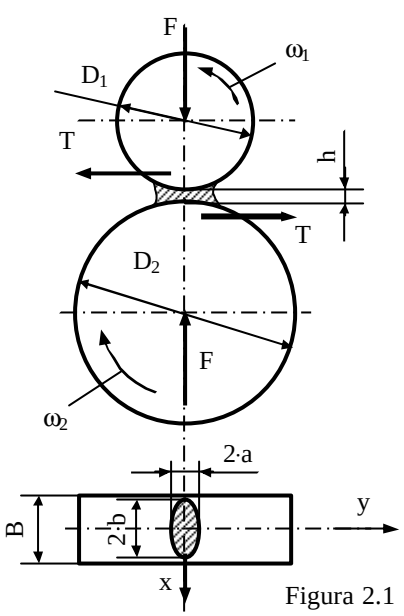

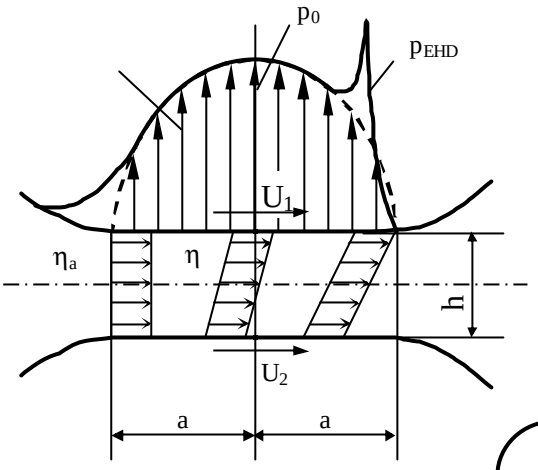

$$p = p_0 \cdot \sqrt{1-\left(\frac{x}{b}\right)^2-\left(\frac{y}{a}\right)^2}$$

Figura 2.1

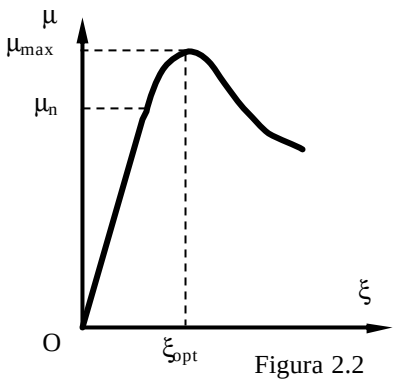

Figura 2.2

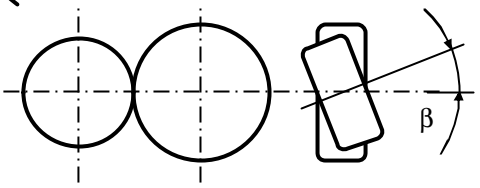

Figura 2.3

$$\xi = \frac{2\Delta U}{U_1 + U_2} = \frac{2(U_1 - U_2)}{U_1 + U_2} \qquad (2.1)$$

$$i_{12} = \frac{\omega_1}{\omega_2} = \frac{D_2}{D_1} \cdot \frac{U_1}{U_2} = \frac{D_2}{D_1} \cdot \frac{2+\xi}{2-\xi} \qquad (2.2)$$

