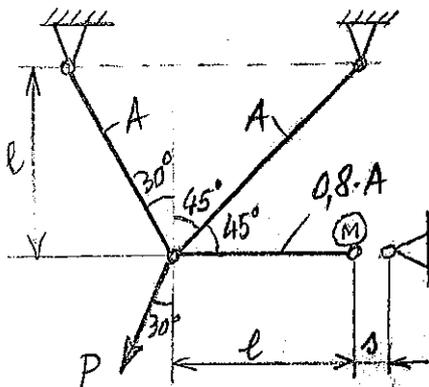


DOMENIU MECANIC

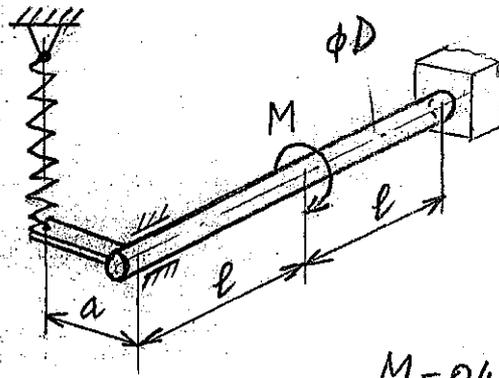
Problema 1A



$l = 1,2 \text{ m}$
 $E = 2,1 \cdot 10^5 \text{ MPa}$
 $P = 125 \text{ kN}$
 $A = 1200 \text{ mm}^2$

- 1) Se cere forta orizontala ce trebuie aplicata in punctul M pentru anulara jocului $s = 0,15 \text{ mm}$ (cand $P = 0$).
- 2) Verificare dupa asamblare si incarcare cu P.

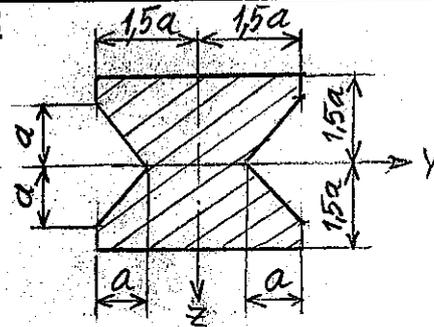
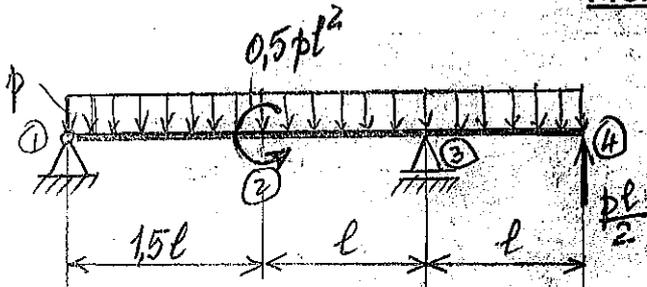
Problema 1B



$a = 200 \text{ mm}$
 $R = 35 \text{ mm}$
 $d = 8 \text{ mm}$
 $i = 7 \text{ spire}$
 $l = 500 \text{ mm}$
 $D = 45 \text{ mm}$

$M = 0,4 \text{ kN}\cdot\text{m}$
Sunt cerute tensiunile din
arc si din arbore

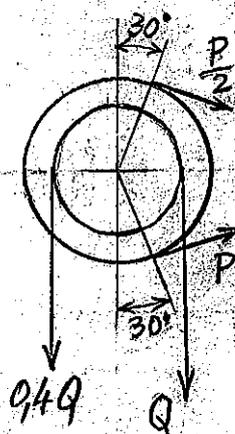
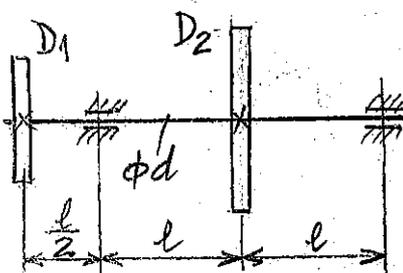
Problema 2



Date: $\phi = 20 \text{ N/mm}$
 $l = 800 \text{ mm}$
 $E = 2 \cdot 10^5 \text{ MPa}$
 $\sigma_a = 150 \text{ MPa}$

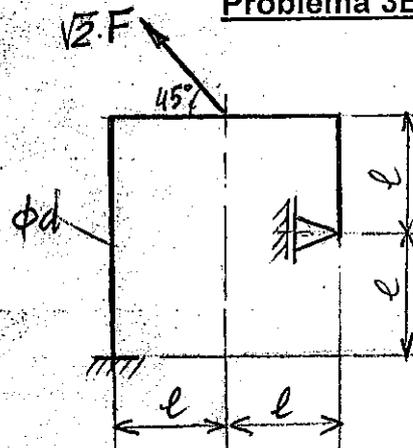
Cerute:
- diagrame T_z, M_y
- dimensionare
- w_4

Problema 3A



Date: $P = 1 \text{ kN}$
 $D_1 = 0,5 \cdot l = 200 \text{ mm}$
 $D_2 = 0,2 \cdot l$; $\sigma_a = 320 \text{ MPa}$
Cerute < forta Q si diagr. M_x, M_y, M_z
dimensionare

Problema 3B



$EI = \text{const.}$
 $d = 40 \text{ mm}$
 $l = 600 \text{ mm}$
 $\sigma_a = 200 \text{ MPa}$

Cerute: - diagr. N, T, M
- F_{max}