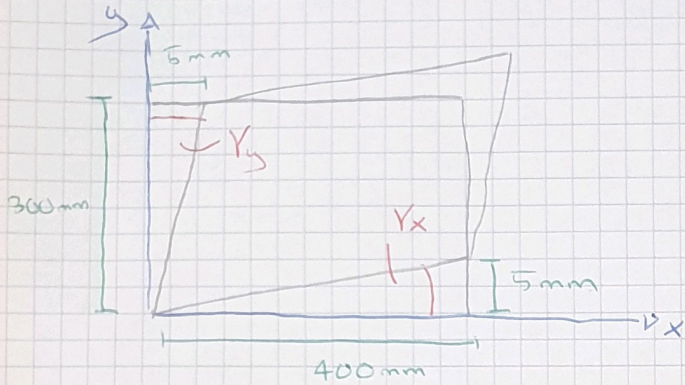


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Stoffgesetze: $\sigma_{xy} = G \cdot \gamma_{xy} \rightarrow G = \frac{\tau_{xy}}{\gamma_{xy}} = \frac{744 \text{ MPa}}{0.0292} = 25479 \text{ MPa} = 25,5 \text{ GPa}$

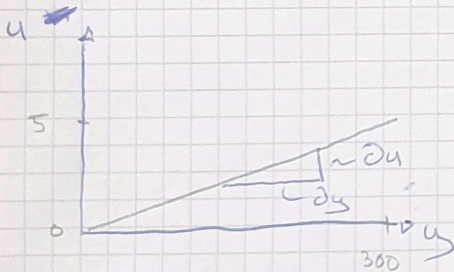
$$\gamma_{xy} = \gamma_x + \gamma_y = \frac{\partial v}{\partial x} + \frac{\partial u}{\partial y} = \frac{5}{300} + \frac{5}{400} = 0.0292 \quad \text{L Au}$$



$$\gamma_y = \arctan\left(\frac{5}{300}\right) \approx \frac{5}{300} = 0.16665$$

$$\gamma_x = \arctan\left(\frac{5}{400}\right) \approx \frac{5}{400}$$

Taylorreihe von $\arctan(x) = x - \frac{x^3}{3} + \frac{x^5}{5} - \frac{x^7}{7} + \dots \approx x$



$$\gamma_y = \frac{\partial u}{\partial y} = \frac{5}{300}$$