QUERSCHNITT: BEULFELD

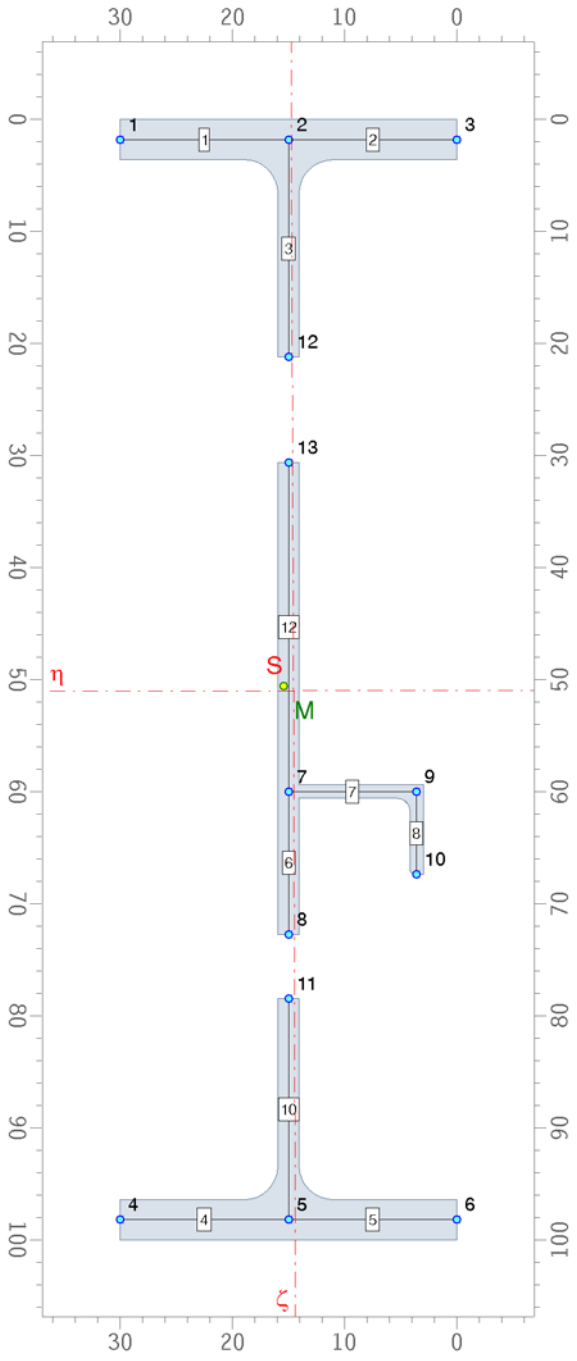
Knoten

Knoten	y	z	Knoten	y	z	Knoten	y	z
-	mm	mm	-	mm	mm	-	mm	mm
1	300.00	18.00	6	0.00	982.00	11	150.00	784.67
2	150.00	18.00	7	150.00	600.00	12	150.00	212.00
3	0.00	18.00	9	36.00	600.00	13	150.00	306.00
4	300.00	982.00	10	36.00	674.00			
5	150.00	982.00	8	150.00	727.33			

Linien

Linie	von	nach	Dicke(A)	Dicke(E)	Bogenstich	r_{ar}	r_{al}	r_{er}	r_{el}	Φa	Φe
-	-	-	mm	mm	mm	mm	mm	mm	mm	°	°
1	1	2	36.00	36.00	0.000	0.00	0.00	3.00	0.00	0.00	0.00
2	3	2	36.00	36.00	0.000	0.00	0.00	0.00	3.00	0.00	0.00
3	2	12	19.00	19.00	0.000	3.00	3.00	0.00	0.00	0.00	0.00
4	4	5	36.00	36.00	0.000	0.00	0.00	0.00	3.00	0.00	0.00
5	6	5	36.00	36.00	0.000	0.00	0.00	3.00	0.00	0.00	0.00
6	7	8	19.00	19.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
7	7	9	12.00	12.00	0.000	0.00	0.00	1.10	0.00	0.00	0.00
8	9	10	12.00	12.00	0.000	1.10	0.00	0.55	0.00	0.00	0.00
10	11	5	19.00	19.00	0.000	0.00	0.00	3.00	3.00	0.00	0.00
12	13	7	19.00	19.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00