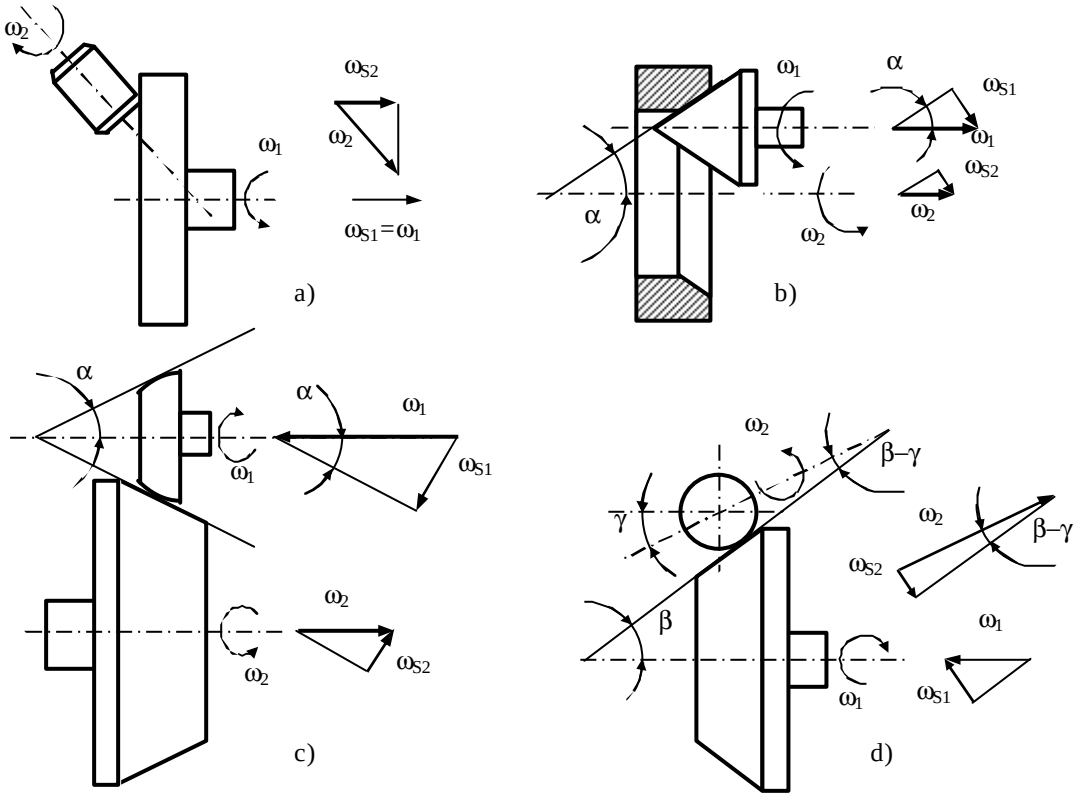

Figura 2.4

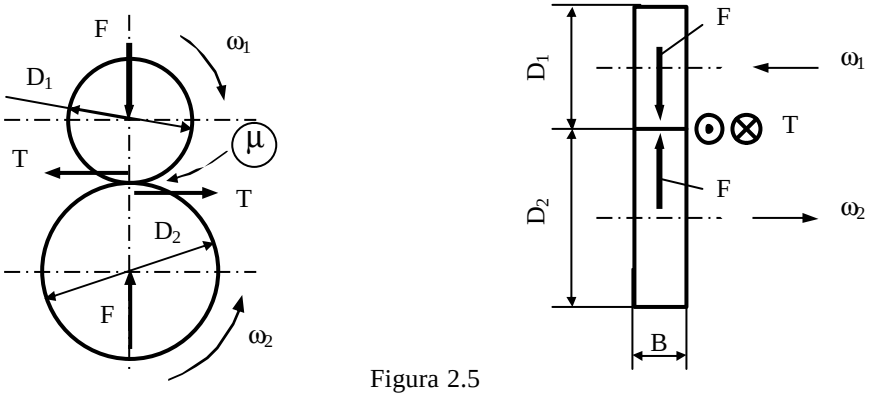

Figura 2.5

$$\mu_{max} = \left(\frac{T}{F}\right)_{max} = 0{,}87 \cdot \alpha \cdot \tau_0 + 1{,}74 \cdot \frac{\tau_0}{\bar{p}} \cdot \ln\left[\frac{1{,}2}{\tau_0 \cdot h} \cdot \frac{K \cdot \eta_a}{\beta \cdot (1+9{,}55)}\right]^{1/2} \quad (2.3)$$

$$\eta = \frac{P_u}{P_u + P_{he} + P_{hl} + P_{rl}} = \frac{T \cdot U_2}{T \cdot U_2 + P_{he} + P_{hl} + F_{rl} \cdot U} \quad (2.4)$$

