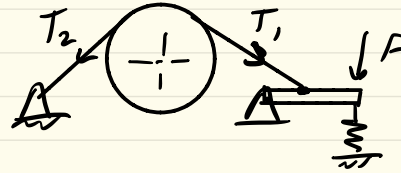
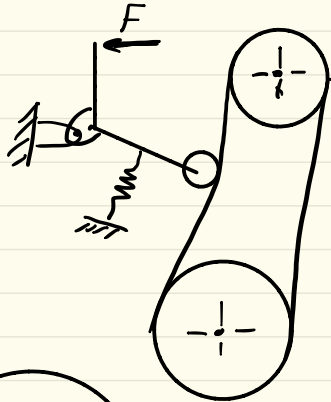


۳- کلاچ هادترمزهای سه ای:

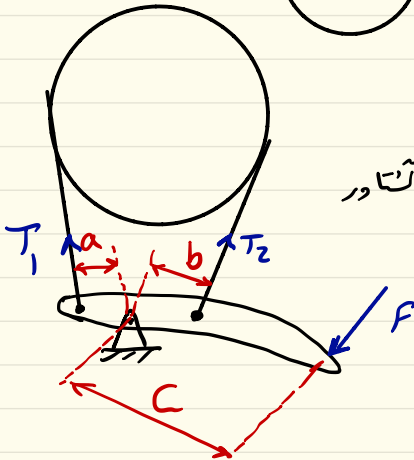


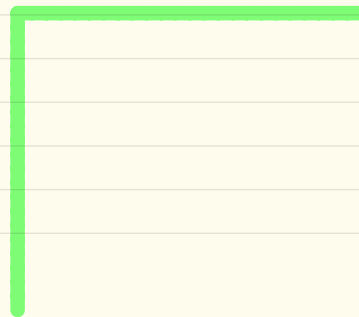
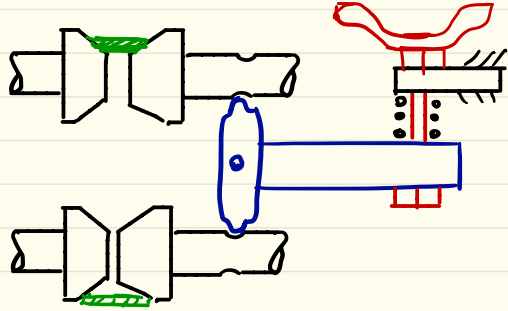
$$F \cdot c + T_1 a = T_2 b \rightarrow F = \frac{T_2 b - T_1 a}{c} \quad (I)$$

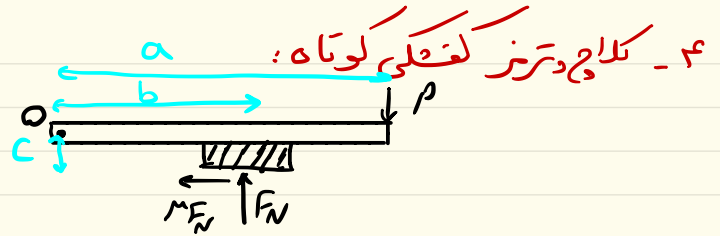
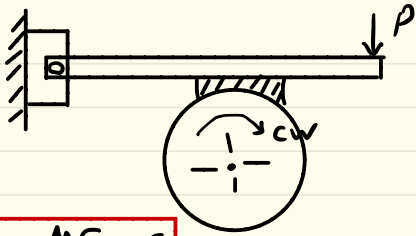
$$\tau = T = (T_1 - T_2) \cdot r \quad (II)$$

