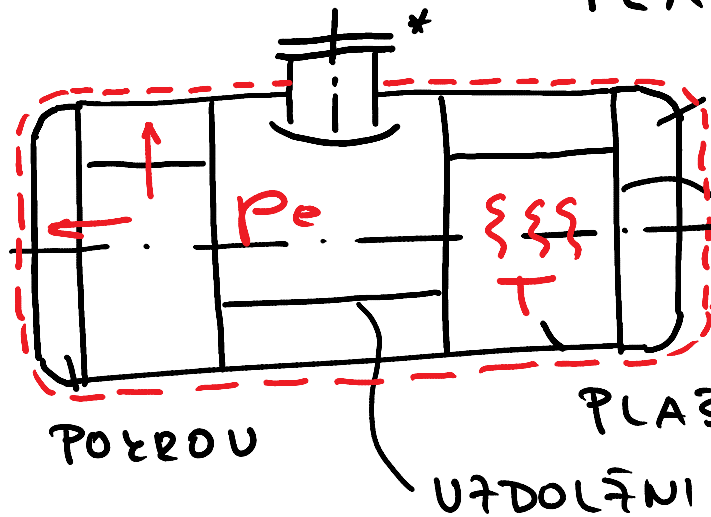


TLAČNE POSODE



* USTOPNO IZSTOPNE ODPRTINE

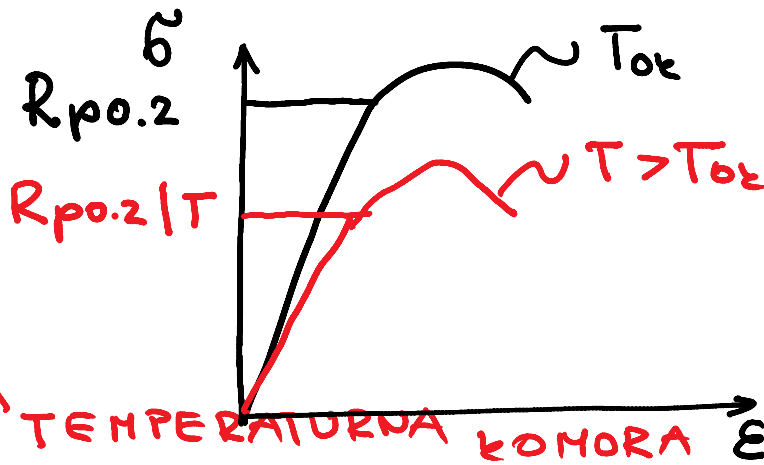
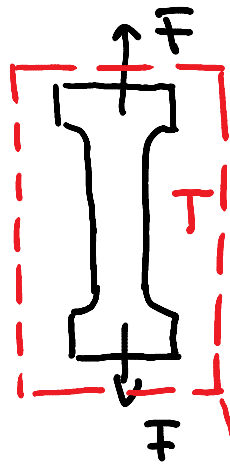
PREČNI ŽVARNI SPOJ (SOLEŽNI)
 ŽVAROU NE UREDNOTIMO LEŽENJE

