

5.2



математически гео. Апперетизи хор. собужање

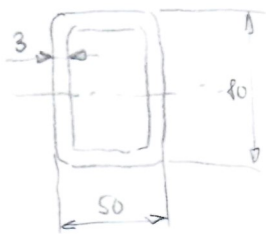
$$u_1 = \frac{S_1}{[\sigma_1]^{2/3}} = \frac{A_1}{W_1^{2/3}} \cdot l_1 = S_1^{2/3} \cdot M_1^{2/3}$$

$$u_2 = \frac{S_2}{[\sigma_2]^{2/3}} = \frac{A_2}{W_2^{2/3}} \cdot l_2 = S_2^{2/3} \cdot M_2^{2/3}$$

$$\left\{ \begin{array}{l} l_1 = l_2 \\ S_1 = S_2 \\ M_1 = M_2 \\ S_1 = S_2 \end{array} \right.$$

$$\frac{u_1}{u_2} = \frac{\frac{1}{[\sigma_1]^{2/3}} \cdot \frac{A_1}{W_1^{2/3}}}{\frac{1}{[\sigma_2]^{2/3}} \cdot \frac{A_2}{W_2^{2/3}}}$$

Носач 1:



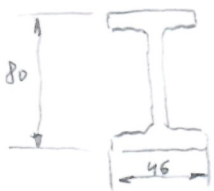
MAT: S235 $\rightarrow R_e = 235 \frac{N}{mm^2}$

OM. T. w_p 172:

$$A_1 = 7.21 \text{ cm}^2 = 7.21 (10 \text{ mm})^2 = 721 \text{ mm}^2$$

$$W_x = 1486 \text{ cm}^3 = 1486 (10 \text{ mm})^3 = 14860 \text{ mm}^3$$

Носач 2:



MAT S275 $\rightarrow R_e = 275 \frac{N}{mm^2}$

OM. T. w_p 183

$$\text{IPE 80} : A_2 = 7.64 \text{ cm}^2 = 764 \text{ mm}^2$$

$$W_x = 20 \text{ cm}^3 = 20000 \text{ mm}^3$$

$$\frac{u_1}{u_2} = \frac{\frac{1}{235^{2/3}} \cdot \frac{721}{14860^{2/3}}}{\frac{1}{275^{2/3}} \cdot \frac{764}{20000^{2/3}}} = 1.287 \Rightarrow u_1 = 1.287 u_2$$

$$\frac{u_2}{u_1} = 0.777 \rightarrow u_2 = 0.777 u_1$$

u_2 за око 23% покрива
од u_1