$$T < F_f = \mu \cdot F; \quad (2.5)$$

$$T < F_f = \mu \cdot F; \quad \frac{2 \cdot M_{t1}}{D_1} < \mu \cdot F; \quad (2.6)$$

$$\frac{2 \cdot \beta \cdot M_{t1}}{D_1} = \mu \cdot F \quad (2.7)$$

Tabelul 2.1

Cuplul de materiale	m	
	Cu ungere	**Fara ungere**
Otel calit / otel calit	0,05 ... 0,06	0,15 ... 0,18
Otel / fonta	-	0,15 ... 0,20
Textolit / otel; fonta cenusie	-	0,2 ... 0,25
Ferodo / otel	-	0,3 ... 0,35
Cauciuc / fonta cenusie, otel	-	0,45 ... 0,85

$$v_1 = \frac{\pi \cdot D_1 \cdot n_1}{60}; \qquad v_2 = \frac{\pi \cdot D_2 \cdot n_2}{60} \quad (2.8)$$

$$i_{12} = \frac{n_1}{n_2} = \frac{D_2}{D_1} \quad (2.9)$$

$$i_{12ef} = \frac{n_1}{n_2} = \xi \cdot \frac{D_2}{D_1} \quad (2.10)$$

$$D_1 = (5 \ldots 10) \cdot d_1 \quad (2.11)$$

$$B \geq \frac{F}{q_a}, \text{ unde forta transmisa este } F = \frac{2 \cdot \beta \cdot M_{t1}}{\mu \cdot D_1}. \quad (2.12)$$

Tabelul 2.2

Cuplul de materiale	q_a [N/cm]
Otel calit / otel calit	1500 … 2000
Otel / fonta cenusie	1000 … 1500
Textolit / otel; fonta cenusie	400 … 800
Lemn / otel, fonta cenusie	100 … 150
Lignofon / fonta cenusie, otel	400 … 600

$$\sigma_{H_{max}} = 0{,}418 \cdot \sqrt{\frac{F}{B} \cdot \frac{E}{\rho}} \quad (2.13)$$

$$\frac{2}{E} = \frac{1}{E_1} + \frac{1}{E_2} \text{ si } \frac{1}{\rho} = \frac{2}{D_1} + \frac{2}{D_2} \quad (2.14)$$

$$\sigma_{H\,max} \leq \sigma_{H\,admisibil} \quad (2.15)$$

Tabelul 2.3

Cuplul de materiale	$\sigma_{H\,admisibil}$
Otel necalit / otel necalit cu ungere	25 HB
Otel calit / otel calit cu ungere	30 HB
Textolit / otel neuns	50 … 80 MPa

$$F' = F_n' \cdot (\sin\alpha + \mu \cdot \cos\alpha) \text{ si } F_n = \frac{\beta \cdot T}{\mu} = z \cdot F_n' \quad (2.16)$$

$$F' = 0{,}4 \cdot F \quad (2.17)$$

$$F' = F_n' \cdot \sin\alpha \quad (2.18)$$

$$F' = 0{,}26 \cdot F \quad (2.19)$$

$$q = \frac{F_n \cdot \cos\alpha}{2 \cdot e} \leq q_a \quad (2.20)$$

$$F_n = \frac{2 \cdot \beta \cdot M_{t1}}{\mu \cdot d_{m1}} \quad (2.21)$$

$$F = F' \cdot z = F_n \cdot \sin\alpha \cdot z \quad (2.22)$$

$$F = \frac{2 \cdot e \cdot q_a}{\cos\alpha} \cdot \sin\alpha \cdot z \qquad (2.23)$$

$$F = 2 \cdot q_a \cdot e \cdot z \cdot tg\alpha \qquad (2.24)$$

$$z_{nec} = \frac{F}{2 \cdot q_a \cdot e \cdot tg\alpha} \le 5...8 \qquad (2.25)$$

$$\sigma_{H_{max}} = 0{,}418 \cdot \sqrt{\frac{F_n}{2 \cdot B} \cdot \frac{E_{red}}{\rho_{red}}} \le \sigma_{H_{adm}} \qquad (2.26)$$

