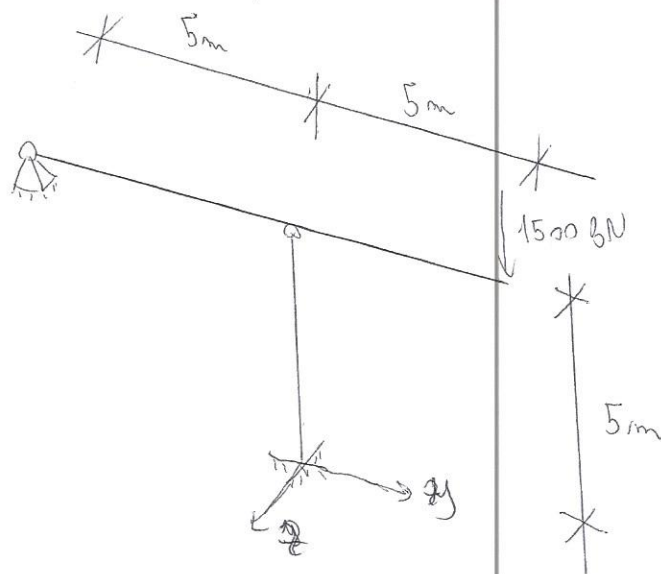


NALOGA: Izberi tab HEA, da bo izkoristecnost vsaj 75%

JEKLO S335



$$E = 0,814$$

$$\lambda_1 = 93,9 \cdot E = 76,4$$

$$N_{ed} = -30000 \text{ BN} = -15000 \text{ BN} \cdot \frac{10 \text{ m}}{5 \text{ m}}$$

• dimensionirano na eno silo $N_{ed} = -30000 \text{ BN}$

$$l_{uy} = 0,7 \cdot 5 \text{ m} = 3,5 \text{ m} \quad \frac{l}{b} = 1,3$$

$$l_{ux} = 2 \cdot 5 \text{ m} = 10 \text{ m}$$

• izberem HEA 400 ($i_{y1} = 16,8 \text{ cm}$, $i_{y2} = 7,34 \text{ cm}$, $A = 159 \text{ cm}^2$)

$$\bar{\lambda}_{y1} = 0,7719 \Rightarrow \phi_{y1}(\alpha = 0,21) = 0,864 \Rightarrow \chi_{y1} = 0,808$$

$$\bar{\lambda}_{y2} = 0,624 \Rightarrow \phi_{y2}(\alpha = 0,34) = 0,767 \Rightarrow \chi_{y2} = 0,824$$

$$N_{p,red} = \chi_{y1} \cdot A \cdot f_y = 4550,76 \text{ BN}$$

\Rightarrow izkoristecnost 65,8%

$$\text{HEA 360} \left(h/b = 1,17 < 1,2 \Rightarrow \alpha_x = 0,49 \quad \alpha_y = 0,34, A = 143 \text{ cm}^2 \right)$$
$$i_y = 15,2 \text{ cm} \quad i_z = 7,43 \text{ cm}$$

$$\bar{\lambda}_y = 0,861 \Rightarrow \phi_y(\alpha = 0,34) = 0,983 \Rightarrow \chi_y = 0,686$$

$$\bar{\lambda}_z = 0,617 \Rightarrow \phi_z(\alpha = 0,49) = 0,793 \Rightarrow \chi_z = 0,775$$

$$N_{b,y,Ed} = \chi_y \cdot A \cdot f_y = 3483,5 \text{ kN}$$

isbreniselenest $m = 86\% > 75\% \checkmark$