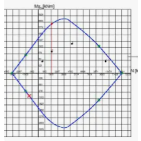


Reinforced Concrete Section Check

Work Date & Time: 2026-02-15 16:05:29
For tags & units please refer to last page of this report.

1. I N P U T

General Data

JAccount	Project	Location	SectTag	Item
JA100000	Titolo di esempio	Vibo Valentia	Rect01	struttura1

Concrete Data

Class	Rck	fck	ec1	ecu	gamma_c	alpha_cc	fcd	Ec
C25/30	30.00	25.00	0.0020	0.0035	1.50	0.85	14.17	31475.81

Steel Data

Tag	ftk	fyk	Es	esd	gamma_s	fyd
B450C	540.00	450.00	206000.00	0.0100	1.15	391.30

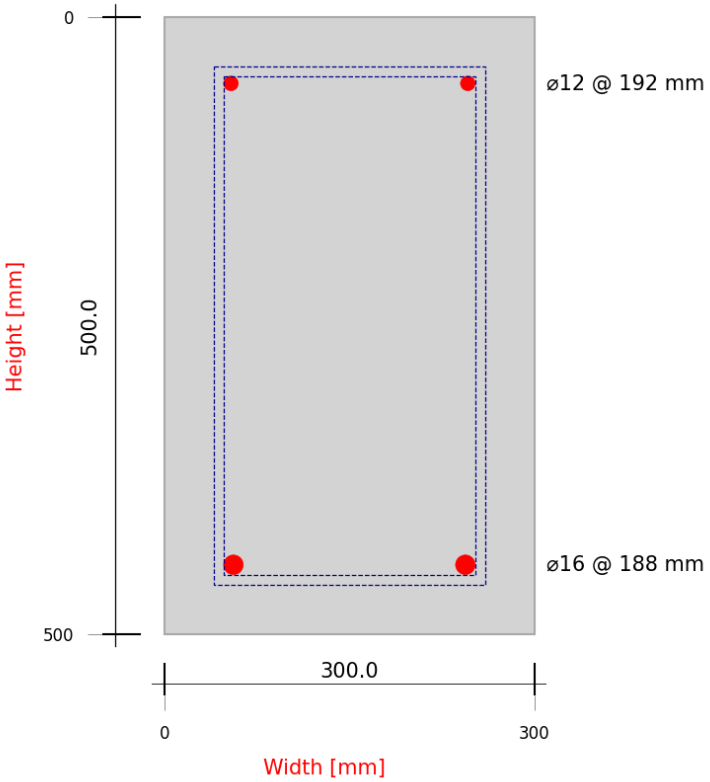
Gemetry Data

base	height	cover	stirrups_dia
300.0	500.0	40.0	8.0

Reinforcement Layers Data

Layer	num_bars	dia	y_layer	x_first	rebar_spacing
L_1	2.0	12.0	54.0	54.0	192.0
L_2	2.0	16.0	444.0	56.0	188.0