$$\sin\alpha = \frac{d_{m\,1,2}/2}{\rho_{1,2}} \qquad (2.27)$$

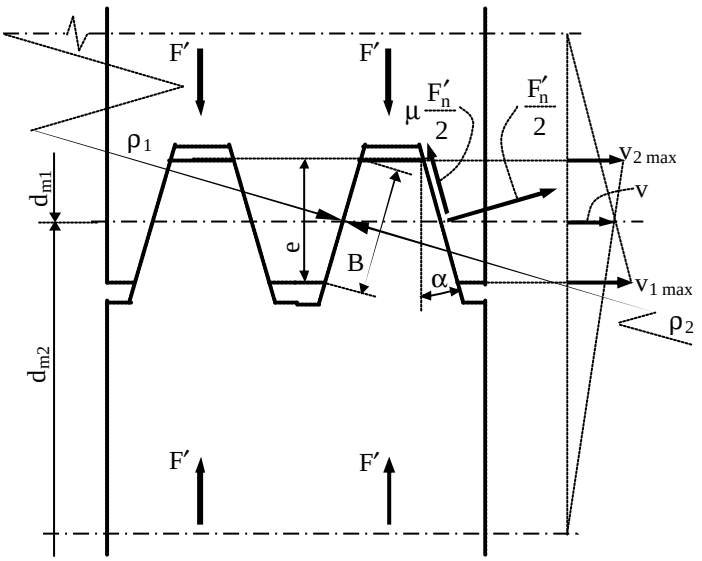

Figura 2.6

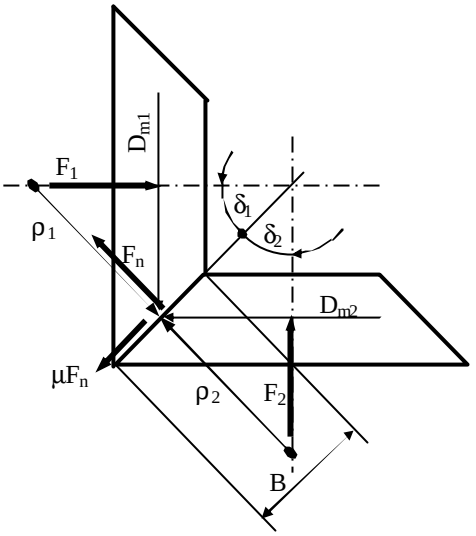

Figura 2.7

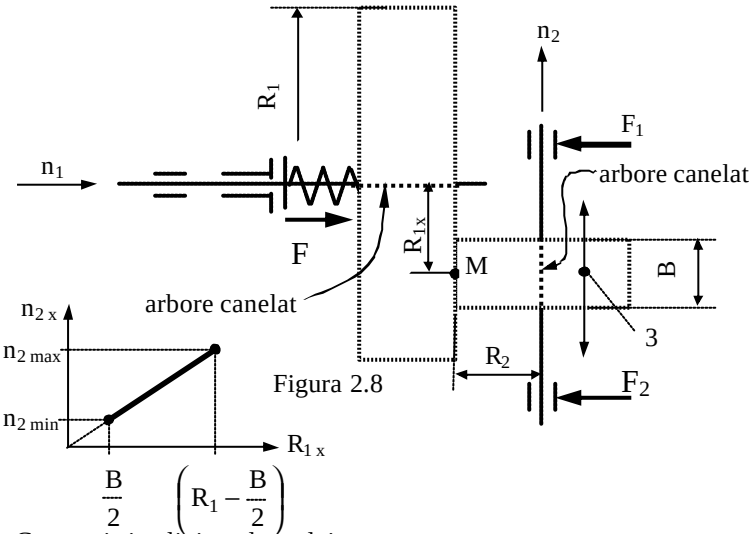

Figura 2.8

Caracteristica liniara de reglaj

Figura 2.9

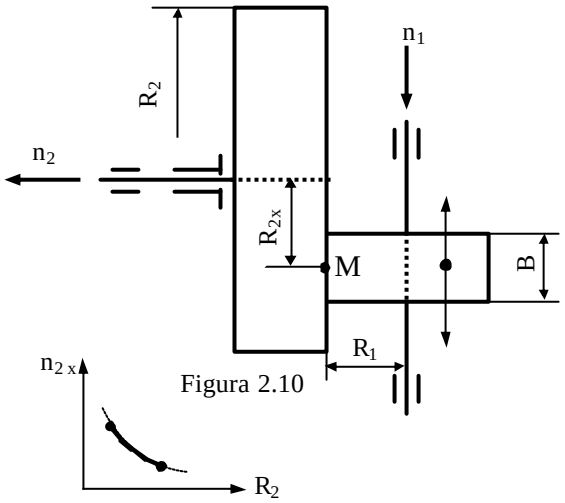

Figura 2.10

Caracteristica neliniara de reglaj

Figura 2.11

$$i_{12} = \frac{n_1}{n_2} = \frac{D_{m2}}{D_{m1}} = \frac{\sin\delta_2}{\sin\delta_1} = \frac{1}{tg\delta_1} \qquad (2.28)$$

$$i_{12ef} = \frac{1}{\xi} \cdot \frac{D_{m2}}{D_{m1}}; \qquad \xi = 0{,}95...0{,}99 \qquad (2.29)$$

$$\begin{aligned} F_1 &= F_n \cdot (\sin\delta_1 + \mu \cdot \cos\delta_1) \\ F_2 &= F_n \cdot (\sin\delta_2 + \mu \cdot \cos\delta_2 \end{aligned} \qquad (2.30)$$

