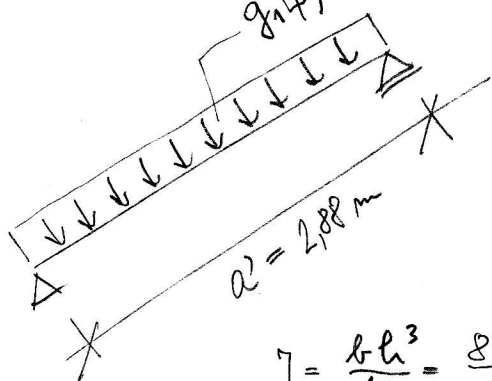


• DIMENZIONIRANJE MSU !

— KONTROLA POVBISA $\dot{q}'_{1A}, \dot{q}'_{2A}, \dot{q}'_{vA}$ (POMIKA)

$$b/h = 8/12$$



$$\dot{q}'_{1A} = 0,364 \text{ kN/m} = 0,00364 \frac{\text{kN}}{\text{cm}}$$

$$\dot{q}'_{2A} = 1,195 \text{ kN/m} = 0,0195 \frac{\text{kN}}{\text{cm}}$$

$$\dot{q}'_{vA} = 0,20 \text{ kN/m} = 0,0020 \frac{\text{kN}}{\text{cm}}$$

$$\psi_0(\text{veler}) = 0,6$$

$$J = \frac{b h^3}{12} = \frac{8 \cdot 12^3}{12} = 1152 \text{ cm}^4$$

— Poves v začetnem času Winst. Določimo pa se konstantično kombinacijo vplivov:

$$W_{\text{inst}} = W_{\text{inst}}(\dot{q}'_{1A}) + W_{\text{inst}}(\dot{q}'_{2A}) + W_{\text{inst}}(\psi_0 \cdot \dot{q}'_{vA})$$

$$= \frac{5 \cdot a'^4}{384 \cdot E_{q, \text{mean}} \cdot J} (\dot{q}'_{1A} + \dot{q}'_{2A} + \psi_0 \cdot \dot{q}'_{vA})$$

$$= \frac{5 \cdot 2,88^4}{384 \cdot 1200 \cdot 1152} (0,00364 + 0,0195 + 0,6 \cdot 0,0020) = 1,58 \text{ cm}$$

$$W_{\text{inst}} = 1,58 \text{ cm} \leq W_{\text{inst, lim}} = \frac{a'}{300} = \frac{288}{300} = 0,96 \text{ cm} //$$

→ povečam prerez:

$$J_{\text{potr}} \geq \frac{5 \cdot a'^4 \cdot (\dot{q}'_{1A} + \dot{q}'_{2A} + \psi_0 \cdot \dot{q}'_{vA}) \cdot 300}{384 \cdot E_{q, \text{mean}} \cdot a'}$$

$$J_{\text{potr}} \geq \frac{5 \cdot 2,88^4 (0,00364 + 0,0195 + 0,6 \cdot 0,0020) \cdot 300}{384 \cdot 1200 \cdot 2,88} = 1892,7 \text{ cm}^4$$

$$\frac{h}{b} = \sqrt{2} \Rightarrow b = \frac{h}{\sqrt{2}}$$

$$\frac{b \cdot h^3}{12} = J_{\text{potr}} \Rightarrow \frac{h^4}{12 \sqrt{2}} = J_{\text{potr}} \Rightarrow h = \sqrt[4]{J_{\text{potr}} \cdot 12 \cdot \sqrt{2}}$$

$$h = \sqrt[4]{1892,7 \cdot 12 \cdot \sqrt{2}} = 13,4 \text{ cm} \Rightarrow b = \frac{13,4}{\sqrt{2}} = 9,5 \text{ cm}$$

Izberem $b/h = 10/14 \text{ cm}$ ($J_{\text{olej}} = \frac{10 \cdot 14^3}{12} = 2286,67 \text{ cm}^4$)

— Pores u končnem šasu w_{fin} oz. $w_{net,fin}$

$$w_{net,fin} = w_{fin,g} + w_{fin,q_s} + w_{fin,q_v} = 0,87 \text{ cm} \leq \frac{2,88}{250} = 1,15 \text{ cm} \checkmark$$

$$w_{fin,g} = w_{inst,g} \cdot (1 + k_{def}) = \frac{5 \cdot 288^4 \cdot 0,00364}{384 \cdot 1200 \cdot 2286,67} (1 + 0,8) = 0,21 \text{ cm}$$

$$w_{fin,q_s} = w_{inst,q_s} \cdot (1 + \psi_2 \cdot k_{def}) = \frac{5 \cdot 288^4 \cdot 0,0195}{384 \cdot 1200 \cdot 2286,67} (1 + 0,8) = 0,64 \text{ cm}$$

$$w_{fin,q_v} = w_{inst,q_v} (\psi_0 + \psi_2 \cdot k_{def}) = \frac{5 \cdot 288^4 \cdot (0,6 \cdot 0,0020)}{384 \cdot 1200 \cdot 2286,67} (0,6 + 0,8) = 0,02 \text{ cm}$$

Dimenzije spiralice $b/h = 10/14 \text{ cm}$