grafische Darstellung



Kennwerte

Fläche, Schwerpunkt und Hauptachsendrehwinkel

A =	392.91	cm^2	e_y =	14.54	cm	e_z =	51.02	cm	α =	0.19	°

Ausdehnung

y_{max} =	30.00	cm	y_{min} =	0.00	cm	b =	30.00	cm	U =	323.37	cm
z_{max} =	100.00	cm	z_{min} =	0.00	cm	h =	100.00	cm			

Imn-System: Trägheits- und Widerstandsmomente, Randabstände und Trägheitsradien

I_m =	629640.51	cm^4	W_{m+} =	12854.60	cm^3	h_{m+} =	15.46	cm	i_m =	40.03	cm
I_n =	17957.32	cm^4	W_{m-} =	12341.47	cm^3	h_{m-} =	-14.54	cm	i_n =	6.76	cm
I_{mn} =	-1994.17	cm^4	W_{n+} =	1161.50	cm^3	h_{n+} =	48.98	cm			
			W_{n-} =	1235.07	cm^3	h_{n-} =	-51.02	cm			

ξηζ-System: Trägheits- und Widerstandsmomente, Randabstände und Trägheitsradien

I_η =	629647.01	cm^4	$W_{\eta+}$ =	12842.37	cm^3	$h_{\eta+}$ =	15.62	cm	i_η =	40.03	cm
I_ζ =	17950.82	cm^4	$W_{\eta-}$ =	12329.48	cm^3	$h_{\eta-}$ =	-14.71	cm	i_ζ =	6.76	cm
I_p =	647597.83	cm^4	$W_{\zeta+}$ =	1149.22	cm^3	$h_{\zeta+}$ =	49.03	cm	i_p =	40.60	cm
			$W_{\zeta-}$ =	1220.66	cm^3	$h_{\zeta-}$ =	-51.07	cm			

Schubmittelpunkt

y_M =	15.46	cm	y_{SM} =	0.92	cm	η_M =	0.92	cm			
z_M =	50.57	cm	z_{SM} =	-0.45	cm	ζ_M =	-0.45	cm			

Schubflächenbeiwerte

κ_m =	3.01	-	A_m =	130.45	cm^2	κ_η =	3.02	-	A_η =	130.29	cm^2
κ_n =	6.62	-	A_n =	59.35	cm^2	κ_ζ =	6.62	-	A_ζ =	59.38	cm^2

Torsion + Verwölbung

I_T =	1129.75	cm^4	I_W =	37716225.41	cm^6	R_{Sy} =	575281.40	cm^5	R_{Sz} =	6655.29	cm^5
C_S =	38246695.56	cm^6	I_{pM} =	648010.35	cm^4	$i_{\omega M}$ =	7.63	cm			
ω_{M+} =	732.68	cm^2	ω_{M-} =	-730.40	cm^2	$W_{\omega+}$ =	51477.37	cm^4	$W_{\omega-}$ =	51637.61	cm^4

Querschnittsstrecken

i_M =	40.61	cm	r_η =	13.05	cm	r_ζ =	-1.97	cm	r_ω =	0.00	cm

plastische Kennwerte

$W_{ply,max}$ =	14283.80	cm^3	$W_{plz,max}$ =	1881.15	cm^3	$W_{pl\eta,max}$ =	14284.31	cm^3	$W_{pl\zeta,max}$ =	1881.16	cm^3
$W_{ply,red}$ =	14187.47	cm^3	$W_{plz,red}$ =	1880.96	cm^3	$W_{pl\eta,red}$ =	14224.71	cm^3	$W_{pl\zeta,red}$ =	1880.97	cm^3