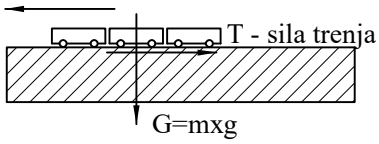
3B - Instalater-monter, keramičar-oblagač, ličilac-soboslikar

Izvježbaj slijedeće zadatke:

1.) Vlak težak 50 000 tona vozi po ravnini. Kolika je sila trenja ako je koeficijent trenja $\mu = 0{,}03$?

vlak se giba u lijevo



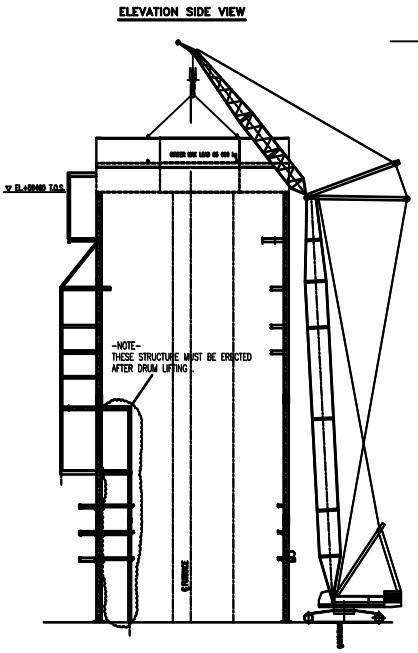
$T = \mu \times G$

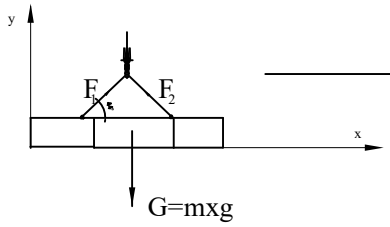
$T = \mu \times m \times g$

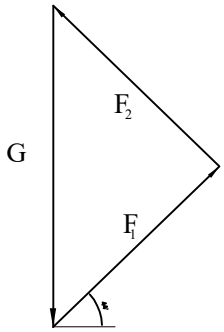
$T = 0{,}03 \times 50\,000\,000 \text{ kg} \times 10 \text{ m/s2}$

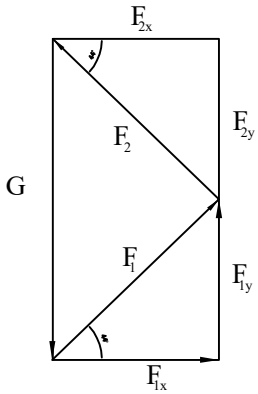
$T =$ **15 000 000 N**

2.) Za dizanje grede teške 85 tona na 60 metara visine izračunati sile u užetu?









$F_{1x} = F_1 \cdot \cos 44°$

$F_{1y} = F_1 \cdot \sin 44°$

$F_{2x} = F_2 \cdot \cos 44°$

$F_{2y} = F_2 \cdot \sin 44°$

$\Xi\ Fx = 0$

$F_{1x} - F_{2x} = 0$

$F_{1x} = F_{2x}$

$F_1 \cdot \cancel{\cos 44°} = F_2 \cdot \cancel{\cos 44°}$

$F_1 = F_2$

$\Xi\ Fy = 0$

$F_{1y} + F_{2y} - G = 0$

$F_1 \cdot \sin 44° + F_2 \cdot \sin 44° = G$

$F_1 \cdot \sin 44° + F_1 \cdot \sin 44° = G$

$2 \cdot F_1 \cdot \sin 44° = G \mid : 2 \cdot \sin 44°$

$$F_1 = \frac{G}{2 \cdot \sin 44°} = \frac{85\,000}{2 \cdot 0{,}69458} = \frac{85\,000}{1{,}38932}$$

$F_1 = 61\,181 \text{ kg} = 61 \text{ tona}$

$F_1 = F_2$

$F_2 = 61\,181 \text{ kg}$

DOMAĆA ZADAĆA:

3.) Izračunaj sile u užadi ako je kut između užeta i grede 60°.