Section: 300.0x500.0



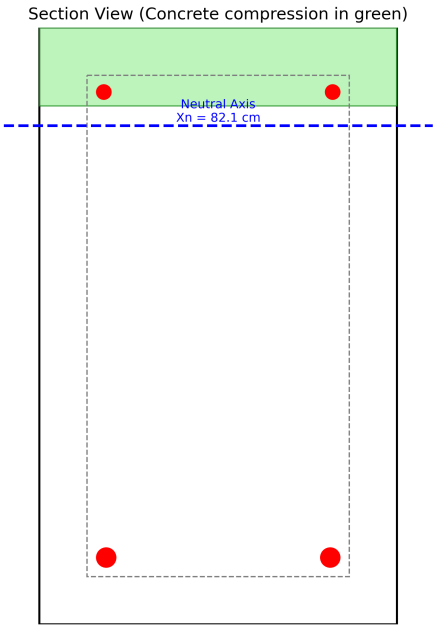
Combined Loads Data

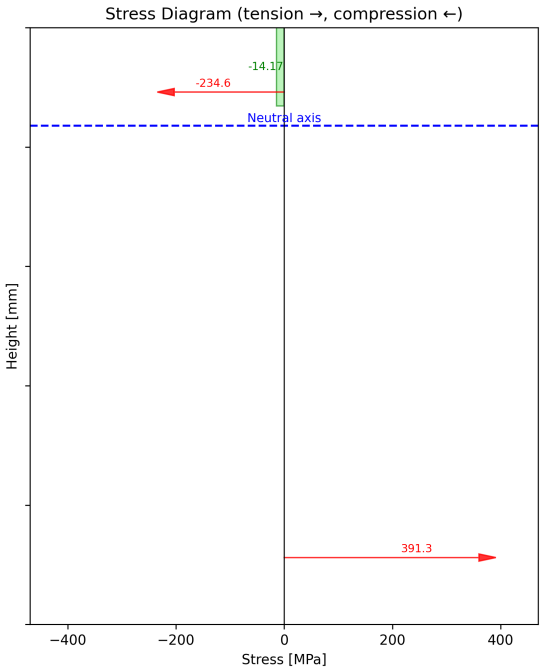
Load	axial	momentX	momentY
CL_1	175.0	44.0	22.0
CL_2	375.0	-150.0	-45.0
CL_3	1000.0	179.0	67.0

2. OUTPUT

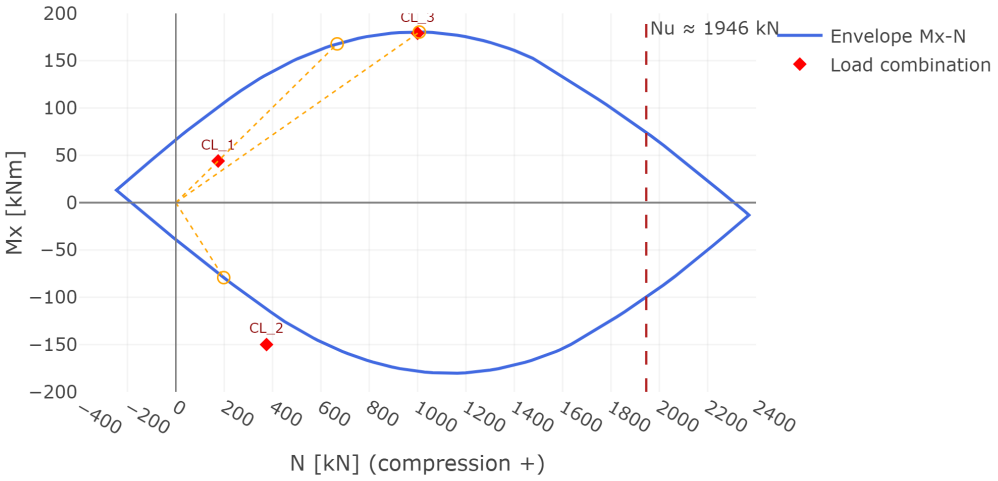
Section Moment Capacity

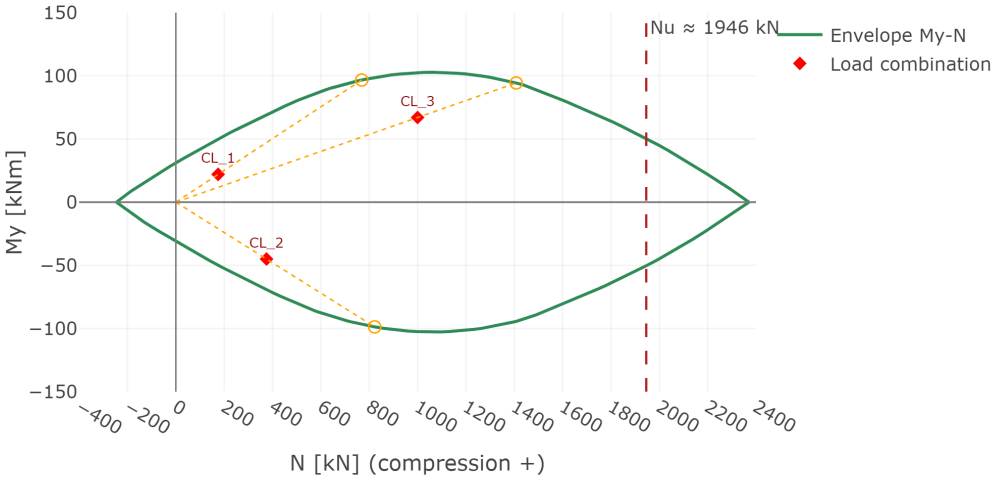
Xn	fcc	fsc	fst	MR
82.14	14.17	-234.61	391.3	101.55