$$\frac{T_1}{T_2} = e^{\mu \theta} \quad (III)$$

if $F=0 \rightarrow$ self locking







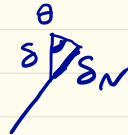
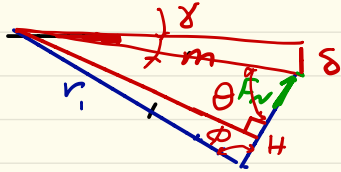
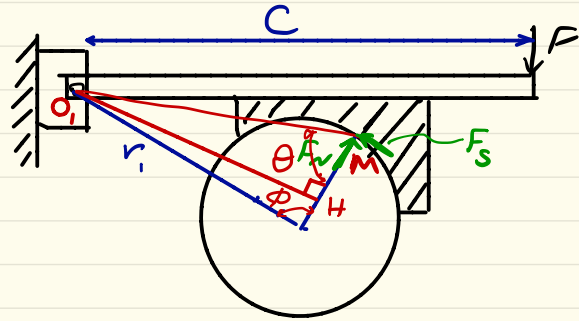
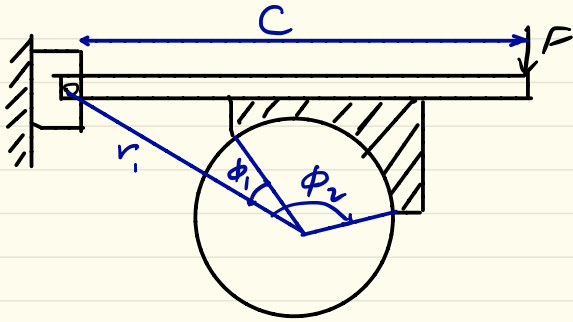
$$T = M F_N \cdot r$$

CW: $\Sigma M_o = 0 \rightarrow P \cdot a = F_N \cdot b + M F_N \cdot c \Rightarrow P = \frac{b + M c}{a} F_N$

حرکت در اتم از سمت لولاب اتمین کنند

CCW: $\Sigma M_o = 0 \rightarrow P \cdot a + M F_N \cdot c = F_N \cdot b \rightarrow P = \frac{b - M c}{a} \cdot F_N$

۵. کلاچ دترز گفتلی بلنده:



$$s = m \cdot \gamma$$

$$s_N = s \cdot \sin \theta$$

$$s_N = \gamma \cdot m \cdot \sin \theta$$

$$\left. \begin{array}{l} \text{از طرفین } Q_1 H = m \cdot \sin \theta = r_1 \cdot \sin \phi \end{array} \right\} \Rightarrow s_N = \gamma r_1 \sin \phi$$

$$s_N = kP$$

از طرفین می دانیم

$$K\rho = \gamma r_i \sin\phi$$

$$K\rho_{\max} = \gamma r_i (\sin\phi)_{\max} \Rightarrow \rho(\phi) = \rho_{\max} \cdot \frac{\sin\phi}{(\sin\phi)_{\max}}$$

عرض لنت

توزیع فشار در یک نقطه بلند

$$dF_N = b \cdot r d\phi \cdot \rho$$

$$dM_n = (br d\phi \rho) \cdot \overbrace{(r_i \sin\phi)}^{D, H}$$

$$M_n = \int_{\phi_1}^{\phi_2} \rho b r r_i \sin\phi d\phi = \frac{b r r_i}{(\sin\phi)_{\max}} \rho_{\max} \int_{\phi_1}^{\phi_2} \sin^2 \phi d\phi$$

$$M_n = \frac{b r r_i}{4 (\sin\phi)_{\max}} \cdot \rho_{\max} \left[2\alpha - \sin 2\phi_2 - \sin 2\phi_1 \right]$$

$$\alpha = \phi_2 - \phi_1$$

$$M_S = \int_{\phi_1}^{\phi_2} (\mu b r d\phi) \cdot (r - r_1 \delta \phi)$$

$$M_S = \frac{\mu b r \rho_{\max}}{4 (\sin\phi)_{\max}} [r_1 \delta \phi_2 - \delta \phi_1] - 4r [\delta \phi_2 - \delta \phi_1]$$

$$\left. \begin{aligned} \text{F.C} &= M_n + M_S \\ \text{F.C} &= M_n - M_S \end{aligned} \right\}$$

حرکت درام از سمت F بر طرف لولا باشد

حرکت درام از سمت لولا بر طرف F باشد

$$T = \int_{\phi_1}^{\phi_2} \mu b \rho_{\max} r^2 \frac{\sin\phi}{(\sin\phi)_{\max}} d\phi$$

تورک ترمز

$$\bar{T} = \frac{\mu b \rho_{\max}}{(\sin\phi)_{\max}} r^2 (\delta \phi_1 - \delta \phi_2)$$