$$P_e > P_{0z}$$

$$T \geq T_{0z}$$

MATERIALNE LASTNOSTI LEŽENJA

TOPLOTNA MEJA PLASTIČNOSTI $R_{p0.2|T}$

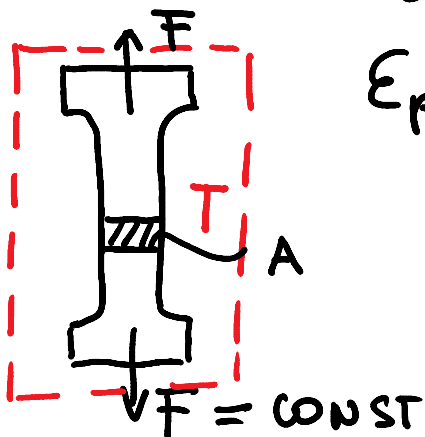


$$E_{0z} > E$$

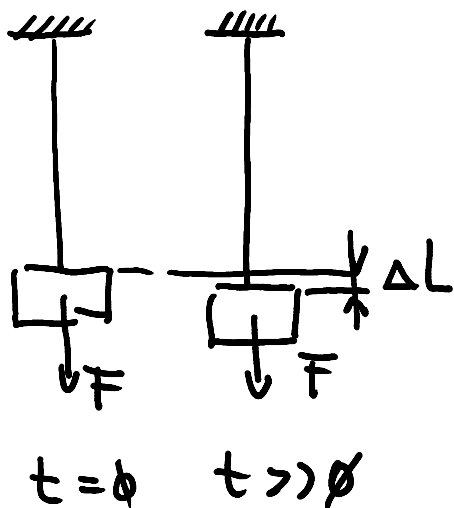
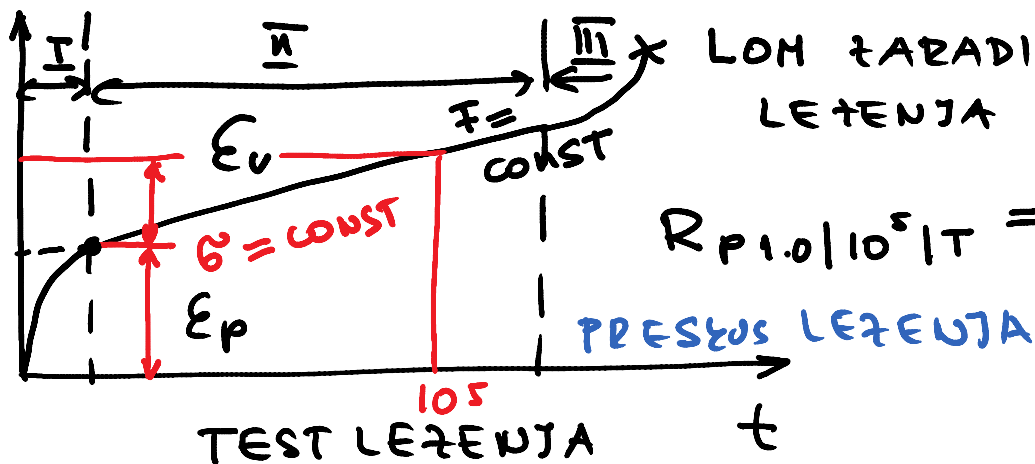
$$R_{p0.2|T_{0z}} > R_{p0.2|T}$$

$$R_m|T_{0z} > R_m|T$$

ČASOVNA MEJA PLASTIČNOSTI $R_{p1.0/10^5/T}$



$\epsilon_p + \epsilon_v$
1%



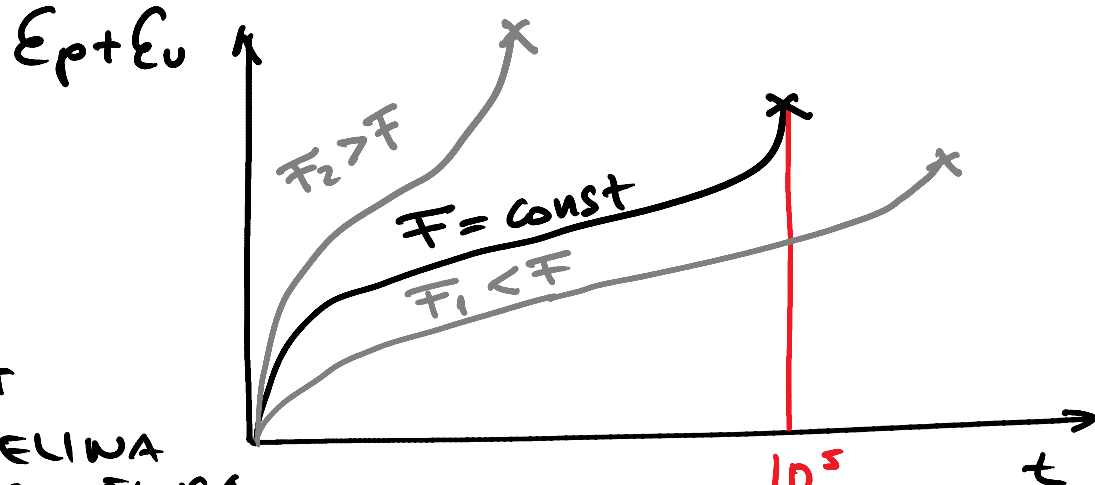
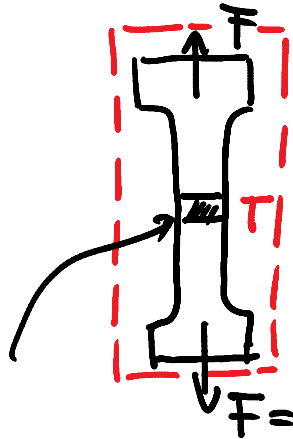
- I - PRIMARNO LETENJE
- II - SEKUNDARNO LETENJE
- III - TERCIARNO LETENJE

