21 Maksimalus portalo konstrukcijos poslinkis veikiant vienpusiam tempimui

Portalo deformacijos nustatomos pagal LST EN 1993-3-1:2007/NA:2011 standarto nuostatas. Portalo deformacijos yra d=64,3 mm lyginant su ribiniai poslinkiai dlim=14550/100=145 mm, todėl sąlyga yra tenkinama.



Pav. 22 Labiausiai išnaudojami portalo konstrukciniai elementai

Lentelė 42. Labiausiai išnaudojami elementai pagal skerspjūvį

Name	Case	Cross-section	Material	UCOverall [-]	UCSec [-]	UCStab [-]
B876	ULS/1	CS2 - L100X8	S 355	0,60	0,31	0,60
B58	ULS/1	CS3 - L70X7	S 355	0,38	0,38	0,00
B289	ULS/1	CS5 - L90X7	S 355	0,74	0,45	0,74
B504	ULS/1	CS4 - L50X5	S 355	0,68	0,08	0,68
B300	ULS/1	CS6 - L35X5	S 355	0,49	0,18	0,49
B623	ULS/2	CS7 - L65X7	S 355	0,37	0,37	0,26

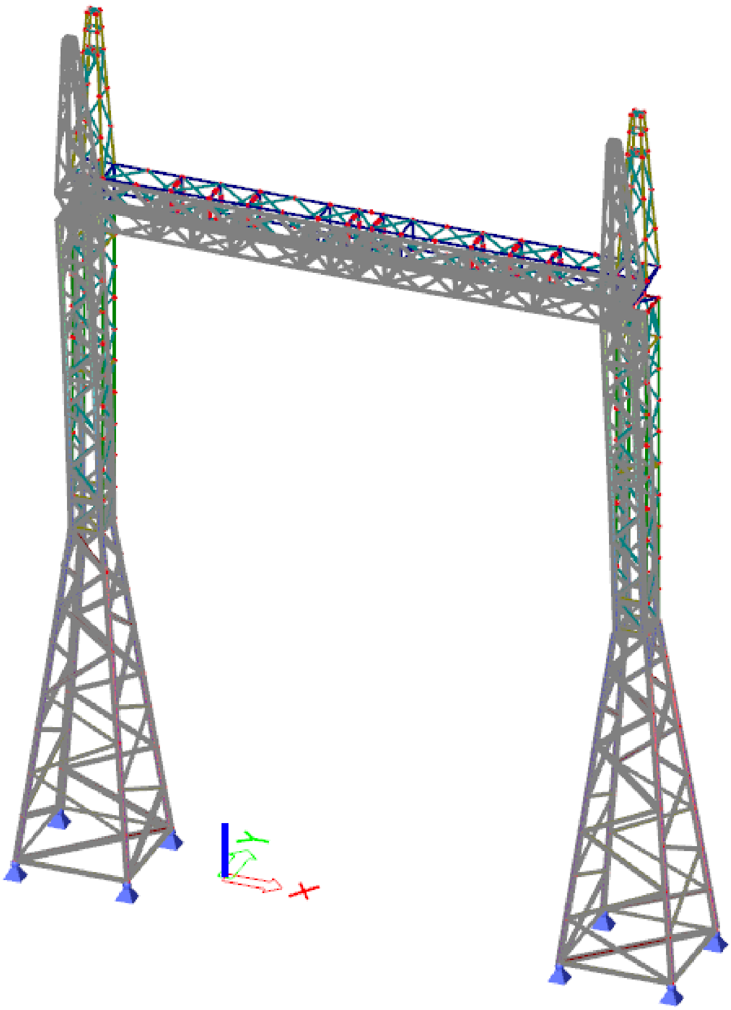
4.1. Portalo savųjų svyravimo dažnių skaičiavimas

Lentelė 43. Portalo svyravimo dažniai

N	f [Hz]	ω [1/s]	ω^2 [$1/s^2$]	T [s]
1	4,19	26,35	694,27	0,24
2	4,81	30,22	913,09	0,21
3	5,64	35,44	1256,00	0,18
4	14,64	92,01	8465,88	0,07
5	19,68	123,67	15294,25	0,05
6	24,05	151,12	22835,99	0,04
7	24,94	156,72	24560,78	0,04
8	28,88	181,43	32918,01	0,03
9	29,11	182,92	33458,87	0,03
10	34,64	217,63	47362,03	0,03

Lentelė 44. Portalo svyravimo dažniai

Mode	Omega [rad/s]	Period [s]	Freq. [Hz]	W_{xi}/W_{xtot}	W_{yi}/W_{ytot}	W_{zi}/W_{ztot}	W_{xi_R}/W_{xtot_R}	W_{yi_R}/W_{ytot_R}	W_{zi_R}/W_{ztot_R}
1	26.3498	0,24	4,19	0,0000	0,5160	0,0000	0,4357	0,0000	0,0000
2	30.2183	0,21	4,81	0,5447	0,0000	0,0000	0,0000	0,2110	0,0000
3	35.4411	0,18	5,64	0,0000	0,0000	0,0000	0,0000	0,0000	0,4390
4	92.0129	0,07	14,64	0,0000	0,0000	0,1590	0,0000	0,0000	0,0000
5	123.674	0,05	19,68	0,0000	0,0035	0,0000	0,0000	0,0000	0,0000
6	151.12	0,04	24,05	0,0000	0,1776	0,0000	0,0515	0,0000	0,0018
7	156.723	0,04	24,94	0,0001	0,0011	0,0000	0,0003	0,0000	0,2013
8	181.439	0,03	28,88	0,0012	0,0001	0,0015	0,0001	0,0003	0,0000
9	182.923	0,03	29,11	0,2016	0,0000	0,0000	0,0000	0,0517	0,0001
10	217.635	0,03	34,64	0,0509	0,0004	0,0000	0,0002	0,0190	0,0001
				0,7987	0,6988	0,1605	0,4879	0,2821	0,6422



Pav. 23 Portalo svyravimo dažniai

	LAPAS	LAPŲ	LAIDA
ED2201-XX-RTP-SK-T1.IS	213	236	0

5. PORTALO VĖJO APKROVOS SKAIČIAVIMAS

Portalo vėjo apkrovos skaičiavimas

(remiantis EN 1991-1-4:2005 ir EN 1993-3-1:2006)

Krypties ir metų laikų koeficientai:

$c_{dir} := 1.0$ $\quad c_{0.z} := 1.0$ (kalnuotumo koeficientas) $\quad k_I := 1.0$ (turbulencijos koeficientas)

$c_{season} := 1.0$ $\quad \rho := 1.25 \, \frac{kg}{m^3}$ (oro tankis) $\quad c_{pi} := 0.4$

Vėjo greičio reikšmė priklausanti nuo vėjo apkrovos rajono:

