

CROSS SECTION: PETERSEN: 1319

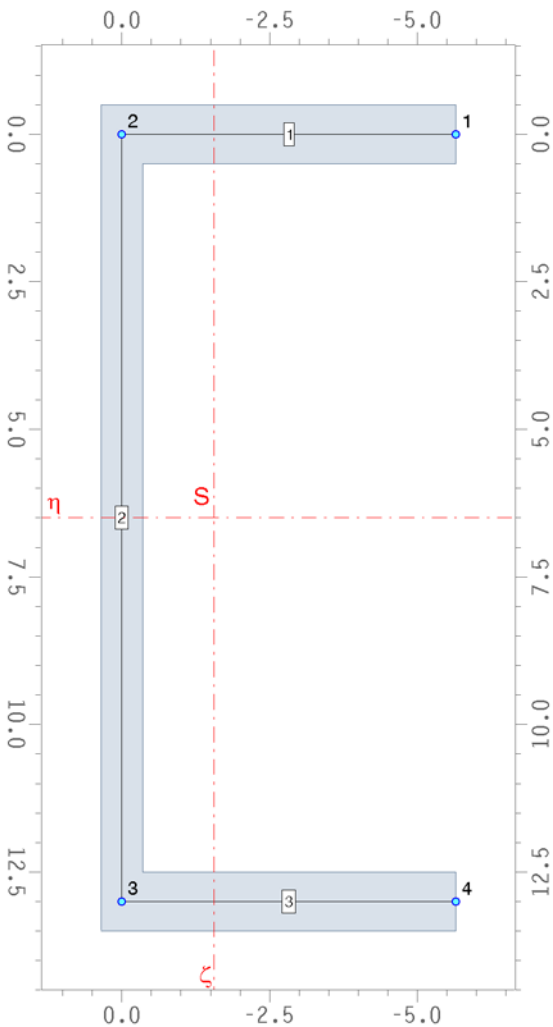
nodes

nodes	y cm	z cm
1	-5.65	0.00
2	0.00	0.00
3	0.00	13.00
4	-5.65	13.00

lines

line	from	to	thickn.A cm	thickn.E cm	arch rise cm	r _{ar} cm	r _{al} cm	r _{er} cm	r _{el} cm	Φ _a °	Φ _e °
1	1	2	1.00	1.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
2	2	3	0.70	0.70	0.000	0.00	0.00	0.00	0.00	0.00	0.00
3	3	4	1.00	1.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00

plotting



characteristic values

area, centroid and angle of principal axis

A =	20.40 cm ²	e _y =	-1.56 cm	e _z =	6.50 cm	α =	0.00 °
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spread

y _{max} =	0.35 cm	y _{min} =	-5.65 cm	b =	6.00 cm	U =	50.60 cm
z _{max} =	13.50 cm	z _{min} =	-0.50 cm	h =	14.00 cm		

Imn-system: moments of inertia and section moduli, clearances and radii of gyration

(I_{mn} = ξηζ)

I _m =	608.80 cm ⁴	W _{m+} =	86.97 cm ³	h _{m+} =	1.91 cm	i _m =	5.46 cm
I _n =	71.04 cm ⁴	W _{m-} =	86.97 cm ³	h _{m-} =	-4.09 cm	i _n =	1.87 cm
I _p =	679.84 cm ⁴	W _{n+} =	37.22 cm ³	h _{n+} =	7.00 cm	i _p =	5.77 cm
		W _{n-} =	17.36 cm ³	h _{n-} =	-7.00 cm		

shear centre

y _M =	2.23 cm	y _{SM} =	3.79 cm	η _M =	3.79 cm		
z _M =	6.50 cm	z _{SM} =	0.00 cm	ζ _M =	0.00 cm		

shear area coefficient

κ _m =	3.36 -	A _m =	6.06 cm ²	κ _η =	3.36 -	A _η =	6.06 cm ²
κ _n =	2.54 -	A _n =	8.02 cm ²	κ _ζ =	2.54 -	A _ζ =	8.02 cm ²

torsion + warping

I _T =	5.25 cm ⁴	I _w =	2076.38 cm ⁶	R _{Sy} =	2296.36 cm ⁵	R _{Sz} =	0.00 cm ⁵
C _s =	10784.13 cm ⁶	I _{pM} =	972.25 cm ⁴	i _{ωM} =	1.46 cm		
ω _{M+} =	22.25 cm ²	ω _{M-} =	-22.25 cm ²	W _{ω+} =	93.33 cm ⁴	W _{ω-} =	93.33 cm ⁴

section lines

i _M =	6.90 cm	r _η =	-14.57 cm	r _ζ =	0.00 cm	r _ω =	0.00 cm
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plastic characteristic values

W _{ply,max} =	103.18 cm ³	W _{plz,max} =	31.43 cm ³	W _{plη,max} =	103.18 cm ³	W _{plζ,max} =	31.43 cm ³
W _{ply,red} =	103.18 cm ³	W _{plz,red} =	31.43 cm ³	W _{plη,red} =	103.18 cm ³	W _{plζ,red} =	31.43 cm ³