POSLEDICA LETENJA

ϵ_p PLASTIČNA SPECIFIČNA DEFORMACIJA

ϵ_v VISKOPLASTIČNA SPECIFIČNA DEFORMACIJA

ČASOVNA NATEŽNA TRDNOST $R_m/10^5/T$



$A = b \cdot t$ - DEBELINA
 | PRESUŠANCA
 ŠIRINA
 PRESUŠANCA

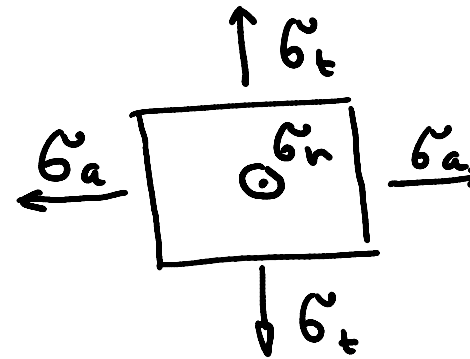
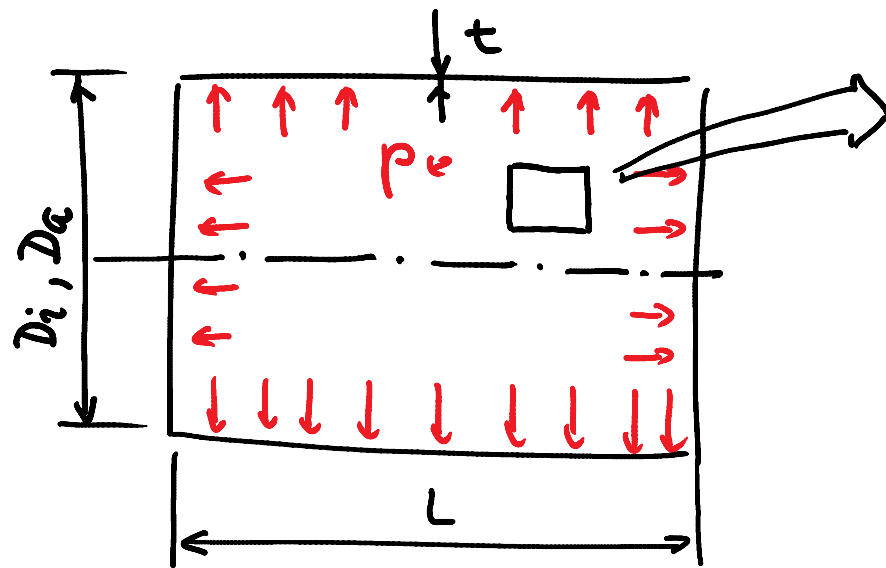
$$R_m/10^5/T = \frac{F}{A} = \text{CONST}$$

DOPUSTNA NAPETOST

$$\sigma_{dop} = \frac{1}{\beta} \min \{ R_{p0.2}/T, R_{p1.0}/10^5/T, R_m/10^5/T \}$$