$V_r := 1$

$$v_{b.0} := \begin{cases} 24 \, \frac{m}{s} & \text{if } V_r = 1 \\ 28 \, \frac{m}{s} & \text{also if } V_r = 2 \\ 32 \, \frac{m}{s} & \text{also if } V_r = 3 \end{cases} = 24 \, \frac{m}{s}$$

Pagrindinis vėjo greitis:

$$v_b := c_{dir} \cdot c_{season} \cdot v_{b.0} = 24 \, \frac{m}{s}$$

Pagrindinio vėjo greičio slėgio reikšmė:

$$q_b := \frac{\rho}{2} \cdot {v_b}^2 = 0.36 \, \frac{kN}{m^2}$$

Vietovės koeficientas:

$V_k := 2$

$z_{0.II} := 0.05$

$$z_0 := \begin{cases} 0.003 & \text{if } V_k = 0 \\ 0.01 & \text{also if } V_k = 1 \\ 0.05 & \text{also if } V_k = 2 \\ 0.3 & \text{also if } V_k = 3 \\ 1.0 & \text{also if } V_k = 4 \end{cases} = 0.05$$

$$z_{min} := \begin{cases} 1.0 & \text{if } V_k = 0 \\ 1.0 & \text{also if } V_k = 1 \\ 2.0 & \text{also if } V_k = 2 \\ 5.0 & \text{also if } V_k = 3 \\ 10.0 & \text{also if } V_k = 4 \end{cases} = 2$$

$$k_r := 0.19 \cdot \left(\frac{z_0}{z_{0.II}} \right)^{0.07} = 0.19$$

Šiurkštumo koeficientas:

$z_{min}=2$ ≤ $z:=5.65$ (m) $c_{rz}:=k_r \cdot \ln\left(\frac{z}{z_0}\right)=0.898$

Vidutinis vėjo greitis:

$$v_{mz}:=c_{rz} \cdot c_{0.z} \cdot v_b=21.557 \ \frac{m}{s}$$

Vėjo turbulencija:

$$I_{v.z}:=\frac{k_I}{c_{0.z} \cdot \ln\left(\frac{z}{z_0}\right)}=0.212$$

Ekspozicijos koeficientas:

$$c_{ez}:=1+\frac{7}{\ln\left(\frac{z}{z_0}\right)}=2.481$$

Viršūninis vėjo greičio slėgis:

$$q_{pz}:=\left(1+7 \cdot I_{v.z}\right) \cdot \frac{1}{2} \cdot \rho \cdot v_{mz}^{2}=0.72 \ \frac{kN}{m^2}$$

Konstrukcijos charakteristikos:

Konstrukcijos plotis:

$b_v:=0.5 \ m$ (viršutinės dalies)

$b_a:=1.85 \ m$ (apatinės dalies)

Konstrukcijos aukštis:

$h_k:=5.65 \ m$

Paviršiaus ribomis apimtas plotas:

$$A_c:=\frac{b_v+b_a}{2} \cdot h_k=6.639 \ m^2$$

Vidutinis k-jos plotis:

$$b_k:=\frac{b_v+b_a}{2}=1.175 \ m$$

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Visuminis elementų ir mazginių lakštų paviršių projekcijos plotas:

1) $b_1 := 50\ mm$ $l_1 := 1.6\ m$ 2) $b_2 := 70\ mm$ $l_2 := 1.8\ m$ 3) $b_3 := 50\ mm$ $l_3 := 1.75\ m$

$A_1 := b_1 \cdot l_1 = 0.08\ m^2$ $A_2 := b_2 \cdot l_2 = 0.126\ m^2$ $A_3 := b_3 \cdot l_3 = 0.088\ m^2$

4) $b_4 := 50\ mm$ $l_4 := 1.6\ m$ 5) $b_5 := 50\ mm$ $l_5 := 1.4\ m$ 6) $b_6 := 70\ mm$ $l_6 := 1.3\ m$

$A_4 := b_4 \cdot l_4 = 0.08\ m^2$ $A_5 := b_5 \cdot l_5 = 0.07\ m^2$ $A_6 := b_6 \cdot l_6 = 0.091\ m^2$

7) $b_7 := 70\ mm$ $l_7 := 1.1\ m$ 8) $b_8 := 70\ mm$ $l_8 := 1\ m$ 9) $b_9 := 70\ mm$ $l_9 := 0.55\ m$

$A_7 := b_7 \cdot l_7 = 0.077\ m^2$ $A_8 := b_8 \cdot l_8 = 0.07\ m^2$ $A_9 := b_9 \cdot l_9 = 0.039\ m^2$

10) $b_{10} := 50\ mm$ $l_{10} := 0.25\ m$ 11) $b_{11} := 100\ mm$ $l_{11} := 6\ m$ 12) $b_{12} := 100\ mm$ $l_{12} := 6\ m$

$A_{10} := b_{10} \cdot l_{10} = 0.013\ m^2$ $A_{11} := b_{11} \cdot l_{11} = 0.6\ m^2$ $A_{12} := b_{12} \cdot l_{12} = 0.6\ m^2$

Lakštai:

13) $b_{13} := 450\ mm$ $l_{13} := 250\ mm$ 14) $b_{14} := 380\ mm$ $l_{14} := 250\ mm$

$A_{13} := 2\ (b_{13} \cdot l_{13}) = 0.225\ m^2$ $A_{14} := 2\ (b_{14} \cdot l_{14}) = 0.19\ m^2$

$$A := A_1 + A_2 + A_3 + A_4 + A_5 + A_6 + A_7 + A_8 + A_9 + A_{10} + A_{11} + A_{12} + A_{13} + A_{14} = 2.348\ m^2$$

Vientisumo santykis:

$$\varphi := \frac{A}{A_c} = 0.354$$

Visuminis projekcijos plotas statmenai plokščiųjų elementų paviršiui:

$$A_f := A_c$$

Visuminis projekcijos plotas statmenai apskritojo skerspjūvio elementų paviršiui, kai srautas nėra kritinis:

$$A_c := 0\ m^2$$

Visuminis projekcijos plotas statmenai apskritojo skerspjūvio elementų paviršiui, kai srautas yra kritinis:

$$A_{c.sup} := 0\ m^2$$

Suminis plotas:

$$A_s := A_f + A_c + A_{c.sup} = 6.639\ m^2$$

Koeficientas K1:

$$K_1 := \frac{0.55 \cdot A_f}{A_s} + \frac{0.8\ (A_c + A_{c.sup})}{A_s} = 0.55$$

Koeficientas K2:

$$K_2 := \begin{cases} 0.2 & \text{if } 0 \le \varphi \le 0.2 \\ \varphi & \text{also if } 0.2 < \varphi \le 0.5 \\ 1 - \varphi & \text{also if } 0.5 < \varphi \le 0.8 \\ 0.2 & \text{also if } 0.8 \le \varphi \le 1.0 \end{cases} = 0.354$$

Vėjo krypties koeficientas:

