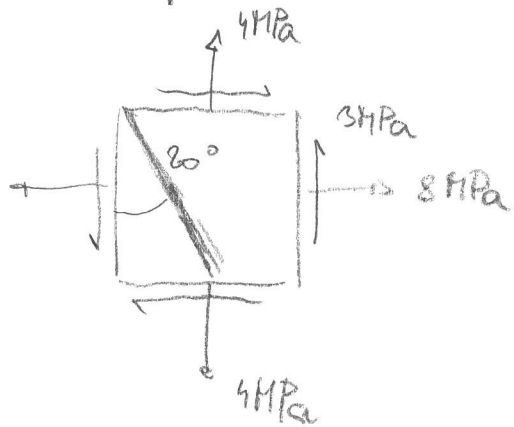
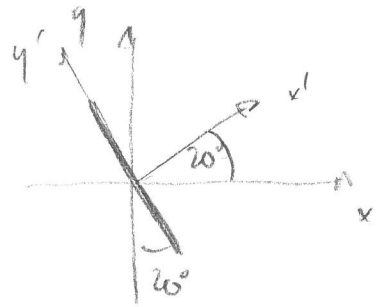


Pr. Určete napětí (normální a smyčková složka) ve vybraném proužku (1)



$$\begin{aligned}\sigma_x &= 8 \text{ MPa} \\ \sigma_y &= 4 \text{ MPa} \\ \tau_{xy} &= 3 \text{ MPa}\end{aligned}$$

$$T_d = \begin{bmatrix} 8 & 4 \\ 4 & 3 \end{bmatrix}$$



$$\begin{aligned}T_{\sigma}^{20} &= \begin{bmatrix} \cos 20 & -\sin 20 \\ \sin 20 & \cos 20 \end{bmatrix}^T \begin{bmatrix} 8 & 3 \\ 4 & 4 \end{bmatrix} \begin{bmatrix} \cos 20 & -\sin 20 \\ \sin 20 & \cos 20 \end{bmatrix} = \\ &= \begin{bmatrix} 9.46 & 1.013 \\ 1.013 & 2.54 \end{bmatrix} \rightarrow \begin{aligned}\sigma_{x'} &= 9.46 \text{ MPa} \\ \tau_{x'y'} &= 1.013 \text{ MPa}\end{aligned}\end{aligned}$$