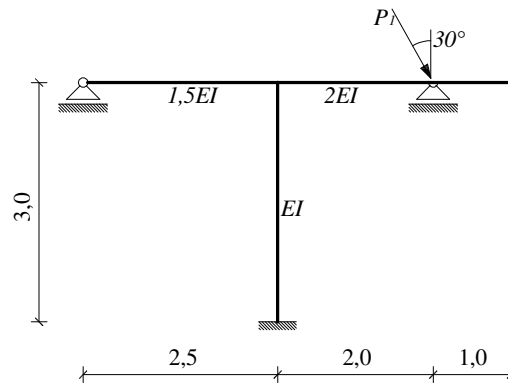


GS 2. - 1. kolokvij (A1) – (2009./2010.)



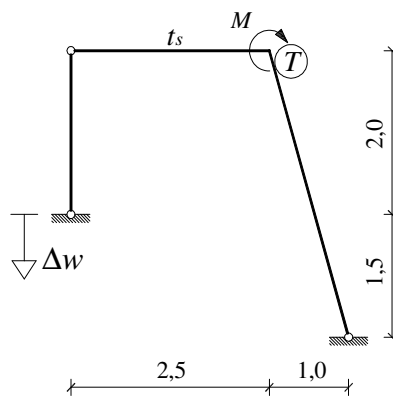
$$P = 300kN$$

$$EI = 130000kNm^2$$

Z1. (30) Crossovim postupkom odredite momentni dijagram za gornji sustav.

Z2. (30) Postupkom Werner-Csonka odredite momentni dijagram za gornji sustav.

Z3. (40) Inženjerskom metodom pomaka odredite vertikalni pomak točke T .



$$M = 305kNm$$

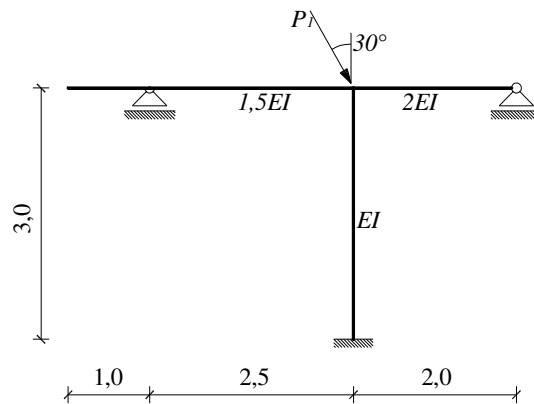
$$\Delta w = 2,5mm$$

$$EI = 100000kNm^2$$

$$\alpha_t = 10^{-5} K^{-1}$$

$$t_s = 21^\circ C$$

GS 2. - 1. kolokvij (A2) – (2009./2010.)



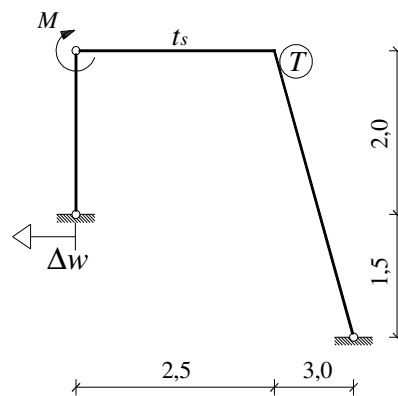
$$P = 220kN$$

$$EI = 120000kNm^2$$

Z1. (30) Crossovim postupkom odredite momentni dijagram gornjeg sustava.

Z2. (30) Postupkom Werner-Csonka odredite momentni dijagram gornjeg sustava.

