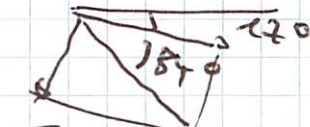
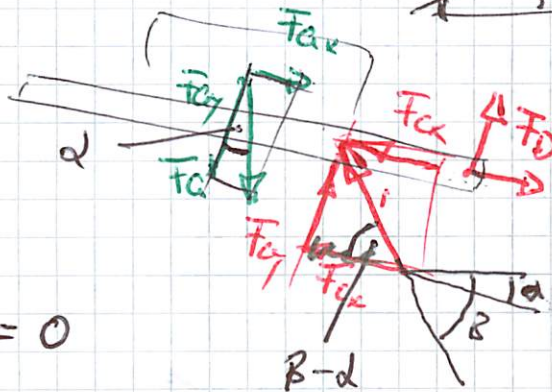


$$\begin{aligned} \bar{F}_D &= \sqrt{\bar{F}_{Dx}^2 + \bar{F}_{Dy}^2} = \\ &= \sqrt{(7,64 \text{ kN})^2 + (-5,18 \text{ kN})^2} \\ &= 9,2 \text{ kN} \end{aligned}$$

$$\begin{aligned} \delta &= \arctan \frac{\bar{F}_{Dy}}{\bar{F}_{Dx}} = \arctan \frac{-5,18}{7,64} \\ &= -34^\circ \end{aligned}$$

5.2 LJ Rampe + Auto



$$\bar{F}_{Ax} = \bar{F}_C \cdot \sin d$$

$$\bar{F}_{Ay} = \bar{F}_C \cdot \cos d$$

$$\bar{F}_{Cy} = \bar{F}_C \cdot \sin(\beta - d)$$

$$\sum \bar{M}_D = 0$$

$$\sum \bar{M}_D = 0 = +\bar{F}_{Ay} \cdot (l_2 + l_3 + l_4) - \bar{F}_{Ax} \cdot l_5 - \bar{F}_{Cy} \cdot (l_3 + l_4)$$

$$\bar{F}_{Cy} = \frac{+\bar{F}_C \cdot \cos d \cdot (l_2 + l_3 + l_4) - \bar{F}_C \cdot \sin d \cdot (l_5)}{l_3 + l_4}$$

$$\begin{aligned} \bar{F}_{Cy} &= \frac{13 \text{ kN} \cdot \cos 17^\circ \cdot (850 + 400 + 1200) \text{ mm} - 13 \text{ kN} \cdot \sin 17^\circ \cdot 600 \text{ mm}}{400 \text{ mm} + 1200 \text{ mm}} \\ &= 17,6 \text{ kN} \end{aligned}$$

$$\bar{F}_C = \frac{\bar{F}_{Cy}}{\sin(\beta - d)} = \frac{17,6 \text{ kN}}{\sin(74 - 17)^\circ} = 21,0 \text{ kN}$$

$$\sum \bar{F}_x = 0 = +\bar{F}_{Ax} - \bar{F}_{Cx} + \bar{F}_{Dx}$$

$$\begin{aligned} \bar{F}_{Dx} &= -\bar{F}_C \cdot \sin d + \bar{F}_C \cdot \cos(74 - 17)^\circ \\ &= -13 \text{ kN} \cdot \sin 17^\circ + 21,0 \text{ kN} \cdot \cos 57^\circ \\ &= 7,64 \text{ kN} \end{aligned}$$

$$\uparrow \sum \bar{F}_y = 0 = -\bar{F}_{Ay} + \bar{F}_{Cy} + \bar{F}_{Dy}$$

$$\begin{aligned} \bar{F}_{Dy} &= \bar{F}_C \cdot \cos d + \bar{F}_C \cdot \sin(\beta - d) = \\ &= (13 \text{ kN} \cdot \cos 17^\circ) + 21 \text{ kN} \cdot \sin 57^\circ = \\ &= 1,35 \text{ kN} - 5,18 \text{ kN} \end{aligned}$$

tgkum-j1 26.06.2020

Wille
Lektorin Kommande, Jac, Video!

Frage zur Notengebung 1.1, 1.2
2.1, 3.3

Frage zur HK? 4.1, 4.2
5.1, 5.2

Kippaufgabe: (3.2)

HA 10.2
ohne Lösung

Weiter Notengebung