VARNOSTNI FAKTOR

UREDNITENJE PLAŠČA TLAČNE POSODE



$\tilde{\sigma}_t$ TANGENCIALNA
NAPETOST

$\tilde{\sigma}_a$ AĀSIALNA NAPETOST

$\tilde{\sigma}_r$ RADIALNA NAPETOST

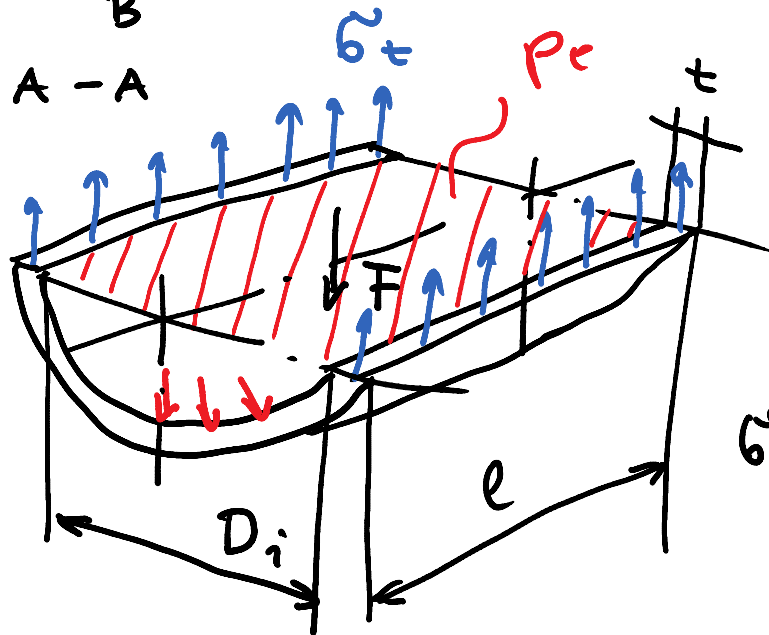
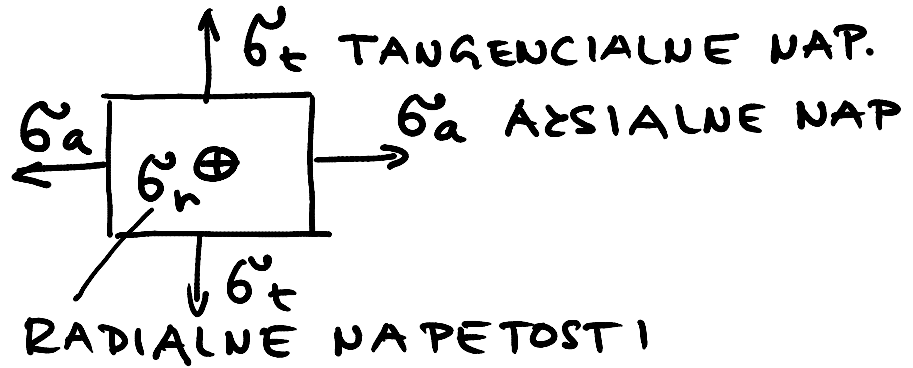
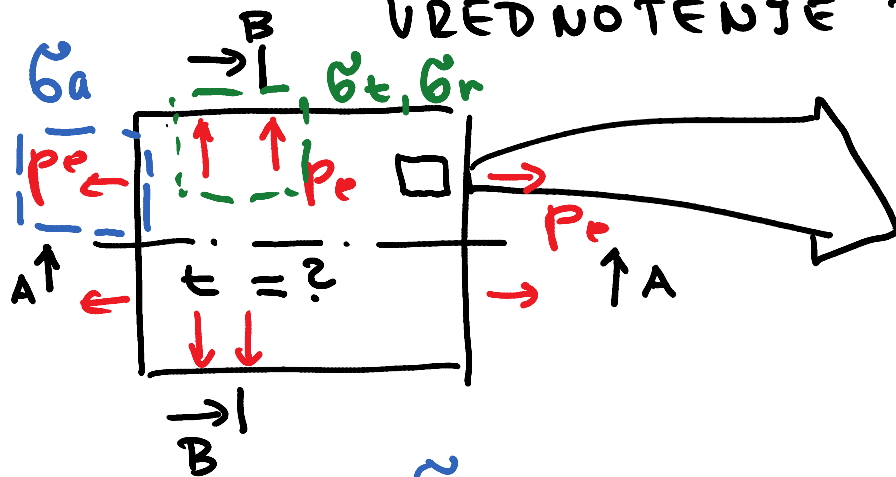
$\tilde{\sigma}_t, \tilde{\sigma}_a, \tilde{\sigma}_r$ SO GLAVNE NAPETOSTI