$\theta := 0°$

$$K_\theta := 1 + K_1 \cdot K_2 \cdot \sin(2 \cdot \theta)^2 = 1$$

Bendrasis vėjo apkrovos koeficientas:

$$C_1 := 2.25$$
$$C_2 := 1.5$$

$$c_{f.0.f} := 1.76 \cdot C_1 \cdot \left(1 - C_2 \cdot \varphi + \varphi^2\right) = 2.355$$

$$c_{f.0.c} := C_1 \cdot (1 - C_2 \cdot \varphi) + (C_1 + 0.875) \cdot \varphi^2 = 1.447$$

$$c_{f.0.c.sup} := 1.9 - \sqrt{((1 - \varphi) \cdot (2.8 - 1.14 \cdot C_1 + \varphi))} = 1.283$$

$$c_{f.s.0} := c_{f.0.f} \cdot \frac{A_f}{A_s} + c_{f.0.c} \cdot \frac{A_c}{A_s} + c_{f.0.c.sup} \cdot \frac{A_{c.sup}}{A_s} = 2.355$$

Spragotosios konstrukcijos visuminis konstrukcijos dalies vėjo apkrovos koeficientas vėjo kryptimi:

$$c_{f.s} := K_\theta \cdot c_{f.s.0} = 2.355$$

Visuminės vėjo apkrovos koeficientas:

1.Pagalbinės įrangos koeficientas: $c_{f.A} := 0$

$$c_{f.0} := c_{f.s} + c_{f.A} = 2.355$$

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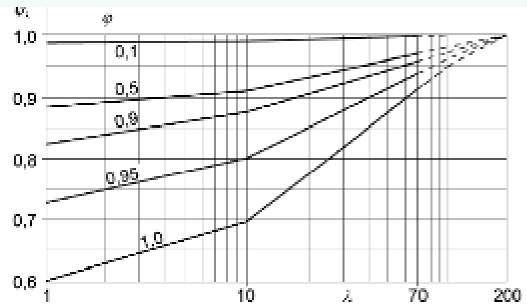
Eektyvusis liaunis:

$$\lambda_1 := \begin{cases} 1.4 \cdot \dfrac{h_k}{b_k} & \text{if } h_k \geq 50\ m \\ 2 \cdot \dfrac{h_k}{b_k} & \text{also if } h_k < 15\ m \\ \left(\dfrac{(h_k - 15\ m) \cdot 3}{50\ m - 15\ m}\right) + 1.4 \cdot \dfrac{h_k}{b_k} & \text{also if } 15\ m < h_k < 50\ m \end{cases} = 9.617 \qquad \lambda_2 := 70$$

Efektyvusis liaunis priimamas mažesnis:

$$\lambda := min(\lambda_1, \lambda_2) = 9.617$$

Nustatomas galinio efekto koeficientas:



7.36 paveikslas. Galinio efekto koeficiento ψ_λ būdingosios reikšmės, atsižvelgiant į vientisumo santykį φ liaunio λ atžvilgiu

$$\psi_\lambda := 0.98$$

Spragotos konstrukcijos jėgos koeficiento apskaičiavimas:

$$c_f := c_{f.0} \cdot \psi_\lambda = 2.308$$

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Savojo svorio sukeltas didžiausias poslinkis, metrais:

$$x_1 := \frac{14.5\ m}{500} = 0.029\ m$$

Laisvųjų svyravimų dažnis:

$$n_{1.x} := \frac{1}{2 \cdot \pi} \cdot \sqrt{\frac{g}{x_1}} = 2.927\ Hz$$

Turbulencinio ilgio reikšmė:

Atskaitos ilgis: $L_t := 300\ m$

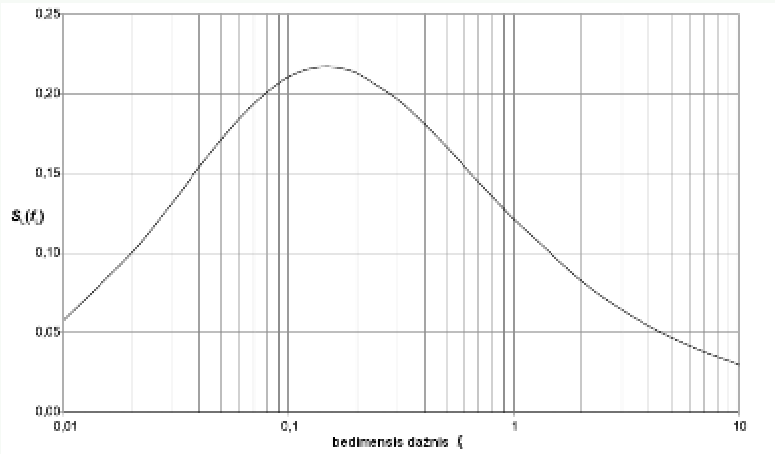
Atskaitos aukštis: $z_t := 200\ m$

$$L_z := L_t \cdot \left(\frac{h_k}{z_t}\right)^{0.67 + 0.05 \cdot \ln(z_0)} = 46.916\ m$$

Bematis dažnis:

$$f_L := \frac{n_{1.x} \cdot L_z}{v_{mz}} = 6.37$$

Spektrinės galios tankio funkcija:



$$S_L := 0.04$$

Aerodinaminio laidumo funkcijos:

$$\eta_h := \frac{4.6 \cdot h_k}{L_z} \cdot f_L = 3.529$$

$$\eta_b := \frac{4.6 \cdot b_k}{L_z} \cdot f_L = 0.734$$

$$R_h := \begin{cases} 1 & \text{if } \eta_h = 0 \\ \dfrac{1}{\eta_h} - \dfrac{1}{2 \cdot \eta_h^{\,2}} \cdot \left(1 - e^{-2 \cdot \eta_h}\right) & \text{else if } \eta_h > 0 \end{cases} = 0.243$$

$$R_b := \begin{cases} 1 & \text{if } \eta_b = 0 \\ \dfrac{1}{\eta_b} - \dfrac{1}{2 \cdot \eta_b^{\,2}} \cdot \left(1 - e^{-2 \cdot \eta_b}\right) & \text{else if } \eta_b > 0 \end{cases} = 0.648$$

Konstrukcinio logaritminio slopimo dekrementas:

Spragotiesiems bokštams: $\delta := 0.03$

Kvazistatinės reakcijos koeficientas:

$$B' := \frac{1}{1 + 0.9 \cdot \left(\dfrac{b_k + h_k}{L_z}\right)^{0.63}} = 0.789$$

Rezonansinės reakcijos koeficientas:

$$R' := \frac{\pi^2}{2 \cdot \delta} \cdot S_L \cdot R_h \cdot \eta_h \cdot R_b \cdot \eta_b = 2.687$$

Kylančios sankirtos dažnis:

$$v := n_{1.x} \cdot \sqrt{\frac{R'}{B' + R'}} = 2.573\ Hz$$

Vidutinio vėjo greičio vidurkinimo trukmė:

$$T := 600\ s$$

Viršūninis koeficientas:

$$k_p := \max\left(\sqrt{2 \cdot \ln(v \cdot T)} + \frac{0.6}{\sqrt{2 \cdot \ln(v \cdot T)}}, 3\right) = 3.989$$