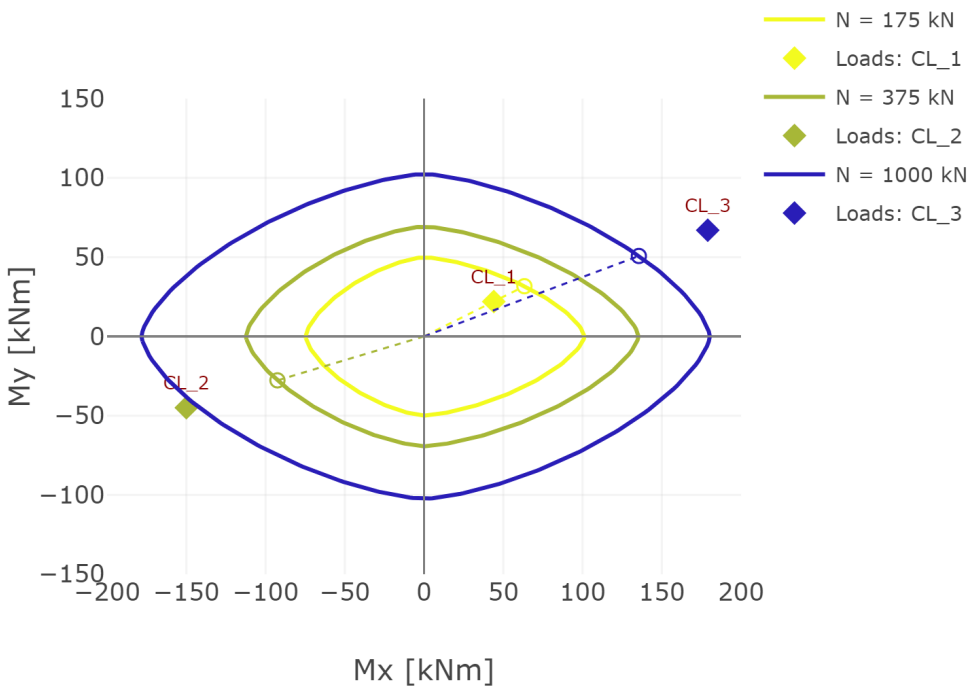


Interaction Domains





... Interaction Domains



Section Check

Load_C	SF(Mx-N)	SF(My-N)	SF(Mx-My)	Check
CL_1	0.26	0.99	0.69	Ok
CL_2	1.89	0.99	1.62	Fail
CL_3	0.99	0.99	1.32	Fail

3. S Y M B O L S

Tags and units

_Tag	Meaning	Unit
Rck/fck	Characteristic compressive strength of concrete (cube/cylinder)	MPa
ec1, ecu	Concrete strain at fcd and ultimate strain	-
gc	Partial safety factor for concrete	-
alpha_cc	Long term effects on the compressive strength	-
fcd	Design compressive strength of concrete	MPa
Ec	Modulus of elasticity of concrete	MPa
ftk	Characteristic tensile strength of steel	MPa
fyk	Yield strength of steel	MPa
Es	Modulus of elasticity of steel	MPa
esd	Steel strain at fyd	-
gs	Partial safety factor for steel	-
fyd	Design strength of steel	MPa
dia	Diameter of the reinforcement bars	mm
y_layer	Distance of the reinforcement layer from the top side	mm
x_first	Distance of the first bar from left side	mm
rebar_spacing	Rebar spacing	mm
axial, Mx, My	Axial and bending loads	kN, kNm
Xn	Neutral axis depth from top side	mm
fcc	Compressive strength of concrete	MPa
fsc	Compressive strength of steel	MPa
fst	Tensile strength of steel	MPa
MR	Moment capacity	kNm