$$D_a = D_i + 2t$$

t DEBELINA PLAŠČA

DO TU PREGIEDANO 9. 1. 2019

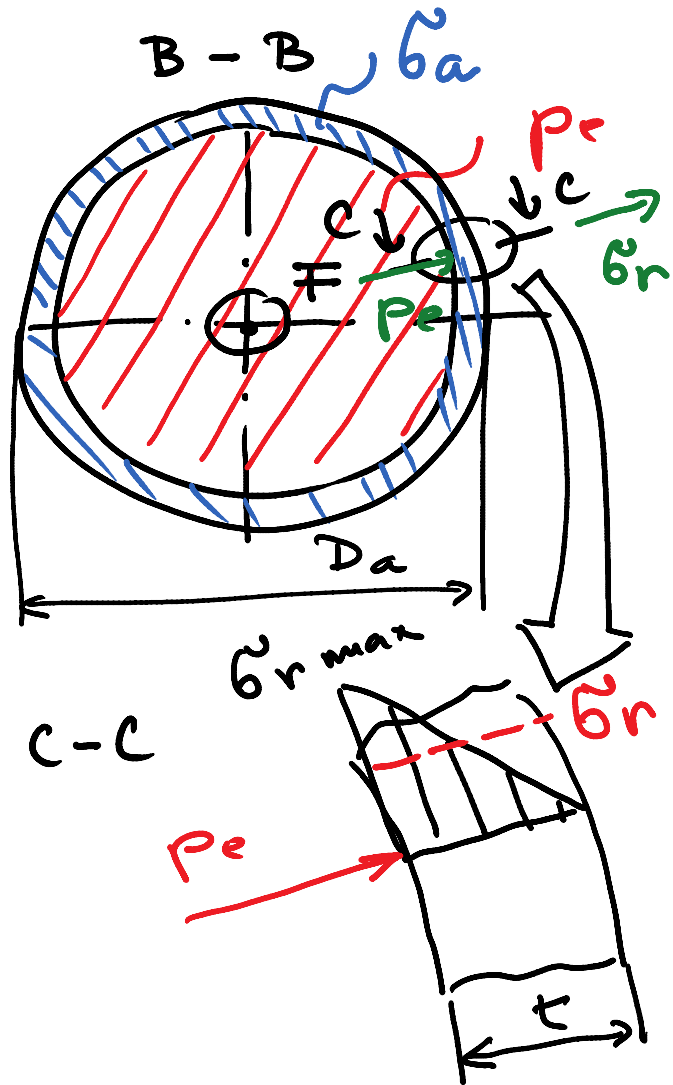
UZEDNOTENJE PLAŠČA TLAČNE POSODE



$$p_e D_i l = F = \sigma_t \cdot t \cdot l \cdot 2$$

$$\sigma_t = \frac{p_e D_i}{2t}$$

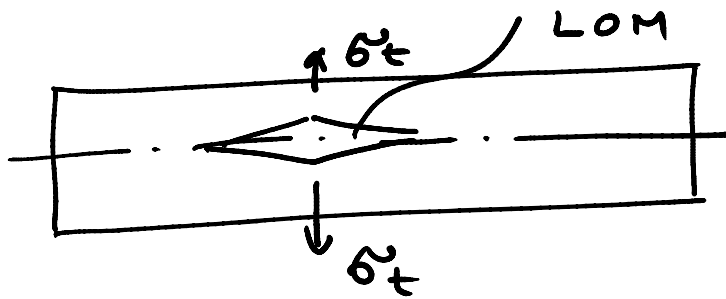
$\sigma_t, \sigma_a, \sigma_r$ - GLAVNE NAPETOSTI
 PROSTORSKO NAPETOSTNO
 DEFORMACIJSKO STANJE



$$F = p_e \cdot \pi \frac{D_i^2}{4} \approx \sigma_a \cdot D_i \cdot t \cdot \pi$$