Dinaminis koeficientas:

$$c_d := \frac{1 + 2 \cdot k_p \cdot I_{v.z} \cdot \sqrt{B' + R'}}{1 + 7 \cdot I_{v.z} \cdot \sqrt{B'}} = 1.791$$

Mastelio koeficientas:

$$c_s := \frac{1 + 7 \cdot I_{v.z} \cdot \sqrt{B'}}{1 + 7 \cdot I_{v.z}} = 0.933$$

Konstrukcinis koficientas:

$$c_s c_d := c_s \cdot c_d = 1.671$$

Konstrukciją veikianti vėjo jėga:

$$F_w := c_s c_d \cdot c_f \cdot q_{pz} \cdot A = 6.523\ kN$$

Konstrukciją veikianti vėjo jėga į išorinį paviršių:

$$q_{w.iš} := \frac{F_w}{A_f} = 0.983\ \frac{kN}{m^2}$$

Konstrukciją veikianti vėjo jėga į vidinį paviršių:

$$q_{w.vid} := q_{w.iš} \cdot c_{pi} = 0.393\ \frac{kN}{m^2}$$

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5.1. Vėjo apkrovos nuo laidų skaičiavimas

Vėjo apkrovos skaičiavimas
(remiantis LST EN 1991-1-4:2004)

Krypties, metų laikų ir turbulencijos koeficientai:

$c_{dir} := 1.0$ $c_{0.z} := 1.0$ $c_{season} := 1.0$ $\rho := 1.25 \frac{kg}{m^3}$ $k_I := 1.0$

Vėjo greičio reikšmė priklausanti nuo vėjo apkrovos rajono:

$V_r := 1$

$$v_{b.0} := \begin{cases} 24 \frac{m}{s} & \text{if } V_r = 1 \\ 28 \frac{m}{s} & \text{also if } V_r = 2 \\ 32 \frac{m}{s} & \text{also if } V_r = 3 \end{cases} = 24 \frac{m}{s}$$

Pradinis vėjo greitis:

$$v_b := c_{dir} \cdot c_{season} \cdot v_{b.0} = 24 \frac{m}{s}$$

Pagrindinio vėjo greičio slėgio reikšmė:

$$q_b := \frac{\rho}{2} \cdot v_b^2 = 0.36 \frac{kN}{m^2}$$

Vietovės koeficientas:

$V_k := 2$

$z_{0.II} := 0.05$

$$z_0 := \begin{cases} 0.003 & \text{if } V_k = 0 \\ 0.01 & \text{also if } V_k = 1 \\ 0.05 & \text{also if } V_k = 2 \\ 0.3 & \text{also if } V_k = 3 \\ 1.0 & \text{also if } V_k = 4 \end{cases} = 0.05$$

$$z_{min} := \begin{cases} 1.0 & \text{if } V_k = 0 \\ 1.0 & \text{also if } V_k = 1 \\ 2.0 & \text{also if } V_k = 2 \\ 5.0 & \text{also if } V_k = 3 \\ 10.0 & \text{also if } V_k = 4 \end{cases} = 2$$

$$k_r := 0.19 \cdot \left(\frac{z_0}{z_{0.II}}\right)^{0.07} = 0.19$$

Šiurkštumo koeficientas:

$z_{min} = 2$ ≤ $z := 14.5$ (m) $c_{rz} := k_r \cdot \ln\left(\frac{z}{z_0}\right) = 1.077$

Vidutinis vėjo greitis:

$$v_{mz} := c_{rz} \cdot c_{0.z} \cdot v_b = 25.855 \ \frac{m}{s}$$

Vėjo turbulencija:

$$I_{v.z} := \frac{k_I}{c_{0.z} \cdot \ln\left(\frac{z}{z_0}\right)} = 0.176$$

Ekspozicijos koeficientas:

$$c_{ez} := 1 + \frac{7}{\ln\left(\frac{z}{z_0}\right)} = 2.235$$

Viršūninis vėjo greičio slėgis:

$$q_{pz} := \left(1 + 7 \cdot I_{v.z}\right) \cdot \frac{1}{2} \cdot \rho \cdot v_{mz}^{2} = 0.934 \ \frac{kN}{m^2}$$

Slėgis į išorinį laido paviršių:

1. Koeficientas laidams ir lynams (kartu padengtiems ledu): $c_x := 1.2$

$$q_l := q_{pz} \cdot c_x = 1.12 \ \frac{kN}{m^2}$$

Laido charakteristikos:

1. Laido skersmuo: $d := 21.8 \ mm$

2. Laido ilgis: $l := 25 \ m$

$$F_{l.w} := q_l \cdot d \cdot \frac{l}{2} = 0.305 \ kN$$

$$F_{l.w.45} := q_l \cdot d \cdot \frac{l}{2} \cdot 1.25 = 0.382 \ kN$$

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5.2. Apšalas nuo laidų ir įrenginių į portalą

Laido apledėjimo apkrovos skaičiavimas

Ledo tankis:

$$\rho := 900 \ \frac{kg}{m^3}$$

Apledėjimo sienelės storis:

$$A_r := 1$$

$$b := \begin{cases} \text{if } A_r = 1 \\ \quad 6.2 \ mm \\ \text{also if } A_r = 2 \\ \quad 8.5 \ mm \\ \text{also if } A_r = 3 \\ \quad 11.5 \ mm \\ \text{also if } A_r = 4 \\ \quad 14.5 \ mm \end{cases} = 6.2 \ mm$$

Apledėjimo storio kitimo koeficientas priklausomai nuo aukščio:

Aukštis: $h := 14.5 \ m$

$$k := \begin{cases} \text{if } h \le 5 \ m \\ \quad 0.8 \\ \text{also if } 5 \ m < h \le 10 \ m \\ \quad 1.0 \\ \text{also if } 10 \ m < h \le 20 \ m \\ \quad 1.2 \\ \text{also if } 20 \ m < h \le 30 \ m \\ \quad 1.4 \\ \text{also if } 30 \ m < h \le 50 \ m \\ \quad 1.6 \\ \text{also if } 50 \ m < h \le 70 \ m \\ \quad 1.8 \\ \text{also if } 70 \ m < h \le 80 \ m \\ \quad 2.0 \end{cases} = 1.2$$

Koeficientas priklausantis nuo apvalaus elemento skerspjūvio skersmens:

Laido charakteristikos:

1.Laido skersmuo: $d := 21.8\ mm$

2.Laido ilgis: $l := 25\ m$

3.Laido svoris: $p_l := 10\ \frac{N}{m}$

$\mu_1 :=$ if $d \le 5\ mm$
‖ 1.1
also if $5\ mm < d \le 10\ mm$
‖ 1.0
also if $10\ mm < d \le 20\ mm$
‖ 0.9
also if $20\ mm < d \le 30\ mm$
‖ 0.8
also if $30\ mm < d \le 50\ mm$
‖ 0.7
also if $50\ mm < d \le 70\ mm$
‖ 0.6
else
‖ "Tikrinti"

