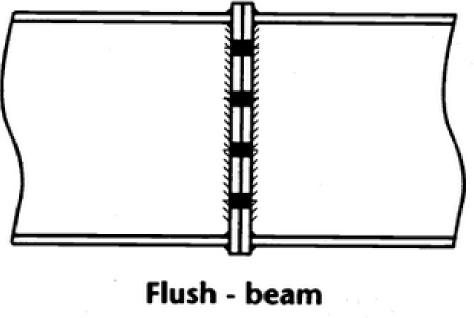
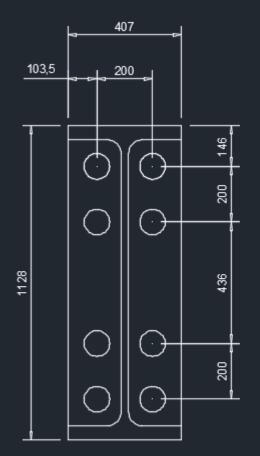
## Neutrino splices



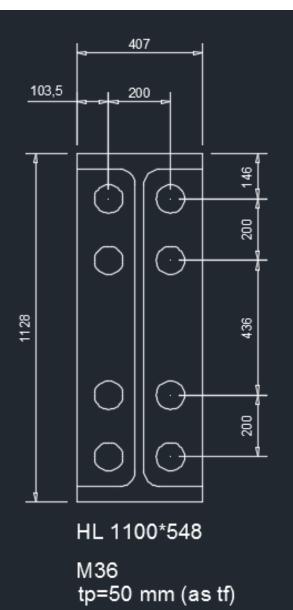
## Beam : HL 1100\*548 end plate as thick as flange (50mm)

Calculations with two bolt sizes (M48 and M36) are provided





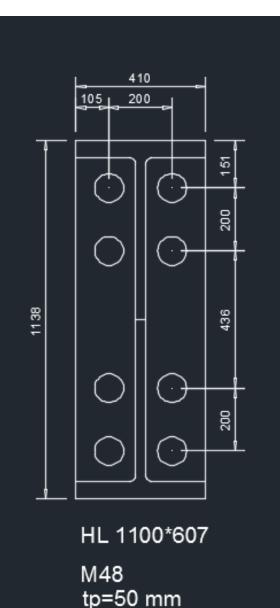
<u>Connection capacity</u>	3)		
Moment resistance	$M_{j.Rd} = (4.116 \cdot 10^3) \ kN \cdot m$		
Shear resistance	$V_{j.Rd} = (1.347 \cdot 10^3) \ kN$		
Initial rotation stiffness	$S_{j,ini} = 4739843.367 \ kN \cdot \frac{m}{rad}$		
Idealized rotation stiffness (for des	n) $S_j = 2369921.683 \ kN \cdot \frac{m}{rad}$		
Minium rigidity for rigid joint	$S_{j.rigid} = 2023938.746 \ kN \cdot \frac{m}{rad}$		
maximum rigidity for pinned joint	$S_{j.pinned} = 126496.172 \ kN \cdot \frac{m}{rad}$		
	$\begin{aligned} Joint_{classification} &\coloneqq \  \text{ if } S_j \leq S_{j,pinned} \\ \  \  \text{``Pinned'''} \\ \  \text{ else if } S_j \geq S_{j,rigid} \\ \  \  \text{``Rigid'''} \end{aligned} \end{aligned} = ``\text{Rigid'''}$		
$M(\phi)$ (J)	"Rigid"    else		
4400000 4000000 3600000 3200000 2800000 2800000 1600000 1200000 1000000 0 0.000.000.000.000.000 0 0.000.000.000.000.000 0 0.000.000.000.000.000 0 0.000.000.000.000 0 0.000.000.000.000 0 0.000.000.000.000 0 0.000.000.000.000 0 0.000.000.000 0 0.000.000.000 0 0.000.000 0 0.000.000 0 0.000.000 0 0.000.000 0 0.000.000 0 0.000.000 0 0.000.000 0 0.000.000 0 0.000 0 0.000.000 0 0.000 0 0.0000 0 0.000 0 0.0000 0 0.00000 0 0.0000 0 0.00000 0 0.00000 0 0.00000 0 0.00000 0 0.000000 0 0.000000 0 0.000000 0 0.0000000000	Note: When 2/3.Mj.Rd>Mj.Ed, Sj.ini can be used in the assessment		
$\phi$ (rad)			



