STEEL BEAM AND COLUMN ANALYSIS / CODE CHECK

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

For C and MC Shapes

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

Input Data:

Member Size:

Select: C15x50

Member Loadings:

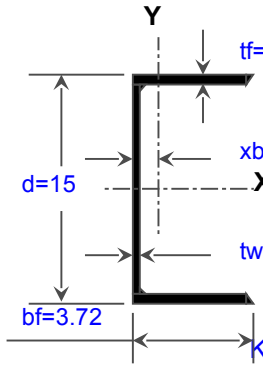
P =	0.00	kips
Mx =	134.00	ft-kips
My =	0.00	ft-kips

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 =	1.00	
Cmy =	1.00	
ASIF =	1.000	

Member Properties:

A =	14.70	in.^2
d =	15.000	in.
tw =	0.716	in.
bf =	3.720	in.
tf =	0.650	in.
xbar =	0.799	in.
d/Af =	6.21	
Ix =	404.00	in.^4
Sx =	53.80	in.^3
rx =	5.240	in.
Iy =	11.00	in.^4
Sy =	3.77	in.^3
ry =	0.865	in.
J =	2.65	in.^4
Cw =	492.00	in.^6



C15x50 Section

Qs =	1.000
Qa =	1.000

Results:

For Axial Compression:

Kx*Lx/rx =	1.80	
Ky*Ly/ry =	19.02	
Cc =	107.00	
fa =	0.00	ksi
Fa =	28.40	ksi
Pa =	417.51	kips

For X-axis Bending:

Lu =	5.37	ft.
fbx =	29.89	ksi
Fbx =	30.00	ksi
Mrx =	134.50	ft-kips

For Y-axis Bending:

fby =	0.00	ksi
Fby =	30.00	ksi
Mry =	9.43	ft-kips

X-axis Euler Stress:

F'ex = N.A. ksi

Y-axis Euler Stress:

F'ey = N.A. ksi

Stress Ratio:

S.R. = **0.996**

Comments:

Sin
Rev
Bra
Unbr
be =
Qa =
Kx*Lx/rx =
Ky*Ly/ry =
K*L/r (max) =
Cc =
fa = P/A =
Fa =
fa/Fa =
Pa =
Lu =
Is b/t<=65/SQRT(Fy)?
Is b/t>95/SQRT(Fy)?
Fbx =
Mrx =
Fby =
Mry =
F'ex =
F'ey =
S.R. =
S.R. =

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S.R. =