

Symbol	Values	Unit	Symbol description	Section
<b>MEMBER: 64 ; COORDINATE: x = 1.00 L = 0.819232775 m</b>				
<b>Cross-section properties: T-200Fx140Wx6</b>				
Ax	2176.00	mm <sup>2</sup>	Cross-section area	
Ay	1280.00	mm <sup>2</sup>	Shear area - Y-axis	
Az	896.00	mm <sup>2</sup>	Shear area - Z-axis	
J	29004.75	mm <sup>4</sup>	Torsional constant	
Iy	4291943.40	mm <sup>4</sup>	Moment of inertia of a section about the Y-axis	
Iz	4269725.01	mm <sup>4</sup>	Moment of inertia of a section about the Z-axis	
Sy,u	128728.01	mm <sup>3</sup>	Elastic section modulus about the Y-axis - upper edge	
Sy,l	37962.04	mm <sup>3</sup>	Elastic section modulus about the Y-axis - lower edge	
Sz	42697.25	mm <sup>3</sup>	Elastic section modulus about the Z-axis	
d	146.4	mm	Height of cross-section	
b	200.0	mm	Width of cross-section	
tf	6.4	mm	Flange thickness	
tw	6.4	mm	Web thickness	
ry	44.4	mm	Radius of gyration - Y-axis	
rz	44.3	mm	Radius of gyration - Z-axis	
<b>Material:</b>				
Name			STEEL 350W	
Fy	350.00	MPa	Minimum guaranteed yield stress	
<b>Local buckling:</b>				
x	15.63		Width-thickness ratio for a flange	(Tab. B5.1)
UNS	Slender		Flexibility of a flange in local buckling	(Tab. B5.1)
y	22.88		Width-thickness ratio for a web	(Tab. B5.1)
STI	Slender		Flexibility of a web on local buckl.	(Tab. B5.1)
<b>Parameters for calculation of allowable stresses:</b>				
<b>Q</b>	<b>0.02</b>		<b>Full reduction factor for slender compr. elements</b>	<b>(A-B5.2.c)</b>
Cc	761.91		Column slend. ratio separating elastic/inelastic buckling	(E2)
Ly	0.81923277 5	m	Theoretical member length	(E1)
Lz	0.81923277 5	m	Theoretical member length	(E1)
Ky	1.00		Effective length factor according to Y axis	Sect.C2
Kz	1.00		Effective length factor according to Z axis	Sect.C2
KL/ry	18.45		Slenderness ratio about the Y axis	(E1)
KL/rz	18.49		Slenderness ratio about the Z axis	(E1)
kc	1.00		Compression element restraint coefficient	(F1.2)
Lc	2.13338444 8	m	Max.unbraced length of the flange in compression	(F1.1)
Cb	1.00		Bending coeff. dependent upon moment gradient	(F1.3)
<b>Internal forces</b>				
Fx	0.596	kN	Axial force	
Mx	-0.00	kN*m	Torsional moment about the X axis	
My	0.14	kN*m	Bending moment about the Y axis	
Mz	-1.82	kN*m	Bending moment about the Z axis	
Vy	4.690	kN	Shear force along the Y axis	
Vz	0.233	kN	Shear force along the Z axis	
<b>Computed stresses:</b>				
fa	0.27	MPa	Computed compressive stress	
fbcy	1.11	MPa	Computed bending stress in compr. part of cross-section	
fbty	-3.77	MPa	Computed bending stress in tens. part of cross-section	
fbcz	42.51	MPa	Computed bending stress in compr. part of	

			cross-section	
fbtz	-42.51	MPa	Computed bending stress in tens. part of cross-section	
fyv	3.66	MPa	Computed shear stress	
f vz	0.26	MPa	Computed shear stress	
fyv,mx	0.46	MPa	Shear stress for simple torsion	
f vz,mx	0.46	MPa	Shear stress for simple torsion	
<b>Allowable stresses</b>				
<b>Fa</b>	<b>4.06</b>	MPa	<b>Allowable axial compressive stress</b>	(A-B5.2.c)
<b>Fbcy</b>	<b>4.08</b>	MPa	<b>Bending stress in compr. part of cross-section</b>	(F1)
Fbty	210.00	MPa	Bending stress in tens. part of cross-section	(F1)
<b>Fbcz</b>	<b>4.08</b>	MPa	<b>Bending stress in compr. part of cross-section</b>	(F2)
Fbtz	210.00	MPa	Bending stress in tens. part of cross-section	(F2)
Fvy	140.00	MPa	Allowable shear stress	(F4)
Fvz	140.00	MPa	Allowable shear stress	(F4)
<b>Ratio:</b>				
RAT	10.76		Results of a check of the member	Incorrect section