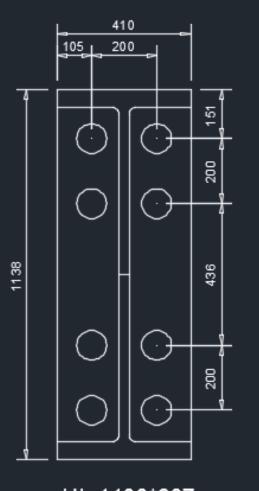
<u>Connection capacity</u>	$M_{i,Rd} = (2.282 \cdot 10^3) \ \mathbf{kN} \cdot \mathbf{m}$	
Moment resistance	Drog ti	
Shear resistance	$V_{j.Rd} = 746.725 \ kN$ want to	
Initial rotation stiffness	$S_{j.ini} = 3027918.438 \ kN \cdot \frac{m}{rad}$	
Idealized rotation stiffness (for design)	$S_j = 1513959.219 \ kN \cdot \frac{m}{rad}$	
Minium rigidity for rigid joint	$S_{j.rigid} = 2023938.746 \ kN \cdot \frac{m}{rad}$	
maximum rigidity for pinned joint	$S_{j.pinned} = 126496.172 \ kN \cdot \frac{m}{rad}$	
Joint classification Join		
	else if $S_{j.ini} \ge S_{j.rigid}$	
$M(\phi)$ (J)	"Rigid"	
$m(\phi)(\sigma)$	llese	
250000 - 2250000 - 2000000 - 1750000 -	"Semi-rigid"	
1250000-	Note: When 2/3.Mj.Rd>Mj.Ed, Sj.ini	
1000000 - 750000 - 500000 - 250000 -	can be used in the assessment	
0.000.002.003.008.005.008.007.0	1090.01	
$\phi$ (rad)		

## Beam : HL 1100\*607 end plate (50mm)

Calculations with two bolt sizes (M48 and M36) are provided



 Connection capacity  $M_{i,Rd} = (4.135 \cdot 10^3) \ kN \cdot m$ Moment resistance 🕰 Snip  $V_{i,Rd} = (1.347 \cdot 10^3) \, kN$ Shear resistance  $S_{j.ini} = 4859011.903 \ kN \cdot \frac{m}{rad}$ Drag th Initial rotation stiffness want to  $S_j = 2429505.952 \ kN \cdot \frac{m}{rad}$ Idealized rotation stiffness (for design)  $S_{j.rigid} = 2258383.033 \ kN \cdot \frac{m}{rad}$ Minium rigidity for rigid joint S<sub>j.pinned</sub>=141148.94 kN.\_\_\_\_ maximum rigidity for pinned joint rad  $Joint_{classification} \coloneqq \| \text{ if } S_{j,ini} \leq S_{j,pinned} \\ \| \| \text{ "Pinned"} \|$ ="Rigid" Joint classification  $\|$  else if  $S_{j.ini} \ge S_{j.rigid}$ "Rigid"  $M(\phi)$  (**J**) jj else "Semi-rigid" 4400000 4000000 3600000 3200000 2800000 2400000 Note: When 2/3.Mj.Rd>Mj.Ed, Sj.ini 2000000 1600000 can be used in the assessment 1200000 800000 400000 0.000.002.003.003.005.005.007.008.0090.01  $\phi$  (rad)



HL 1100\*607 M36 tp=50 mm

<u>Connection capacity</u> Moment resistance	$M_{j.R}$	$_{d} = \langle 2.293 \cdot 10^{3} \rangle \ kN \cdot m$		
Shear resistance	$V_{j.Rd}$	<sub>l</sub> =746.725 <b>kN</b>		
Initial rotation stiffness	$S_{j.ini}$ =	-3083688.906 kN • m rad		
Idealized rotation stiffness (for de	esign) $S_j = 1$	$S_j = 1541844.453 \ kN \cdot \frac{m}{rad}$		
Minium rigidity for rigid joint	$S_{j.rig}$	$S_{j.rigid} = 2258383.033 \ kN \cdot \frac{m}{rad}$		
maximum rigidity for pinned joint	$S_{j.pir}$	$S_{j.pinned} = 141148.94 \ kN \cdot \frac{m}{rad}$		
Joint classification		if $S_{j.ini} \leq S_{j.pinned}$ = "Rigid" "Pinned"		
		$ \  else \text{ if } S_{j.ini} \ge S_{j.rigid} \\ \  \  \text{``Rigid''} $		
$M(\phi)$ (J)				
250000 - 2250000 - 2200000 - 175000 - 150000 -		"Rigid"    else       "Semi-rigid"		
125000 - 1000000 - 750000 - 500000 - 250000 -		Note: When 2/3.Mj.Rd>Mj.Ed, Sj.ini can be used in the assessment		
φ ( <b>ra</b>	008.002.008.0090.01 ►			