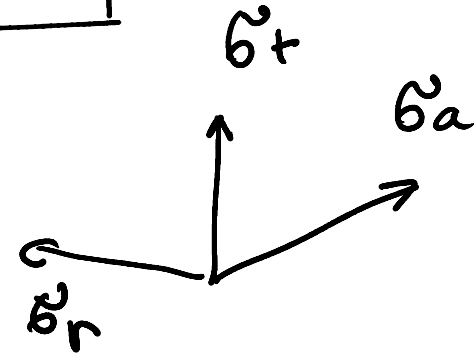
$$\sigma_a = \frac{p_e D_i}{4t} = \frac{\sigma_t}{2}$$

VELJA ZA
TANZOŠTENE
TLAČNE
POSODE



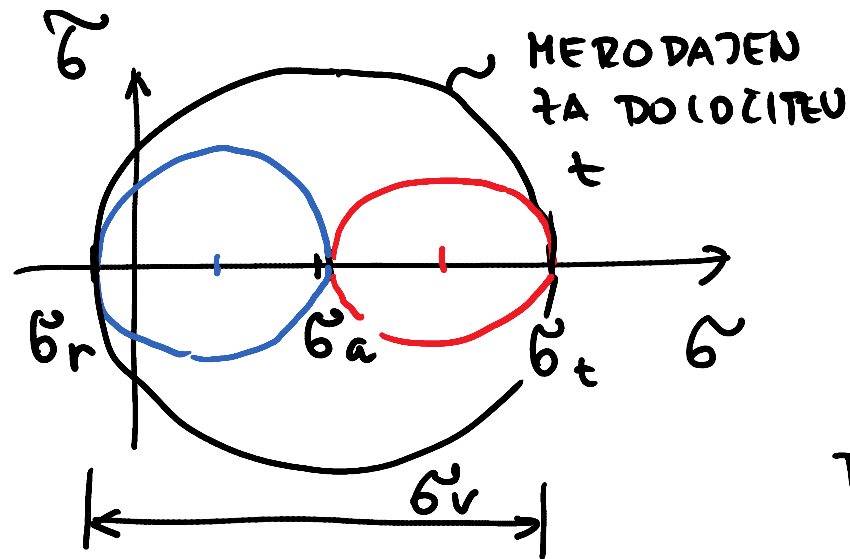
$$\sigma_{rmax} = -p_e$$

$$\sigma_r = -\frac{p_e}{2}$$



$$\sigma_1 = \sigma_t > \sigma_2 = \sigma_a > \sigma_3 = \sigma_r$$

GLAVNE
NAPETOSTI



MOHRU KROG

$$\begin{aligned} \tilde{\sigma}_v &= \tilde{\sigma}_t - \tilde{\sigma}_r \\ &= \frac{p_e D_i}{2t} + \frac{p_e}{2} \end{aligned}$$

$$\begin{aligned} D_i &= D_a - 2t \\ &= \frac{p_e D_a}{2t} - p_e + \frac{p_e}{2} \\ &= \frac{p_e D_a}{2t} - \frac{p_e}{2} = \tilde{\sigma}_{dop} \end{aligned}$$

