

***Gegeben: Gesucht:***

**Ø=8mm F=?**

**l=600mm**

**Re=220N/mm²**

$σ\_{bzul}$**=73,33 N/mm²**

***Lösung:***

$$W\_{b}=\frac{π\*d³}{32} ≈0,1\*d³$$

$$W\_{b}=\frac{π\*\left(8mm\right)^{3}}{32}=50,27mm^{3}$$

$$σ\_{b=}\frac{M\_{b}}{W\_{b}}=> M\_{b= }W\_{b}\*σ\_{b}$$

$$M\_{b}=50,27mm³\*\frac{73,33N}{mm^{2}}=3686,3N/mm$$

$F=\frac{M\_{b}}{l}$ =$ \frac{3683,3N/mm}{600mm}=6,14N$

F=6,14N