Z3. (40) Inženjerskom metodom pomaka odredite zaokret točke T .



$$M = 300kNm$$

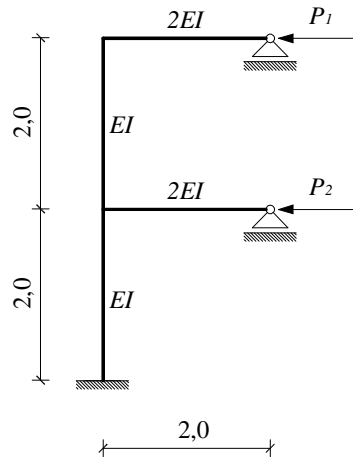
$$\Delta w = 2,0mm$$

$$EI = 100000kNm^2$$

$$\alpha_t = 10^{-5} K^{-1}$$

$$t_s = 16^\circ C$$

GS 2. - 1. kolokvij (B1) – (2009./2010.)



$$P_1 = 100 \text{ kN}$$

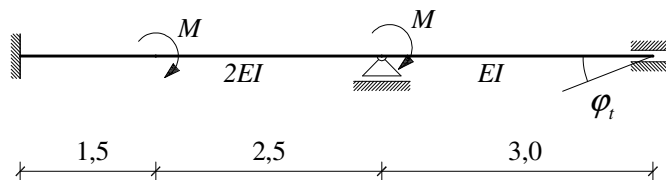
$$P_2 = 210 \text{ kN}$$

$$EI = 100000 \text{ kNm}^2$$

Z1. (35) Crossovom metodom odredite momentni dijagram gornjeg sustava.

Z2. (35) Metodom Werner-Csonka odredite momentni dijagram gornjeg sustava.

Z3. (30) Inženjerskom metodom pomaka odredite dijagram momenata i poprečnih sila.

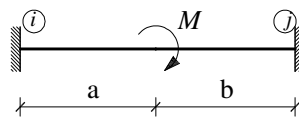


$$E = 3 \cdot 10^7 \text{ kN/m}^2$$

$$b/h = 30/40 [\text{cm}]$$

$$M = 205 \text{ kNm}$$

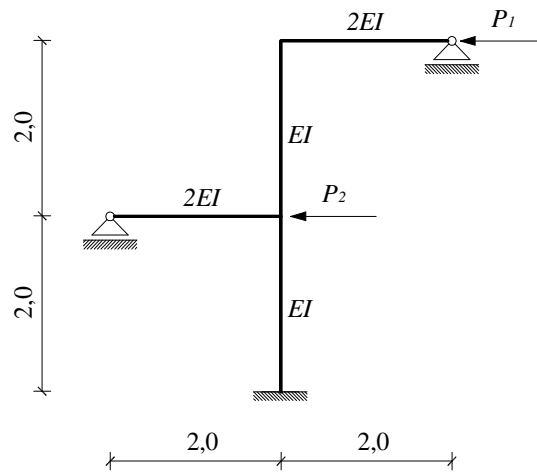
$$\varphi_t = 0,002$$



$$\overline{M}_{ij} = -M \cdot \frac{b(3a-L)}{L^2}$$

$$\overline{M}_{ji} = -M \cdot \frac{a(3b-L)}{L^2}$$

GS 2. - 1. kolokvij (B2) – (2009./2010.)



$$P_1 = 150 \text{ kN}$$

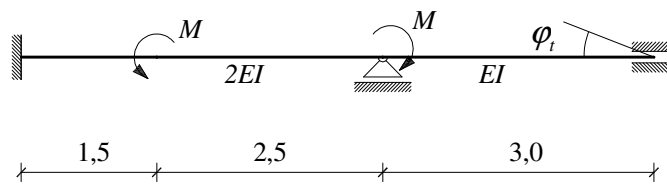
$$P_2 = 200 \text{ kN}$$

$$EI = 100000 \text{ kNm}^2$$

Z1. (35) Crossovom metodom odredite momentni dijagram gornjeg sustava.

Z2. (35) Metodom Werner-Csonka odredite momentni dijagram gornjeg sustava.

Z3. (30) Inženjerskom metodom pomaka odredite dijagram momenata i poprečnih sila.

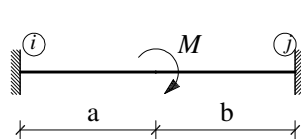


$$E = 3 \cdot 10^7 \text{ kN/m}^2$$

$$b/h = 30/50 [\text{cm}]$$

$$M = 200 \text{ kNm}$$

$$\varphi_i = 0,005$$



$$\overline{M}_{ij} = -M \cdot \frac{b(3a-L)}{L^2}$$

$$\overline{M}_{ji} = -M \cdot \frac{a(3b-L)}{L^2}$$