

Opmerkingen: Zie §2.3, blz. 22 t/m 23

Aanwijzing:

Bereken eerst alle staafkrachten.

Antwoorden:

a. $\sigma^{(2)} = \sigma^{(6)} = -125 \text{ N/mm}^2$
 $\sigma^{(12)} = \sigma^{(16)} = -75 \text{ N/mm}^2$

b. $\sigma^{(4)} = \sigma^{(14)} = 0$
 $\sigma^{(8)} = \sigma^{(10)} = +150 \text{ N/mm}^2$

c. $\sigma^{(1)} = -125 \text{ N/mm}^2$
 $\sigma^{(5)} = \sigma^{(13)} = 0$
 $\sigma^{(9)} = +100 \text{ N/mm}^2$
 $\sigma^{(17)} = -75 \text{ N/mm}^2$

d. $\sigma^{(3)} = +101 \text{ N/mm}^2$
 $\sigma^{(7)} = -14,3 \text{ N/mm}^2$
 $\sigma^{(11)} = -60,6 \text{ N/mm}^2$
 $\sigma^{(15)} = +60,6 \text{ N/mm}^2$

Toelichting:

De staven (4), (5), (13) en (14) zijn nulstaven.

Overige staafkrachten:

$$\begin{aligned} N^{(1)} &= -100 \text{ kN} \\ N^{(2)} &= -100 \text{ kN} \\ N^{(3)} &= +100\sqrt{2} \text{ kN} \\ N^{(6)} &= -100 \text{ kN} \\ N^{(7)} &= -20 \text{ kN} \\ N^{(8)} &= +120 \text{ kN} \\ N^{(9)} &= +80 \text{ kN} \\ N^{(10)} &= +120 \text{ kN} \\ N^{(11)} &= -60\sqrt{2} \text{ kN} \\ N^{(12)} &= -60 \text{ kN} \\ N^{(15)} &= +60\sqrt{2} \text{ kN} \\ N^{(16)} &= -60 \text{ kN} \\ N^{(17)} &= -60 \text{ kN} \end{aligned}$$