$$\frac{p_e D_a}{2t} = \tilde{\sigma}_{dop} + \frac{p_e}{2}$$

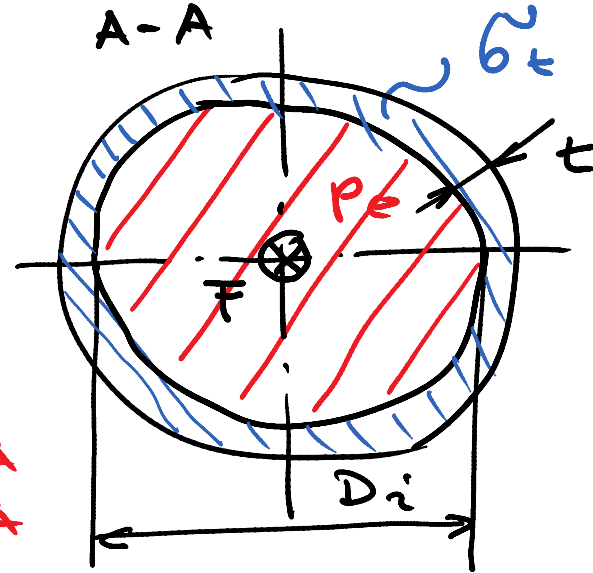
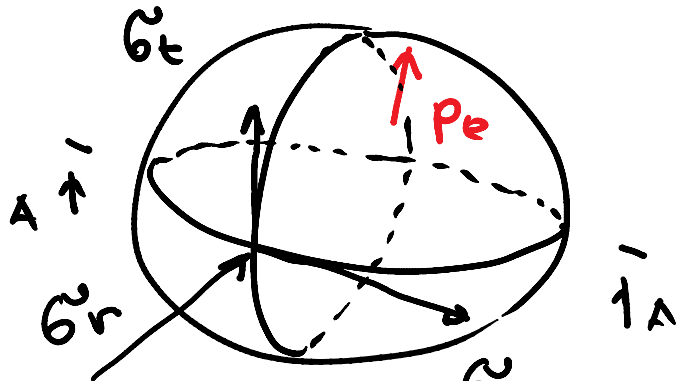
$$t \geq \frac{p_e \cdot D_a}{2 \tilde{\sigma}_{dop} + p_e}$$

+ C₁ + C₂ || 2 

↑ DODATNE ZA TOLERANCO CONST
 ZA KORIZIJU DIMENZIJE

VREDNOTENJE DVA TLAČNE POSODE

$$\sigma_t = \sigma_a$$



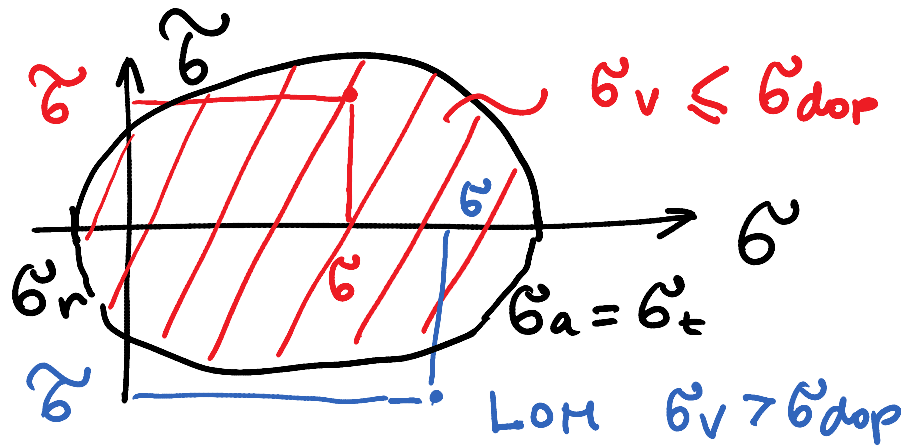
VELJA ZA
TANJOSTENA
DVA

$$F = p_e \cdot \frac{\pi D_i^2}{4} = \sigma_t \cdot \pi D_i \cdot t$$

$$\sigma_t = \sigma_a = \frac{p_e \cdot D_i}{4 \cdot t}$$

$$\sigma_r = -\frac{p_e}{2}$$

$$\begin{aligned} \sigma_r &< \sigma_a = \sigma_t \\ \sigma_3 &= \sigma_r & \sigma_2 &= \sigma_1 \end{aligned}$$



$$\begin{aligned} \sigma_v &= \sigma_t - \sigma_r \\ &= \frac{p_e D_i}{4t} + \frac{p_e}{2} \end{aligned}$$

$$D_i = D_a - 2t$$

$$\sigma_v = \frac{p_e \cdot D_a}{4t} - \frac{p_e}{2} + \frac{p_e}{2} = \frac{p_e D_a}{4 \cdot t} = \sigma_{dop}$$

$$t \geq \frac{p_e D_a}{4 \sigma_{dop}} \cdot \beta + C_1 + C_2 - \text{DODATEK ZA TOLERANCO DIMENZIJE}$$

DODATEK ZA KORUZIJO

↑
VELJA

ZA IZBOČENO DNO

↑
UPOŠTEVA
OBLIK DNO IN TAREŽNI UČINEK

ČE JE $\beta = 1$ ENAČBA ZA t
VELJA ZA ZROGLU

