

**Opmerkingen:** Zie §2.2.1, blz. 17 t/m 19

Zie §2.3, blz. 22 t/m 23

Zie §2.6, blz. 32 en verder

**Antwoorden:**

a.  $u_C = 20 \text{ mm}$  (↓)

b.  $\varepsilon^{(1)} = 6,67 \text{ ‰}$        $N^{(1)} = +20 \text{ kN}$

$\varepsilon^{(2)} = 13,33 \text{ ‰}$        $N^{(2)} = +20 \text{ kN}$

c.  $A_v = 10 \text{ kN}$  (↓)

**Toelichting:**

a.  $\sum T_z|_A = 0 \Rightarrow N^{(1)} + 2N^{(2)} = 2F$

$$\frac{(3000 \text{ kN}) \times \frac{1}{2} u_C}{1500 \text{ mm}} + 2 \times \frac{(1500 \text{ kN}) \times u_C}{1500 \text{ mm}} = 2 \times (30 \text{ kN}) \Rightarrow u_C = 20 \text{ mm}$$

b.  $\varepsilon^{(1)} = \frac{10 \text{ mm}}{1500 \text{ mm}} = 6,67 \times 10^{-3}$

$$\varepsilon^{(2)} = \frac{20 \text{ mm}}{1500 \text{ mm}} = 13,33 \times 10^{-3}$$

$$N^{(1)} = 6,67 \times 10^{-3} \times (3000 \text{ kN}) = +20 \text{ kN}$$

$$N^{(2)} = 13,33 \times 10^{-3} \times (1500 \text{ kN}) = +20 \text{ kN}$$

c.  $\sum F_{\text{vert}} = 0 \Rightarrow A_v = 10 \text{ kN}$  (↓)