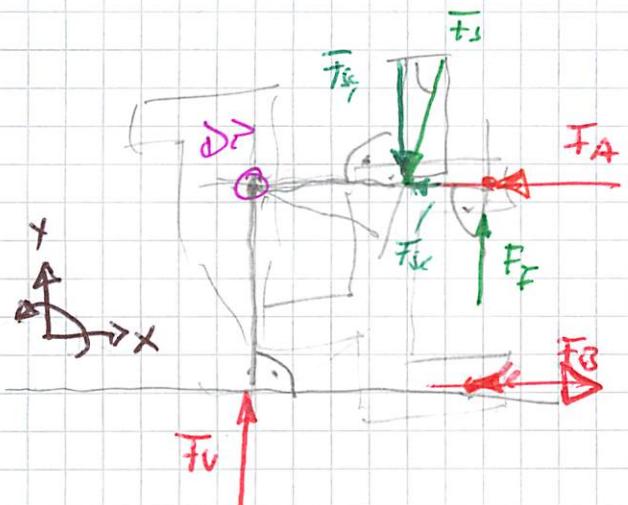


1.2 LS Pow 2 (u) + Balancescheine



$$\bar{F}_{sy} = \bar{F}_s \cdot \sin \varphi$$

$$\bar{F}_{sx} = \bar{F}_s \cdot \cos \varphi$$

$$\sum \bar{M}_{OP} = 0 = -\bar{F}_{sy} \cdot (l_5 - l_4) + \bar{F}_F \cdot l_5 + \bar{F}_B \cdot l_3$$

$$\bar{F}_B = \frac{\bar{F}_s \cdot \sin \varphi \cdot (l_5 - l_4) - \bar{F}_F \cdot l_5}{l_3}$$

$$= \frac{450 \text{ N} \cdot \sin 85^\circ \cdot (150 - 50) \text{ mm} - 80 \text{ N} \cdot \frac{150}{140} \text{ mm}}{140 \text{ mm}}$$

$$= 234,5 \text{ N}$$

$$\sum \bar{F}_x = 0 = \bar{F}_{sx} - \bar{F}_A + \bar{F}_B$$

$$\begin{aligned} \bar{F}_A &= -\bar{F}_s \cdot \cos \varphi + \bar{F}_B \\ &= -450 \text{ N} \cdot \cos 85^\circ + 234,5 \text{ N} \\ &= -233,7 \text{ N} \quad 195,3 \text{ N} \end{aligned}$$

$$\sum \bar{F}_y = 0 = \bar{F}_V - \bar{F}_{sy} + \bar{F}_F$$

$$\begin{aligned} \bar{F}_V &= \bar{F}_s \cdot \sin \varphi - \bar{F}_F \\ &= 450 \text{ N} \cdot \sin 85^\circ - 80 \text{ N} \\ &= 368 \text{ N} \end{aligned}$$

Fr. 19.06. M¹⁰

HA 10+11 Freimut

2+3 Rechnung ohne Kippe

T: Mi 17.06. 24⁰⁰