$$\left.\begin{aligned} F_1 &= F_n \cdot \sin\delta_1 \\ F_2 &= F_n \cdot \sin\delta_2 \end{aligned}\right\} \quad \Rightarrow \quad F_1 < F_2 ! \qquad (2.31)$$

$$B \ge \frac{F_n}{q_a} = \frac{2 \cdot \beta \cdot M_{t1}}{\mu \cdot D_{m1} \cdot q_a} \qquad (2.32)$$

$$\sigma_{H_{max}} = 0{,}418\sqrt{\frac{F_n}{B}\cdot\frac{E_{red}}{\rho_{red}}} \le \sigma_{H_{ad}} \tag{2.33}$$

$$\rho_1 = \frac{D_{m1}/2}{\sin\delta_1}; \qquad \rho_2 = \frac{D_{m2}/2}{\sin\delta_2} \tag{2.34}$$

$$n_{2x} = n_1 \cdot \frac{R_{1x}}{R_2} \tag{2.35}$$

$$n_{2max} = n_1 \cdot \frac{(R_1 - B/2)}{R_2} \text{ si } n_{2min} = n_1 \cdot \frac{B/2}{R_2} \tag{2.36}$$

$$G = \frac{n_{2max}}{n_{2min}} = \frac{2\cdot R_1 - B}{B} = \frac{2\cdot R_1}{B} - 1 \tag{2.37}$$

$$n_{2x} = n_1 \cdot \frac{R_2}{R_{1x}} \tag{2.38}$$

$$\frac{n_1}{n_3} = \frac{r}{R_{1x}} \text{ si } \frac{n_3}{n_{2x}} = \frac{R_{2x}}{r} \tag{2.39}$$