$= 0.8$

Apledėjimo apkrova:

$$i_k := \pi \cdot b \cdot k \cdot \mu_1 \cdot (d + b \cdot k \cdot \mu_1) \cdot \rho \cdot g = 4.58\ \frac{N}{m}$$

Vertikali jėga veikianti k-ja nuo laido savojo svorio:

$$F_l := \frac{p_l \cdot l}{2} = 0.125\ kN$$

Vertikali jėga veikianti k-ja nuo laido ir apšalo svorio:

$$F_V := F_l + \frac{i_k \cdot l}{2} = 0.182\ kN$$

Apšalo apkrova nuo elementu:

1. Įrenginio masė: $m := 50\ kg$

2. Įrenginio svoris: $F := m \cdot g = 0.49\ kN$

3. Apšalo svoris: $F_a := \frac{F}{2} = 0.245\ kN$

$F_{l.g} := F + F_a = 0.735\ kN$

6. PORTALŲ PAMATŲ PROJEKTAVIMAS

Portalų pamatai skaičiuoti ir parinkti pagal nepalankiausią apkrovų derinį. Pamatai parinkti priklausomai nuo pamatą veikiančių rovimo, gniuždymo ir skersinių jėgų reikšmių bei geologinių ir hidrogeologinių sąlygų.

6.1. Portalo laikomosios galios tikrinimas (IGS2)

Pile verification

Input data

Project

Date : 6/1/2022

Settings

Standard - safety factors

Materials and standards

Concrete structures :	EN 1992-1-1 (EC2)
Coefficients EN 1992-1-1 :	standard
Steel structures :	EN 1993-1-1 (EC3)
Partial factor on bearing capacity of steel cross section :	γ_{M0} = 1.00
Timber structures :	EN 1995-1-1 (EC5)
Partial factor for timber property :	γ_M = 1.30
Modif. factor of load duration and moisture content :	k_{mod} = 0.50
Coeff. of effective width for shear stress :	k_{cr} = 0.67

Pile

Verification methodology :	Safety factors (ASD)
Analysis for drained conditions :	NAVFAC DM 7.2
Load settlement curve :	linear (Poulos)
7. Horizontal bearing capacity :	Elastic subsoil (p-y method)

Safety factors			
Permanent design situation			
Safety factor for compressive pile :	SF_{cp} =	2.00	[–]
Safety factor for tensile pile :	SF_{tp} =	3.00	[–]

Basic soil parameters

No.	Name	Pattern	γ [kN/m3]	ν [–]
1	Planingai supiltas vidutinio rupumo smėlis		5.50	0.28
2	Purus, vidutinio rupumo smėlis		3.50	0.28
3	Tankus, vidutinio rupumo smėlis, mažai drėgnas, geltonas		14.90	0.28
4	Labai tankus, žvyringas smėlis		34.50	0.30
5	Tankus, mažai dulkingas molingas vidutinio rupumo smėlis		43.70	0.28
6	Ypatingai tankus žvyringas smėlis		43.70	0.30
7	Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas		14.30	0.28

No.	Name	Pattern	γ [kN/m³]	ν [–]
8	Tankus, vidutinio rupumo smėlis, mažai drėgnas		12.00	0.28
9	Tankus, žvyringas smėlis		17.70	0.28

8.

No.	Name	Pattern	E_{oed} [MPa]	E_{def} [MPa]	γ_{sat} [kN/m³]	γ_s [kN/m³]	n [–]
1	Planingai supiltas vidutinio rupumo smėlis		57.50	-	5.50	-	-
2	Purus, vidutinio rupumo smėlis		57.50	-	3.50	-	-
3	Tankus, vidutinio rupumo smėlis, mažai drėgnas, geltonas		96.00	-	14.90	-	-
4	Labai tankus, žvyringas smėlis		28.50	-	34.50	-	-
5	Tankus, mažai dulkingas molingas vidutinio rupumo smėlis		57.50	-	43.70	-	-
6	Ypatingai tankus žvyringas smėlis		28.50	-	43.70	-	-
7	Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas		96.00	-	14.30	-	-
8	Tankus, vidutinio rupumo smėlis, mažai drėgnas		57.50	-	12.00	-	-
9	Tankus, žvyringas smėlis		57.50	-	17.70	-	-

9.

No.	Name	Pattern	φ_{ef} [°]	δ [°]	K [–]	c_u [kPa]	α [–]
1	Planingai supiltas vidutinio rupumo smėlis		0.00	-	-	-	-
2	Purus, vidutinio rupumo smėlis		0.00	-	-	-	-
3	Tankus, vidutinio rupumo smėlis, mažai drėgnas, geltonas		38.00	-	-	-	-
4	Labai tankus, žvyringas smėlis		42.00	-	-	-	-
5	Tankus, mažai dulkingas molingas vidutinio rupumo smėlis		42.00	-	-	-	-
6	Ypatingai tankus žvyringas smėlis		42.00	-	-	-	-
7	Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas		38.00	-	-	-	-
8	Tankus, vidutinio rupumo smėlis, mažai drėgnas		38.00	-	-	-	-

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No.	Name	Pattern	φ_{ef} [°]	δ [°]	K [–]	c [kPa]	α [–]
9	Tankus, žvyringas smėlis		38.00	-	-	-	-

Soil parameters

Planingai supiltas vidutinio rupumo smėlis
Unit weight : γ = 5.50 kN/m^3
Saturated unit weight : γ_{sat} = 5.50 kN/m^3
Angle of internal friction : φ_{ef} = 0.00 °

Purus, vidutinio rupumo smėlis
Unit weight : γ = 3.50 kN/m^3
Saturated unit weight : γ_{sat} = 3.50 kN/m^3
Angle of internal friction : φ_{ef} = 0.00 °

Tankus, vidutinio rupumo smėlis, mažai drėgnas, geltonas
Unit weight : γ = 14.90 kN/m^3
Saturated unit weight : γ_{sat} = 14.90 kN/m^3
Angle of internal friction : φ_{ef} = 38.00 °

Labai tankus, žvyringas smėlis
Unit weight : γ = 34.50 kN/m^3
Saturated unit weight : γ_{sat} = 34.50 kN/m^3
Angle of internal friction : φ_{ef} = 42.00 °

Tankus, mažai dulkingas molingas vidutinio rupumo smėlis
Unit weight : γ = 43.70 kN/m^3
Saturated unit weight : γ_{sat} = 43.70 kN/m^3
Angle of internal friction : φ_{ef} = 42.00 °

Ypatingai tankus žvyringas smėlis
Unit weight : γ = 43.70 kN/m^3
Saturated unit weight : γ_{sat} = 43.70 kN/m^3
Angle of internal friction : φ_{ef} = 42.00 °

Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas
Unit weight : γ = 14.30 kN/m^3
Saturated unit weight : γ_{sat} = 14.30 kN/m^3
Angle of internal friction : φ_{ef} = 38.00 °

Tankus, vidutinio rupumo smėlis, mažai drėgnas
Unit weight : γ = 12.00 kN/m^3
Saturated unit weight : γ_{sat} = 12.00 kN/m^3
Angle of internal friction : φ_{ef} = 38.00 °

Tankus, žvyringas smėlis
Unit weight : γ = 17.70 kN/m^3
Saturated unit weight : γ_{sat} = 17.70 kN/m^3
Angle of internal friction : φ_{ef} = 38.00 °

Geometry

Pile profile: circular

Dimensions
Diameter d = 0.60 m
Length l = 2.00 m

Calculated cross-sectional characteristics
Area A = 2.83E-01 m^2

Moment of inertia I = 6.36E-03 m^4

Location

Off ground height h = -0.60 m
Depth of finished grade h_z = 0.00 m

Technology: CFA piles

Material of structure

Unit weight γ = 23.00 kN/m^3
Analysis of concrete structures carried out according to the standard EN 1992-1-1 (EC2).

Concrete: C 25/30

Cylinder compressive strength f_{ck} = 25.00 MPa
Tensile strength f_{ctm} = 2.60 MPa
Elasticity modulus E_{cm} = 31000.00 MPa
Shear modulus G = 12917.00 MPa

Longitudinal steel: B500A

Yield strength f_{yk} = 500.00 MPa

Transverse steel: B500A

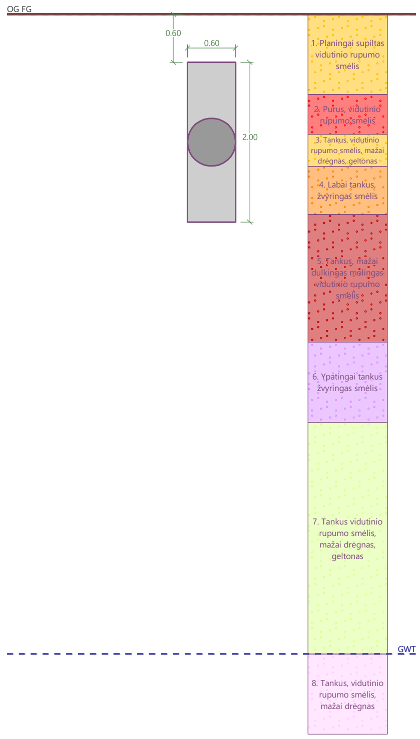
Yield strength f_{yk} = 500.00 MPa

Geological profile and assigned soils

No.	Thickness of layer t [m]	Depth z [m]	Assigned soil	Pattern
1	1.00	0.00 .. 1.00	Planingai supiltas vidutinio rupumo smėlis	
2	0.50	1.00 .. 1.50	Purus, vidutinio rupumo smėlis	
3	0.40	1.50 .. 1.90	Tankus, vidutinio rupumo smėlis, mažai drėgnas, geltonas	
4	0.60	1.90 .. 2.50	Labai tankus, žvyringas smėlis	
5	1.60	2.50 .. 4.10	Tankus, mažai dulkingas molingas vidutinio rupumo smėlis	
6	1.00	4.10 .. 5.10	Ypatingai tankus žvyringas smėlis	
7	2.90	5.10 .. 8.00	Tankus vidutinio rupumo smėlis, mažai drėgnas, geltonas	
8	1.60	8.00 .. 9.60	Tankus, vidutinio rupumo smėlis, mažai drėgnas	
9	-	9.60 .. ∞	Planingai supiltas vidutinio rupumo smėlis	

10.

ame : Grężinys Nr. 1	Stage - analysis : 1 - 0



Load

No.	Load new	Load change	Name	Type	N [kN]	M_x [kNm]	M_y [kNm]	H_x [kN]	H_y [kN]
1	Yes		Portalas P-2 (didžiausia ašinė jėga)	Design	114.87	0.00	0.00	0.00	0.00

Ground water table
The ground water table is at a depth of 8.00 m from the original terrain.

Global settings
Analysis of vertical bearing capacity : analytical solution
Analysis type : analysis for drained conditions

Settings of the stage of construction
Design situation : permanent
Verification methodology : without reduction of soil parameters

Verification No. 1

Verification of pile bearing capacity according to NAVFAC DM 7.2 - partial results

Pile base bearing capacity:
The soil under the base is cohesionless
Coefficient of bearing capacity N_q = 72.00
Area of pile transverse cross-section A_p = 2.83E-01 m^2

Pile shaft resistance:

Depth [m]	Thickness [m]	c_{ud} [kPa]	α [–]	K [–]	δ [°]	σ_{or} [kPa]	R_{si} [kN]
0.00	-	-	-	-	-	-	-
0.40	0.40	-	-	1.00	0.00	1.65	0.00
0.40	-	-	-	-	-	-	-
0.90	0.50	-	-	1.00	0.00	3.30	0.00
0.90	-	-	-	-	-	-	-
1.30	0.40	-	-	1.61	28.50	3.30	2.17
1.30	-	-	-	-	-	-	-
1.90	0.60	-	-	1.86	31.50	3.30	4.25
1.90	-	-	-	-	-	-	-

Depth [m]	Thickness [m]	c_{ud} [kPa]	α [–]	K [–]	δ [°]	σ_{or} [kPa]	[illegible] [kN]
2.00	0.10	-	-	1.86	31.50	3.30	0.71

Verification of bearing capacity : NAVFAC DM 7.2

Analysis carried out with automatic selection of the most unfavourable load cases.
Factor determining critical depth k_{dc} = 1.00

Verification of compressive pile:
Most unfavorable load case No. 1. (Portalas P-2 (didžiausia ašinė jėga))

Pile skin bearing capacity	R_s	=	7.13	kN
Pile base bearing capacity	R_b	=	779.29	kN
Pile bearing capacity	R_c	=	786.42	kN
Ultimate vertical force	V_d	=	114.87	kN

Safety factor = 6.85 > 2.00

Pile bearing capacity is SATISFACTORY

Verification No. 1

Analysis of load settlement curve - input data

Layer No.	E_s [MPa]
1	15.00
2	15.00
3	15.00
4	15.00
5	15.00

Maximum pile settlement s_{lim} = 25.0 mm

Analysis of load settlement curve - partial results

Correction factor for pile compressibility	C_k	=	0.99
Correction factor for Poisson's ratio of soil	C_v	=	0.80
Correction factor for stiffness of bearing stratum	C_b	=	1.02
Base-load proportion for incompressible pile	β_0	=	0.45
Proportion of applied load transferred to pile base	β	=	0.36

Influence coefficients of settlement :

Basic - dependent on ratio l/d	I_0	=	0.26
Correction factor for pile compressibility	R_k	=	1.00
Correction factor for finite depth of layer on a rigid base	R_h	=	1.00
Correction factor for Poisson's ratio of soil	R_v	=	0.90

Analysis of load settlement curve - results

Load at the onset of mobilization of skin friction	R_{yu}	=	11.20	kN
The settlement for the force R_{yu}	s_y	=	0.3	mm
Total resistance	R_c	=	359.26	kN
Maximum settlement	s_{lim}	=	25.0	mm

Išvados:

- Atliktus skaičiavimus gauta, kad portalo (Nr. 106) polio laikomoji galia R_c = 786,42kN. Skaičiuotinė skersinė jėga lygi 114,87 kN. Saugumo koeficientas 6,85 > 2, laikomosios galios sąlyga yra tenkinama. Parenkamas polis 600 mm skersmens ir 2 m ilgio.

