

[Opmerkingen:](#) Zie §6.3, blz. 384 t/m 400

[Antwoorden:](#)

1a. $I_t = 4 \times 10^6 \text{ mm}^4$ (gesloten doorsnede)

1b. $I_t = 8,53 \times 10^3 \text{ mm}^4$ (open doorsnede)

2a. $I_t = 4,8 \times 10^6 \text{ mm}^4$ (gesloten doorsnede)

2b. $I_t = 18,67 \times 10^3 \text{ mm}^4$ (open doorsnede)

[Toelichting:](#)

1a. $A_m = 10 \times 10^3 \text{ mm}^2$

$$I_t = \frac{4 \times (10 \times 10^3 \text{ mm}^2)^2}{\frac{400 \text{ mm}}{4 \text{ mm}}} = 4 \times 10^6 \text{ Nmm}$$

1b. $I_t = \frac{1}{3} \times (400 \text{ mm})(4 \text{ mm})^3 = 8,53 \times 10^3 \text{ Nmm}$

2a. $A_m = 10 \times 10^3 \text{ mm}^2$

$$I_t = \frac{4 \times (10 \times 10^3 \text{ mm}^2)^2}{\frac{200 \text{ mm}}{4 \text{ mm}} + \frac{200 \text{ mm}}{6 \text{ mm}}} = 4,8 \times 10^6 \text{ Nmm}$$

2b. $I_t = \frac{1}{3} \left\{ (200 \text{ mm})(4 \text{ mm})^3 + (200 \text{ mm})(6 \text{ mm})^3 \right\} = 18,67 \times 10^3 \text{ Nmm}$