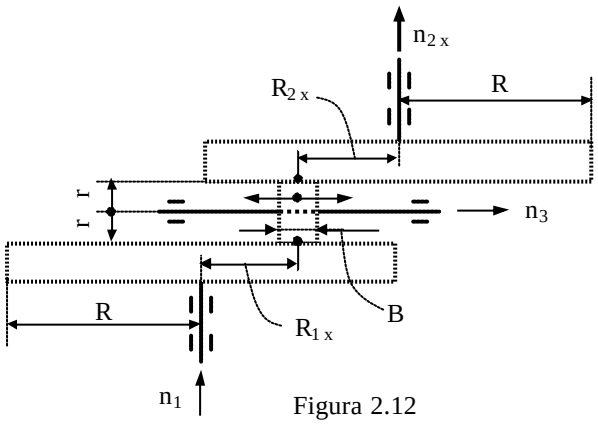

Figura 2.12

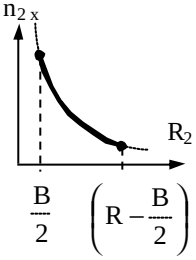

Figura 2.13

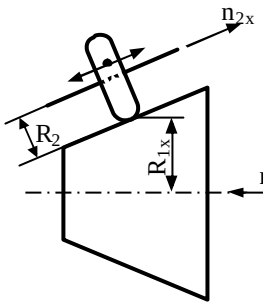

Figura 2.14

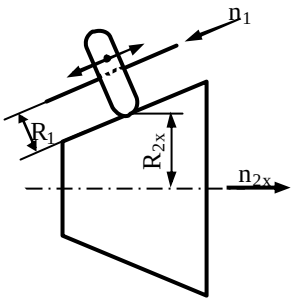

Figura 2.15

$$n_{2x} = n_1 \cdot \frac{R - R_{2x}}{R_{2x}} = n_1 \cdot \left(\frac{R}{R_{2x}} - 1\right) \tag{2.40}$$

$$G = \left(\frac{2\cdot R}{B} - 1\right)^2 = 7...8 \tag{2.41}$$

$$n_{2x} = n_1 \cdot \frac{R_1}{R_{2x}} \tag{2.42}$$

$$n_{2x} = n_1 \cdot \frac{R_{2x}}{R_1} \tag{2.43}$$

$$\xi_{geometric} = \frac{v_{alunec.max}}{v_0} \tag{2.44}$$

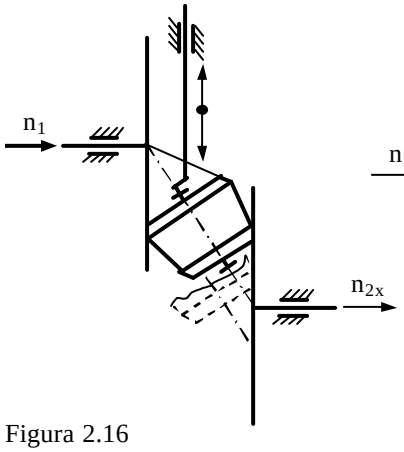

Figura 2.16

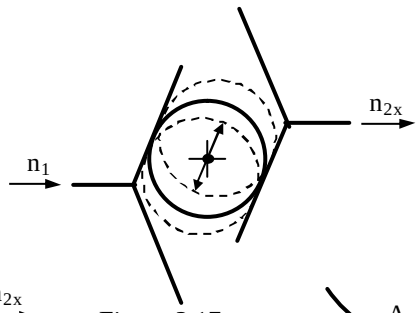

Figura 2.17

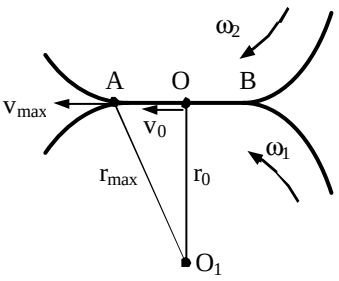

Figura 2.18

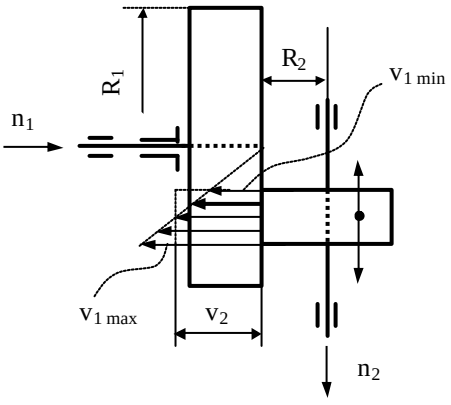

Figura 2.19