STEEL DESIGN

CODE: *NF EN 1993-1:2005/NA:2007/AC:2009, Eurocode 3: Design of steel structures.*
ANALYSIS TYPE: Member Verification

CODE GROUP:
MEMBER: 290 Simple bar_290 **POINT:** 2 **COORDINATE:** x = 0.17 L = 1.01 m

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LOADS:
Governing Load Case: 16 ULS /105/ 1*1.35 + 2*1.35 + 3*1.35 + 4*1.35 + 5*1.35 + 6*1.35 + 7*1.05 + 8*1.05 + 9*1.05 + 14*1.50

MATERIAL:
ACIER fy = 235.00 MPa

SECTION PARAMETERS: CAE 100x7

h=10.0 cm	gM0=1.00	gM1=1.00	
b=10.0 cm	Ay=7.00 cm2	Az=7.00 cm2	Ax=13.66 cm2
tw=0.7 cm	Iy=128.20 cm4	Iz=128.20 cm4	Ix=2.21 cm4
tf=0.7 cm	Wely=17.54 cm3	Welz=17.54 cm3	
	Weff,y=17.54 cm3		Aeff=13.66 cm2

Attention: Section of the 4 class! The program does not perform a full analysis of the 4 class for these section types; they are treated as the 3 class sections.

INTERNAL FORCES AND CAPACITIES:

N,Ed = 17.45 kN	My,Ed = 0.36 kN*m	
Nc,Rd = 321.01 kN	My,Ed,max = 0.65 kN*m	
Nb,Rd = 61.20 kN	My,c,Rd = 4.12 kN*m	Vz,Ed = 0.28 kN
		Vz,c,Rd = 94.97 kN
		Class of section = 4

LATERAL BUCKLING PARAMETERS:

BUCKLING PARAMETERS:

About y axis:

About z axis:

Ly = 6.06 m	Lam_y = 2.11	Lz = 6.06 m	Lam_z = 2.11
Lcr,y = 6.06 m	Xy = 0.19	Lcr,z = 6.06 m	Xz = 0.19
Lamy = 197.97	kyy = 1.06	Lamz = 197.97	kzy = 1.06

VERIFICATION FORMULAS:
Section strength check:
My,Ed/My,c,Rd = 0.09 < 1.00 (6.2.5.(1))
N,Ed/Nc,Rd + My,Ed/My,c,Rd = 0.14 < 1.00 (6.2.1(7))
Vz,Ed/Vz,c,Rd = 0.00 < 1.00 (6.2.6.(1))
Global stability check of member:
Lambda,y = 197.97 < Lambda,max = 210.00 Lambda,z = 197.97 < Lambda,max = 210.00 STABLE
N,Ed/(Xmin*N,Rk/gM1) + kyy*My,Ed,max/(XLT*My,Rk/gM1) = 0.45 < 1.00 (6.3.3.(4))
N,Ed/(Xmin*N,Rk/gM1) + kzy*My,Ed,max/(XLT*My,Rk/gM1) = 0.45 < 1.00 (6.3.3.(4))

Section OK !!!