

[Remarks:](#) See §5.4.1, pages 311 till 322

[Answer:](#)

$$q = 4 \text{ kN/m}$$

[Explanation:](#)

Maximum shear stress is at half-height and at the support points

where $V = V_{\max} = \frac{1}{2} q \ell$.

Cross-sectional properties:

$$I_{zz} = 7,2 \times 10^6 \text{ mm}^4 \text{ and } S_z^a = 90 \times 10^3 \text{ mm}^3$$

$$\tau_{\max} = \frac{\frac{1}{2} q \ell \cdot S_z^a}{b^a I_{zz}} = \frac{\frac{1}{2} q (1200 \text{ mm}) (90 \times 10^3 \text{ mm}^3)}{(50 \text{ mm}) (7,2 \times 10^6 \text{ mm}^4)} = 0,6 \text{ N/mm}^2$$

$$\Rightarrow q = 4 \text{ kN/m}$$