STEEL BEAM AND COLUMN ANALYSIS / CODE CHECK

Stress Code Check Per AISC 9th Edition Manual (ASD)

For W, S, M, and HP Shapes

Job Name:		Subject:			
Job Number:		Originator:		Checker:	

Sin
Rev
Bra

Input Data:

Member Size:

Select: W14x30

Member Loadings:

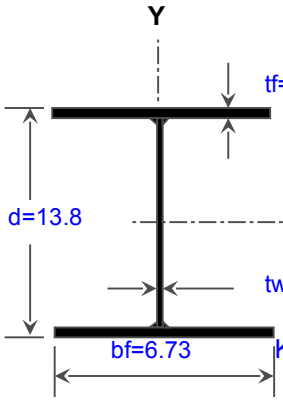
P =	0.00	kips
Mx =	108.72	ft-kips
My =	0.00	ft-kips

Design Parameters:

Fy =	50.00	ksi
Kx =	0.79	
Ky =	1.37	
Lx =	1.000	ft.
Ly =	1.000	ft.
Lb =	1.000	ft.
Cb =	1.00	
Cmx =	0.85	
Cmy =	0.85	
ASIF =	1.000	

Member Properties:

A =	8.85	in.^2
d =	13.800	in.
tw =	0.270	in.
bf =	6.730	in.
tf =	0.385	in.
rt =	1.740	in.
d/Af =	5.34	
Ix =	291.00	in.^4
Sx =	42.00	in.^3
rx =	5.730	in.
Iy =	19.60	in.^4
Sy =	5.82	in.^3
ry =	1.490	in.
J =	0.38	in.^4
Cw =	887.0	in.^6



W14x30 Section

Qs =	1.000
Qa =	1.000

P(be) =
Qa =
Sx(eff) =
Sy(eff) =
Ky*Ly/ry =
K*L/r (max) =
Cc =
fa = P/A =
Fa =
Fa =
Pa =

Results:

Lc =
Lu =
Lb/rt =

For Axial Compression:

Kx*Lx/rx =	1.65	
Ky*Ly/ry =	11.04	
Cc =	107.00	
fa =	0.00	ksi
Fa =	29.17	ksi
Pa =	258.11	kips

For X-axis Bending:

Lc =	6.03	ft.
Lu =	6.55	ft.
Lb/rt =	6.90	
fbx =	31.06	ksi
Fbx =	33.00	ksi
Mrx =	115.50	ft-kips

For Y-axis Bending:

fby =	0.00	ksi
Fby =	37.50	ksi
Mry =	18.19	ft-kips

Is d/tw<=allow?
Is b/t<=65/SQRT(Fy)?
Is b/t>95/SQRT(Fy)?
Fbx =
Fbx =
Fbx =

X-axis Euler Stress:

F'ex = N.A. ksi

Y-axis Euler Stress:

F'ey = N.A. ksi

Fbx =
Fbx =
Fbx =
Use: Fbx =
Mrx =

Stress Ratio:

S.R. = **0.941**

Comments:

fby = My/Sy =
Fby =
Mry =