Eurocode 3-2005 STEEL SECTION CHECK (Summary for Combo and Station)
Units : KN, m, C

Frame : 18 X Mid: 24,294 Combo: ELU2 Design Type: Brace
Length: 3,736 Y Mid: 0,000 Shape: D244,5x6,3 Frame Type: DCM-MRF
Loc : 0,000 Z Mid: 0,839 Class: Class 1 Rolled : No

Country=CEN Default Combination=Eq. 6.10
Reliability=Class 2
Interaction=Method 1 (Annex A) MultiResponse=Envelopes P-Delta Done? No
Consider Torsion? No

GammaM0=1,05 GammaM1=1,10 GammaM2=1,25
An/Ag=1,00 RLLF=1,000 PLLF=0,750 D/C Lim=0,950

Aeff=0,005 eNy=0,000 eNz=0,000
A=0,005 Iyy=3,346E-05 iyy=0,084 Wel,yy=2,737E-04 Weff,yy=2,737E-04
It=6,692E-05 Izz=3,346E-05 izz=0,084 Wel,zz=2,737E-04 Weff,zz=2,737E-04
Iw=0,000 Iyz=0,000 h=0,245 Wpl,yy=3,575E-04 Av,z=0,003
E=210000000,0 fy=275000,000 fu=430000,000 Wpl,zz=3,575E-04 Av,y=0,003

STRESS CHECK FORCES & MOMENTS

Location	Ned	Med,yy	Med,zz	Ved,z	Ved,y	Ted
0,000	-755,227	-15,205	-9,801	-6,193	-1,837	-12,163

PMM DEMAND/CAPACITY RATIO (Governing Equation EC3 6.3.3(4)-6.61)
D/C Ratio: 0,924 = 0,766 + sqrt[(0,145)^2 + (0,064)^2] < 0,950 OK
= NEd/(Chi_y NRk/GammaM1) + sqrt[(kyy (My,Ed+NEd eNy)/(Chi_LT My,Rk/GammaM1))^2
+ (kyz (Mz,Ed+NEd eNz)/(Mz,Rk/GammaM1))^2] (EC3 6.3.3(4)-6.61)

AXIAL FORCE DESIGN

	Ned Force	Nc,Rd Capacity	Nt,Rd Capacity
Axial	-755,227	1234,740	1234,740

Npl,Rd	Nu,Rd	Ncr,T	Ncr,TF	An/Ag
1234,740	1459,598	380783,504	4967,929	1,000

	Curve	Alpha	Ncr	LambdaBar	Phi	Chi	Nb,Rd
Major (y-y)	c	0,490	4967,929	0,511	0,707	0,837	986,388
MajorB(y-y)	c	0,490	4967,929	0,511	0,707	0,837	986,388
Minor (z-z)	c	0,490	4967,929	0,511	0,707	0,837	986,388
MinorB(z-z)	c	0,490	4967,929	0,511	0,707	0,837	986,388
Torsional TF	c	0,490	4967,929	0,511	0,707	0,837	986,388

MOMENT DESIGN

	Med Moment	Med,span Moment	Mc,Rd Capacity	Mv,Rd Capacity	Mn,Rd Capacity	Mb,Rd Capacity
Major (y-y)	-15,205	-15,205	93,642	93,642	93,642	89,385
Minor (z-z)	-9,801	-9,801	93,642	93,642	93,642	

	Curve	AlphaLT	LambdaBarLT	PhiLT	ChiLT	C1	Mcr
LTB	d	0,760	0,097	0,465	1,000	2,025	10494,291

	kyy	kyz	kzy	kzz
Factors	0,851	0,584	0,512	0,970

SHEAR DESIGN

	Ved Force	Ted Torsion	Vc,Rd Capacity	Stress Ratio	Status Check
Major (z)	6,193	11,816	453,832	0,014	OK
Minor (y)	1,837	11,816	453,832	0,004	OK

	Vpl,Rd	Eta	LambdabarW
Reduction	453,832	1,200	0,000

BRACE MAXIMUM AXIAL LOADS

	P Comp	P Tens
Axial	-755,227	N/C