6.2. Portalų inkarinių varžtų laikomosios galios skaičiavimas

Portalų bazės inkariniai varžtai HPM30L tikrinami dviem atvejais, kai:
Ned = -114,87 kN, Vxd = 14,20 kN, Vyd = 12,90 kN
Ned = -104,18 kN, Vxd = -16,7 kN, Vyd = -13,00 kN.

Designer:
Company:
Address:
Phone:
E-Mail:
Name:

Project:
Title: New Project
Location:
Contact Person:
Comments:
Design Norm: EN Eurocodes (without NA)
Unit system: SI

This design applies exclusively to proprietary PEIKKO products and can't be used to validate properties of third party products, might they appear to be identical.

Summary

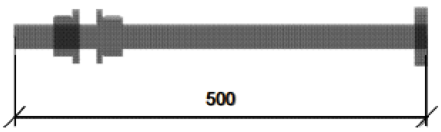
Name	Stage	#	Load Case	Page No.	Max Utilization	Status
INK varztai	Final	1	Nd=-114.9, Mxd=0.0, Myd=0.0, Vxd=14.2, Vyd=12.9	4	4%	OK
	Final	2	Nd=-104.2, Mxd=0.0, Myd=0.0, Vxd=-16.7, Vyd=-13.0	5	3%	OK

INK varztai

Note: Number of Columns: 1

Peikko Products

Bolts: 2 x HPM30L



Totals

Product	Amount
HPM30L	2

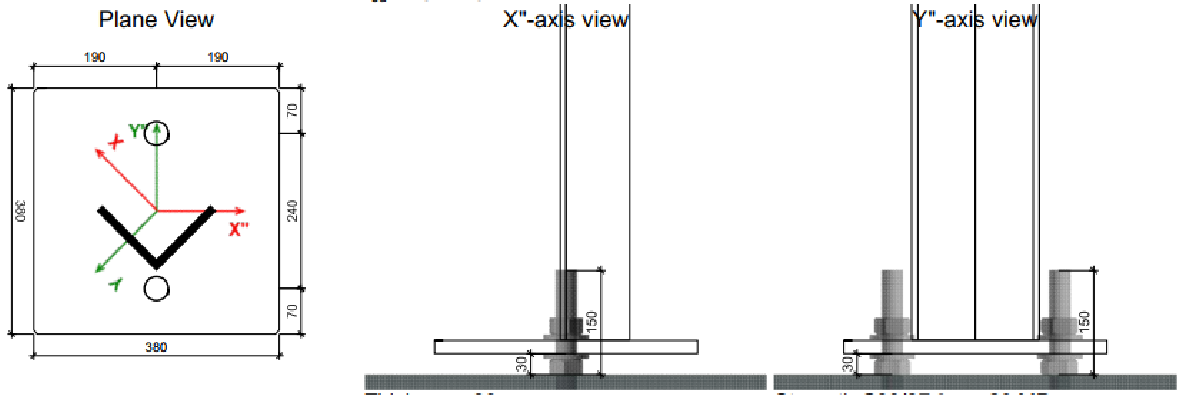
Minimum required torque value of nuts : T_{min} = 250 Nm
Maximum allowed torque value of nuts : T_{max} = 450 Nm
Bolt installation template: PPL30-2 240

ED2201-XX-RTP-SK-T1.IS	LAPAS	LAPŲ	LAIDA
	232	236	0

Materials and Geometry

Column: 130x130

f_{cd}= 20 MPa



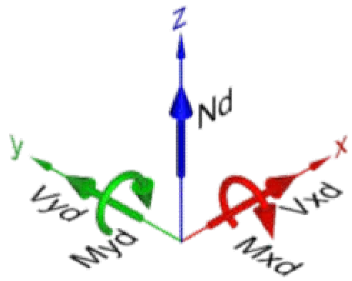
Grouting: Thickness: 30 mm Strength C30/37 f_{cd} = 20 MPa

X; Y = local coordinate system of profile
X"; Y" = local coordinate system of anchors

Load Cases

NOTE: Loads are defined in the local coordinate system of the profile.

(Design loads)



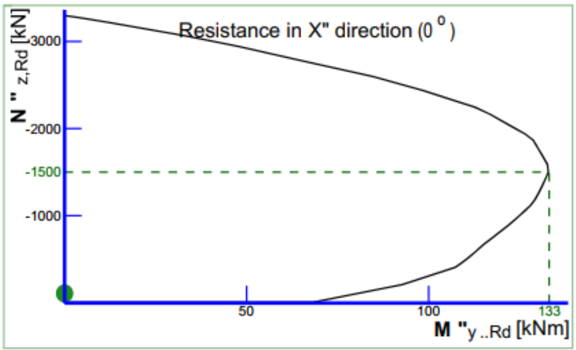
Final Stage

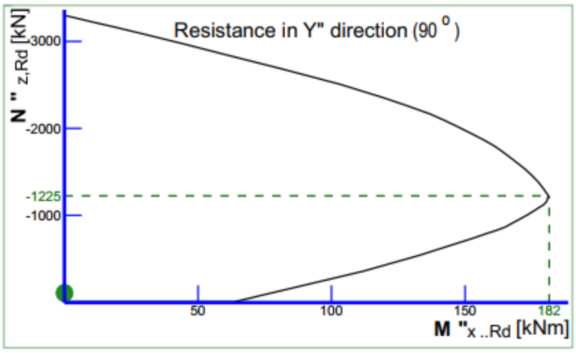
#	Name	N_d [kN]	M_{xd} [kNm]	M_{yd} [kNm]	V_{xd} [kN]	V_{yd} [kN]
1		-114.9	0.0	0.0	14.2	12.9
2		-104.2	0.0	0.0	-16.7	-13.0

Erection stage

No load case for this stage defined

Resistance Diagrams





Base Structure

Concrete	C25/30
Uncracked	No
Aggregate size	16 mm
Footing dimension X-axis direction (b)	850 mm
Footing dimension Y-axis direction (h)	850 mm
Height of Footing	800 mm
Eccentricity of bolted column (e_x)	0 mm
Eccentricity of bolted column (e_y)	0 mm

