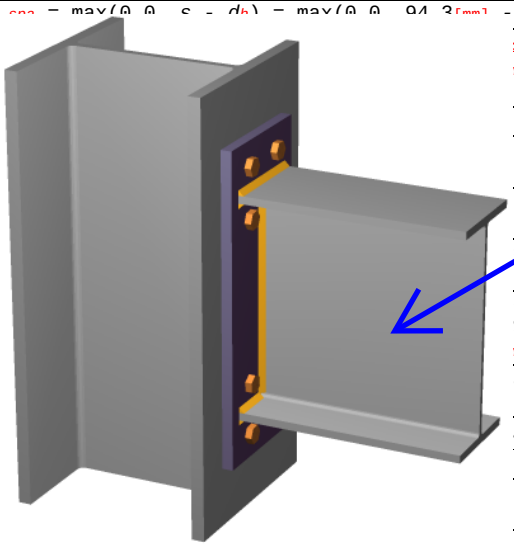
0.02 Eq. J3-6

$L_{c\text{-}end}$ = max(0.0, L_e - d_h/2) = max(0.0, 94.3[mm] - 20.6375[mm]/2) = **83.98125[mm]** Sec. J4.10

$L_{c\text{-}spa}$ = max(0.0, s - d_h) = max(0.0, 94.3[mm] - 20.6375[mm]) = **73.6625[mm]** Sec. J4.10



BCF

ϕR_n = ϕ*(min(k_1*$L_{c\text{-}end}$, k_2*d) + min(k_1*$L_{c\text{-}spa}$, k_2*d)*(n - 1))*t_p*F_u* n_c = 0.75*(min(1.2*83.98125[mm], 2.4*19.05[mm]) + min(1.2*73.6625[mm], 2.4*19.05[mm])*(2 - 1))* 23.800001[mm]*0.4078[KN/mm2]*2 = **1331.23[KN]**

[KN*m] 0.00 LC-2

DG4 Table 3.1,

= **96.514246[mm]**

= **94.3[mm]** DG4 Table 3.4, AISC 358-05

+ 3*c/4) + h_0*(s + c/4) + c2/2) + g/2 = 5[mm]*(1/96.514246[mm])) + 2/100[mm]*(347.95[mm]* mm]/4) + 94.3[mm]2/2) + 100[mm]/2 = **3890.24[mm]** (96.514246[mm] + DG4 Table 3.4,

800001[mm]2 = **557.95[KN*m]** DG4 Eq. 3.20,

452.39[KN*m] DG4 Eq. 3.20, Sec. 2.2.3

[KN] 1331.23 23.82 LC-2
Eq. J3-6

] - 20.6375[mm]/2) = **83.98125[mm]** Sec. J4.10

$L_{c\text{-}spa}$ = max(0.0, s - d_h) = max(0.0, 94.3[mm] - 20.6375[mm]) = **73.6625[mm]** Sec. J4.10

ϕR_n = ϕ*(min(k_1*$L_{c\text{-}end}$, k_2*d) + min(k_1*$L_{c\text{-}spa}$, k_2*d)*(n - 1))*t_p*F_u* n_c = 0.75*(min(1.2*83.98125[mm], 2.4*19.05[mm]) + min(1.2*73.6625[mm], 2.4*19.05[mm])*(2 - 1))* 23.800001[mm]*0.4078[KN/mm2]*2 = **1331.23[KN]**
Eq. J3-6

Panel web shear [KN] 724.94 40.90 LC-2
0.06 Sec. J10-6,

P_c = ϕ*F_y*A = 1*0.2532[KN/mm2]*22600[mm2] = **5722.32[KN]** Sec. J10-6

IsPanelZoneDeformationConsidered = *IsPanelZoneDeformationConsidered* = **False** Sec. J10-6

P_r<=0.4*P_c → 24.311239[KN]<=0.4*5722.32[KN] → **True**

ϕR_n = ϕ*0.60*F_y*d_c*t_w = 0.9*0.60*0.2532[KN/mm2]*368.2[mm]*14.4[mm] = **724.94[KN]** Eq. J10-9

Local web yielding [KN] 978.97 42.51 LC-2
0.04 DG4 eq. 3.24

IsBeamReaction → **False**

N = N = **14.3[mm]** Sec. J10-2

IsMemberEnd → **False**

ϕR_n = ϕ*1*(6*k + N + 2*t_p)*F_{yw}*t_w = 1*1*(6*35.700001[mm] + 14.3[mm] + 2*20[mm])* 0.2532[KN/mm2]*14.4[mm] = **978.97[KN]** DG4 eq. 3.24

Bottom web bearing [KN] 1215.56 42.08 LC-2
0.03 Eq. J10-4

IsBeamReaction → **False**

N = N = **14.3[mm]** Sec. J10-2

ϕR_n = ϕ*0.80*t_w2*(1 + 3*(N/d)*(t_w/t_f)1.5)*(E*F_{yw}*t_f/t_w)1/2 = 0.75*0.80* 14.4[mm]2*(1 + 3*(14.3[mm]/368.2[mm])*(14.4[mm]/23.800001[mm])1.5)*(205[KN/mm2]*0.2532[KN/mm2]* 23.800001[mm]/14.4[mm])1/2 = **1215.56[KN]** Eq. J10-4

AISC-DG4 - eq.3.26 is missing?

Critical strength ratio

NOTATION

A:

A_b:

A_g:

A_n:

A_w:

b_{cf}:

b_{fb}:

b_p: Plate width

AISC-360 - J.5-Web compression buckling check is missing?