

STEEL DESIGN

CODE: CAN/CSA S16-09

ANALYSIS TYPE: Member Verification

CODE GROUP:

MEMBER: 325 Truss_325

POINT: 3

COORDINATE: x = 1.00 L = 1.86 m

LOADS:

Governing Load Case: 4 Neige

MATERIAL:

ACIER 250W A36 Fy = 350.00 MPa



SECTION PARAMETERS: LLSC 76x64x6.4

d=63.5 mm

b=162.4 mm

w=6.3 mm

t=6.3 mm

Ay=870.97 mm²

Iy=619000.00 mm⁴

Sy=13226.50 mm³

Az=725.80 mm²

Iz=2322549.25 mm⁴

Sz=28602.82 mm³

A=1690.00 mm²

J=22800.00 mm⁴

INTERNAL FORCES AND CAPACITIES:

Tf = -273.73 kN

Tr = 532.35 kN

Mfz = -0.00 kN*m

Mrz = 9.01 kN*m

Vfy = 0.00 kN

Vry = 181.07 kN

CLASS: = Slender



LATERAL BUCKLING PARAMETERS:

BUCKLING PARAMETERS:



About Y axis:



About Z axis:

VERIFICATION FORMULAS:

$Tf/Tr + Mfz/Mrz = 0.51 < 1.00$ (13.9.1)

$Vfy/Vry = 0.00 < 1.00$ (13.4.1)

LIMIT DISPLACEMENTS



Deflections

uy = 0.0 mm < uy max = L/300.00 = 6.2 mm

Verified

Governing Load Case: 4 Neige

uz = 0.1 mm < uz max = L/300.00 = 6.2 mm

Verified

Governing Load Case: 1 Poids propre



Displacements Not analyzed

Section OK !!!

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POINT: 3

COORDINATE: x = 1.00 L = 1.86 m

LOADS:

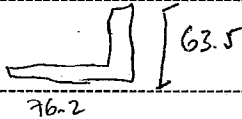
Governing Load Case: 4 Neige

6.35
H

$$A = 2 \times (76.2 - 6.35 + 63.5) \times 6.35 = 1694$$

MATERIAL:

ACIER 250W A36

 $F_y = 350.00 \text{ MPa}$


$$A_y = (76.2 - 6.35) \times 6.35 \times 2 = 887$$

$$A_z = (63.5 - 6.35) \times 6.35 \times 2 = 725.8$$



SECTION PARAMETERS: 2Ls 3x2.5x0.25

d = 63.5 mm

~~b = 152.4 mm~~

w = 6.3 mm

t = 6.3 mm

A_y = 725.80 mm²I_y = 611027.73 mm⁴S_y = 13081.14 mm³A_z = 870.97 mm²I_z = 1876678.25 mm⁴S_z = 24628.32 mm³A = 1690.32 mm²J = 52028.93 mm⁴

INTERNAL FORCES AND CAPACITIES:

T_f = -273.73 kNT_r = 532.45 kNV_{fy} = 0.00 kNV_{ry} = 150.89 kNM_{fy} = -0.00 kN*m~~M_{rz} = 776 kN*m~~ 5.54

CLASS: = Slender



LATERAL BUCKLING PARAMETERS:

BUCKLING PARAMETERS:



About Y axis:



About Z axis:

VERIFICATION FORMULAS:

T_f/T_r + M_{fy}/M_{rz} = 0.51 < 1.00 (13.9.1)V_{fy}/V_{ry} = 0.00 < 1.00 (13.4.1)

LIMIT DISPLACEMENTS



Deflections

u_y = 0.0 mm < u_y max = L/300.00 = 6.2 mm

Verified

Governing Load Case: 4 Neige

u_z = 0.1 mm < u_z max = L/300.00 = 6.2 mm

Verified

Governing Load Case: 1 Poids propre



Displacements Not analyzed

Section OK !!!