VERTICAL TRUSS ANALYSIS

Number of Posts	1

Local Buckling AASHTO 5.3

Left Post

Outside Dia. (inches)	Wall Thick. (inches)	Yield Str. (ksi)	λ	λp	λr	λmax	Result
14.000	0.50	42.0	28.00	56.9	150.8	335.5	Compact

Right Post

Outside Dia. (inches)	Wall Thick. (inches)	Yield Str. (ksi)	λ	λp	λr	λmax	Result
14.000	0.50	42.0	28.00	56.9	150.8	335.5	Compact

Diagonals

Leg Dim (inches)	Thickness (inches)	Flex Dia. (inches)	Wall Thk. (inches)	Yield Str (ksi)	λ	λp	λr	Result
0.00	0.00	0.00	0.00	999	999.0	999.0	999.0	NA

λ width-thickness ratio
λp compact width-thickness ratio
λr non-compact width-thickness ratio
λmax maximum width-thickness ratio
E 29000 ksi (Young's Modulus)

Post Design Values

K
2.1
1.5
2

<= input for 3 chord post
<= Value used in computations

Fa calculated for KL/ryy only

GROUP 1

BENDING AND SHEAR STRESSES

	Mmax kip-ft	Sxxnt in^3	fb ksi	Shear Vbx	Pipe Area in^2	fvs ksi	Axial Kips	Area y in^2	fa ksi
Left Support	0.00	49.01	0.00	0.00	21.21	0.00	3.91	21.21	0.18
Right Support	0.00	49.01	0.00	0.00	21.21	0.00	3.72	21.21	0.18

RESULTS

	Pb kip	Pv kip	Pa kip	Cc	Rwsqk	KLR	Pcr	Eqn. 5-17 Cdb	Eqn. 5-18 Cdb	Eqn. 5-19 Cdb	MAX Cdb
Left Support	27.72	13.86	9.65	116.75	4.77	124.11	9.55	0.012	0.018	0.012	0.018
Right Support	27.72	13.86	9.65	116.75	4.77	124.11	9.55	0.007	0.002	0.002	0.007

	Length	Pipe or Angle	Diagonal Area	Rmin	Chord Yield Str.	Max Axial Force	Column Strut/tension	KL/Rmin	fa (ksi)	Fa (ksi)	Result C/D
Left Diagonal	0.00	PIPE	0.00	999.00	0	0.00	999.00	0.00	999.00	999.00	1.00
Right Diagonal	0.00	PIPE	0.00	999.00	0	0.00	999.00	0.00	999.00	999.00	1.00

Fb Calculation

	Lbrs	Lbrs D'area	Cb
Left Support	0.000	0.000	0.000
Right Support	0.000	0.000	0.000
Eqn. 5-17	0.000	0.000	0.000
Eqn. 5-18	0.000	0.000	0.000
Eqn. 5-19	0.000	0.000	0.000

	Fb (ksi) Compact (lbs)	Non-Compact (lbs)	Shether
Left Support	27.72	51.60	51.60
Right Support	27.72	51.60	51.60

GROUP 1 CASE 1

BENDING AND SHEAR STRESSES

	Mmax kip-ft	Sxxnt in^3	Rwsqk ksi	Shear Vbx	Pipe Area in^2	fvs ksi	Axial kips	Area y in^2	fa ksi
Left Support	114.10	49.01	19.85	4.65	21.21	0.22	3.94	21.21	0.19
Right Support	105.67	49.01	17.50	3.62	21.21	0.18	3.84	21.21	0.18

RESULTS

	Pb kip	Pv kip	Pa kip	Cc	Rwsqk	KLR	Pcr	Eqn. 5-17 Cdb	Eqn. 5-18 Cdb	Eqn. 5-19 Cdb	MAX Cdb
Left Support	27.72	13.86	9.65	116.75	4.77	124.11	9.55	0.022	0.047	0.022	0.047
Right Support	27.72	13.86	9.65	116.75	4.77	124.11	9.55	0.019	0.040	0.019	0.040

	Length	Pipe or Angle	Diagonal Area	Rmin	Chord Yield Str.	Max Axial Force	Column Strut/tension	KL/Rmin	fa (ksi)	Fa (ksi)	Result C/D
Left Diagonal	0.00	PIPE	0.00	999.00	0	0.00	999.00	0.00	999.00	999.00	1.00
Right Diagonal	0.00	PIPE	0.00	999.00	0	0.00	999.00	0.00	999.00	999.00	1.00

Fb Calculation

	Lbrs	Lbrs D'area	Cb
Left Support	0.000	0.000	0.000
Right Support	0.000	0.000	0.000
Eqn. 5-17	0.000	0.000	0.000
Eqn. 5-18	0.000	0.000	0.000
Eqn. 5-19	0.000	0.000	0.000

	Fb (ksi) Compact (lbs)	Non-Compact (lbs)	Shether
Left Support	27.72	51.60	51.60
Right Support	27.72	51.60	51.60

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