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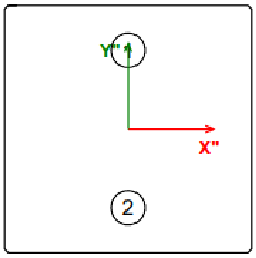
Load Case #1 : Nd=-114.9, Mxd=0.0, Myd=0.0, Vxd=14.2, Vyd=12.9

Steel Failure: Sufficient capacity **Concrete failure: Sufficient capacity**

Steel failure verification

Design value of normal compressive force in the column	$N_{c,Ed}$	-114.9	kN
Friction coefficient (between base plate and grout layer)	C_{fd}	0.2	
Joint friction resistance	$F_{f,Rd}$	22.98	kN
Resultant shear force	V_{sd}	19.18	kN
Resultant shear force taking account friction contribution	$V_{sd,f}$	0	kN

Resultant compression force (concrete) in (X"/Y") = F_{cc}(0.0/0.0)



Bolt Pos.	Acting axial force [kN]	Design tension resistance [kN]	Axial capacity usage [%]	Acting shear force [kN]	Design shear resistance [kN]	Shear capacity usage [%]	Interaction [%]
1	-4.21	202.0	2.1	0.0	71.6	0.0	n/r
2	-4.21	202.0	2.1	0.0	71.6	0.0	n/r

Concrete failure verifications

Proof	Load [kN]	Capacity [kN]	Utilization [%]	Status
Pull-Out Failure	0.0	0.0	0.0	Ok
Cone failure				Ok
Covered with reinforcement:				
1) Foundation (Plain Concrete)	0.0	0.0	n/r	
2) Assigned Hanger Reinforcement	0.0	266.8	0.0	
3) Requirement of Strut and Tie Model	18.9	24.6	76.8	
Splitting Failure				Ok
Concrete decisive:				
1) Foundation (Plain Concrete)	0.0	0.0	n/r	
2)Assigned Splitting Reinforcement || X	0.0	49.2	n/r	
3)Assigned Splitting Reinforcement || Y	0.0	24.6	n/r	
Blow-Out Failure	0.0	0.0	n/r	Ok
Pry-out failure	0.0	0.0	n/r	Ok
Edge failure				Ok
Concrete decisive:				
1) -X (Left) Edge (Plain Concrete)	0.0	0.0	n/r	
2) +X (Right) Edge (Plain Concrete)	0.0	0.0	n/r	
3) +Y (Top) Edge (Plain Concrete)	0.0	0.0	n/r	
4) -Y (Bottom) Edge (Plain Concrete)	0.0	0.0	n/r	
5)Assigned Edge Reinforcement (-X)	0.0	0.0	n/r	
6)Assigned Edge Reinforcement (+X)	0.0	0.0	n/r	
7)Assigned Edge Reinforcement (+Y)	0.0	0.0	n/r	
8)Assigned Edge Reinforcement (-Y)	0.0	0.0	n/r	
Combined Resistance		$\beta_N \leq 1$	0.0	Ok

Explanation:

n/r - Verification of failure mode not required

n/a - Not applicable failure mode

(-) - Failure mode has no resistance to actions

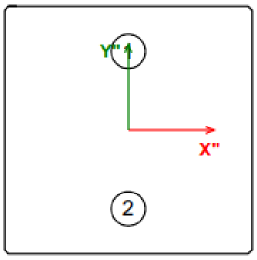
Load Case #2 : Nd=-104.2, Mxd=0.0, Myd=0.0, Vxd=-16.7, Vyd=-13.0

Steel Failure: Sufficient capacity **Concrete failure: Sufficient capacity**

Steel failure verification

Design value of normal compressive force in the column	$N_{c,Ed}$	-104.2	kN
Friction coefficient (between base plate and grout layer)	C_{fd}	0.2	
Joint friction resistance	$F_{f,Rd}$	20.84	kN
Resultant shear force	V_{sd}	21.16	kN
Resultant shear force taking account friction contribution	$V_{sd,f}$	0.32	kN

Resultant compression force (concrete) in (X"/Y") = F_{cc}(0.0/0.0)



Bolt Pos.	Acting axial force [kN]	Design tension resistance [kN]	Axial capacity usage [%]	Acting shear force [kN]	Design shear resistance [kN]	Shear capacity usage [%]	Interaction [%]
1	-3.82	202.0	1.9	0.162	71.6	0.2	n/r
2	-3.81	202.0	1.9	0.162	71.6	0.2	n/r

Concrete failure verifications

Proof	Load [kN]	Capacity [kN]	Utilization [%]	Status
Pull-Out Failure	0.0	0.0	0.0	Ok
Cone failure				Ok
Covered with reinforcement:				
1) Foundation (Plain Concrete)	0.0	0.0	n/r	
2) Assigned Hanger Reinforcement	0.0	266.8	0.0	
3) Requirement of Strut and Tie Model	18.9	24.6	76.8	
Splitting Failure				Ok
Concrete decisive:				
1) Foundation (Plain Concrete)	0.0	0.0	n/r	
2)Assigned Splitting Reinforcement || X	0.0	49.2	n/r	
3)Assigned Splitting Reinforcement || Y	0.0	24.6	n/r	
Blow-Out Failure	0.0	0.0	n/r	Ok
Pry-out failure	0.3	271.0	0.1	Ok
Edge failure				Ok
Concrete decisive:				
1) -X (Left) Edge (Plain Concrete)	0.0	131.1	0.0	
2) +X (Right) Edge (Plain Concrete)	0.3	52.8	0.6	
3) +Y (Top) Edge (Plain Concrete)	0.3	143.2	0.2	
4) -Y (Bottom) Edge (Plain Concrete)	0.3	137.8	0.2	
5)Assigned Edge Reinforcement (-X)	0.0	0.0	n/r	
6)Assigned Edge Reinforcement (+X)	0.2	0.0	n/r	
7)Assigned Edge Reinforcement (+Y)	0.2	0.0	n/r	
8)Assigned Edge Reinforcement (-Y)	0.2	0.0	n/r	
Combined Resistance	$\beta_V \leq 1$		0.6	Ok

Explanation:

n/r - Verification of failure mode not required

n/a - Not applicable failure mode

(-) - Failure mode has no resistance to actions

Išvados:

- Parenkami pamatų inkariniai varžtai HPM30L.
- Nepalankiausiu apkrovų derinių apkrautų inkarinių varžtų išnaudojimas 4%.

7. IŠVADOS

Projektas ir jame priimtos konstrukcijos bei atlikti skaičiavimų rezultatai atitinka Eurokodo keliamus reikalavimus, bei kitus projekto rengimo dokumentų reikalavimus, nurodytus šioje projekto dalyje. Elementų ir mazgų laikomosios galios išnaudojimo neviršija ribinių reikšmių pagal saugos ribinius būvius.

Konstrukcijų poslinkiai, įlinkiai neviršija ir atitinka reikalavimus pagal tinkamumo ribinius būvius.

Pamatai ir pamatų pagrindų laikomosios galios reikšmės atitinka saugos ir tinkamumo ribinius būvius.