

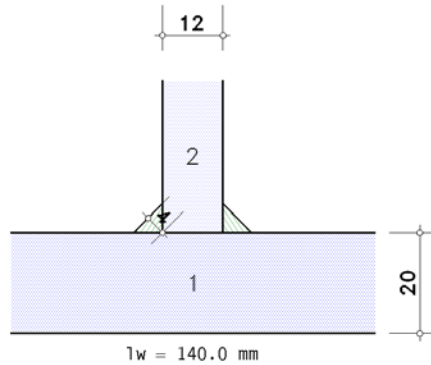
POS. 36: WELD

4H-EC3GK version: 1/2012-1k

weld

Basic component 19

EC 3-1-8 (12.10), NA: Germany



M 1:1.5

weld:

fillet weld, weld thickness $a = 4.0$ mm, weld length $l_w = 140.0$ mm (full-size)

welds on both sides

connected plates:

plate 1: plate thickness $t_1 = 20.0$ mm, steel grade S 275

plate 2: plate thickness $t_2 = 12.0$ mm, steel grade S 275

material safety factor: $\gamma_{M2} = 1.25$

stress:

Lk 1 : $F_{w,Ed} = 100.0$ kN

design resistance

shear strength: $f_{vw,d} = (f_u/3^{1/2}) / (\beta_w \cdot \gamma_{M2}) = 233.66$ N/mm²

design resistance: $F_{w,Rd} = f_{vw,d} \cdot a \cdot l_{eff} = 130.85$ kN per side, $l_{eff} = 140.0$ mm

verification

Lk 1 : $F_{Ed} = 100.0$ kN < $F_{Rd} = 130.8$ kN \Rightarrow utilization = 0.764 < 1 **ok.**