

# SAP2000

AISC360-05/IBC2006 STEEL SECTION CHECK (Summary for Combo and Station)  
Units : Kgf, m, C

Frame : 5027 X Mid: 1.950 Combo: 1.2D+0.5L-1.3W Design Type: Brace  
Length: 0.854 Y Mid: 23.400 Shape: Barra 3/4 Frame Type: SMF  
Loc : 0.427 Z Mid: 8.235 Class: Compact Princpl Rot: 0.000 degrees

Provision: LRFD Analysis: Direct Analysis  
D/C Limit=0.950 2nd Order: General 2nd Order Reduction: Tau-b Fixed  
AlphaPr/Py=0.159 AlphaPr/Pe=0.625 Tau\_b=1.000 EA factor=0.800 EI factor=0.800  
Ignore Seismic Code? No Ignore Special EQ Load? No D/P Plug Welded? Yes

SDC: D I=1.000 Rho=1.000 Sds=0.500  
R=8.000 Omega0=3.000 Cd=5.500  
PhiB=0.900 PhiC=0.900 PhiTY=0.900 PhiTF=0.750  
PhiS=0.900 PhiS-RI=1.000 PhiST=0.750

A=2.850E-04 I33=0.000 r33=0.005 S33=0.000 Av3=2.565E-04  
J=0.000 I22=0.000 r22=0.005 S22=0.000 Av2=2.565E-04  
E=2.100E+10 fy=25300000.00 Ry=1.000 z33=1.152E-06  
RLLF=1.000 Fu=40800000.0 z22=1.152E-06

STRESS CHECK FORCES & MOMENTS (Combo 1.2D+0.5L-1.3W)  
Location Pu Mu33 Mu22 Vu2 Vu3 Tu  
0.427 -1148.263 0.046 0.000 0.000 0.000 0.000

PMM DEMAND/CAPACITY RATIO (H1-1a)  
D/C Ratio: 0.794 = 0.792 + 0.002 + 0.000  
= (Pr/Pc) + (8/9)(Mr33/Mc33) + (8/9)(Mr22/Mc22)

AXIAL FORCE & BIAXIAL MOMENT DESIGN (H1-1a)  
Factor L K1 K2 B1 B2 Cm  
Major Bending 1.000 1.000 1.000 1.000 1.000 1.000  
Minor Bending 1.000 1.000 1.000 1.000 1.000 1.000

Ltbt Kltb Cb  
LTB 1.000 1.000 1.316

Pu phi\*Pnc phi\*Pnt  
Force Capacity Capacity  
Axial -1148.263 1449.654 6489.973

Mu phi\*Mn phi\*Mn  
Moment Capacity No LTB  
Major Moment 0.046 24.727 24.727  
Minor Moment 0.000 24.727

SHEAR CHECK  
Vu phi\*Vn Stress Status  
Force Capacity Ratio Check  
Major Shear 0.000 3504.585 0.000 OK  
Minor Shear 0.000 3504.585 0.000 OK