

[Remarks:](#) See §5.2.2, pages 285 till 288

[Answer:](#)

15 N/mm

[Explanation:](#)

Location of the NC w.r.t. the top of the profile

(units in mm):

$$NC = \frac{400 \times 12 \times 200}{(400 \times 12) + (400 \times 12)} = 100 \text{ mm}$$

Cross-sectional properties (unit in mm):

$$I_{zz} = I_{\text{steiner;flange}} + I_{\text{centr;web}} + I_{\text{steiner;web}} = 160 \times 10^6 \text{ mm}^4$$

$$S_z^{(a)} = 400 \times 12 \times 100 = 480 \times 10^3 \text{ mm}^3$$

Shear force per length in the double corner weld:

$$s_x^a = \frac{(10 \times 10^3 \text{ N})(480 \times 10^3 \text{ mm}^3)}{160 \times 10^6 \text{ mm}^4} = 30 \text{ N/mm}$$

In a single weld: 15 N/mm