

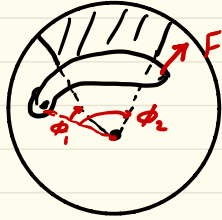
دانشگاه تهران

جلد 27

طراحی اجزاء II

بسم الله الرحمن الرحيم

ترمز کنشکی داخل کاسه:

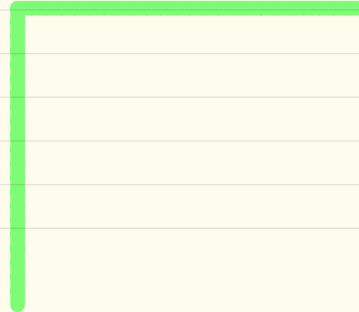
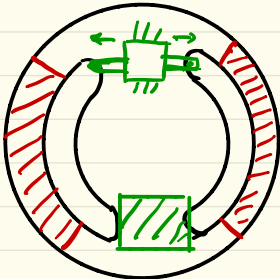
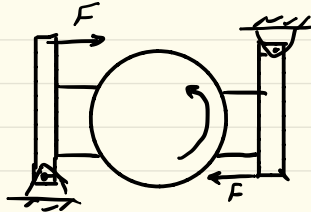
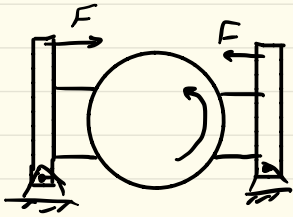


$$F \cdot C = M_n - M_s$$

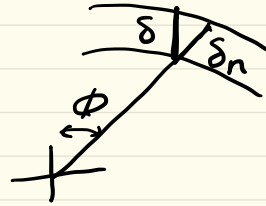
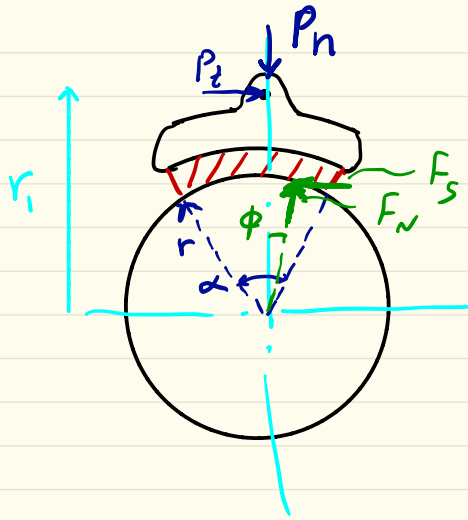
حرکت از انتها به سمت لولا

$$F \cdot C = M_n + M_s$$

حرکت برعکس



۶ - ترمز کنتکلی بالولای مرکزی



$$\delta_n = \delta \cdot \sin \phi$$

سقط قائم ثابت : $\delta = cte$

$$\delta_n = k P(\phi) \cdot r$$

رسم خطی برای تمام نقاط کنتکلی یکسان است.

$$\delta_n = k P(\phi)$$

$$\phi = 0 \rightarrow \delta_n = \delta \rightarrow P(\phi = 0) = P_{max}$$

$$\left(\delta = k \frac{P}{\sin \phi} \right)$$

$$P = P_{max} \cdot \sin \phi, \quad dF_n = P \cdot dA,$$

$$dF_s = \mu P \cdot dA$$

$$M_s = 2 \int_0^{\alpha/2} br d\phi \mu P_{max} \sin\phi (r_1 \sin\phi - r)$$

$$= 2 \mu br \rho \int_0^{\alpha/2} (r_1 \sin^2\phi - r \sin\phi) d\phi$$

برای نیجیدین لنت: $M_s = 0$

$$r_1 = \frac{4r \sin \alpha/2}{\alpha + \sin \alpha}$$

تَرک حاصل از اصطکاک بر روی درام:

$$T = 2 \int_0^{\alpha/2} \mu br d\phi P_{max} r = 2 \mu br^2 P_{max} \int_0^{\alpha/2} \sin\phi d\phi = \underline{2 \mu br^2 P_{max} \sin \alpha/2}$$

$$P_n = 2 \int_0^{\alpha/2} br P_{max} \sin^2\phi d\phi \rightarrow \underline{P_n = \frac{br P_{max}}{2} (\alpha + \sin \alpha)}$$

$$P_t = 2 \int_0^{\alpha/2} dF_s \sin\phi = 2 \int_0^{\alpha/2} \mu br P_{max} \sin^2\phi d\phi \rightarrow \boxed{P_t = \mu P_n}$$