

$$M_{sd,x} := q_d \cdot l_{ox}^2 \cdot \phi_{lx} \quad M_{sd,x} = 18.155 \text{ kN}\cdot\text{m} \quad M_{sd,px} := \frac{-\chi_1}{12} \cdot q_d \cdot l_{ox}^2 \quad M_{sd,px} = -20.425 \text{ kN}\cdot\text{m}$$

$$M_{sd,y} := q_d \cdot l_{oy}^2 \cdot \phi_{ly} \quad M_{sd,y} = 15.892 \text{ kN}\cdot\text{m} \quad M_{sd,py} := -\frac{1-\chi_1}{12} \cdot q_d \cdot l_{ox}^2 \quad M_{sd,py} = -13.96 \text{ kN}\cdot\text{m}$$

$$s_{bcx} := \frac{M_{sd,x}}{\alpha \cdot b \cdot d^2 \cdot f_{cd}} \quad s_{bcx} = 0.05 \quad \xi := \frac{1 - \sqrt{1 - 2 \cdot s_{bcx}}}{0.8} \quad \xi = 0.064 \quad x := \xi \cdot d \quad x = 1.026 \text{ cm}$$

$$A_{s1x} := \frac{0.8 \cdot x \cdot b \cdot \alpha \cdot f_{cd}}{f_{yd}} \quad A_{s1x} = 2.7728 \text{ cm}^2 \quad \text{- przyjęto } \phi 12 \text{ co } 12 \text{ cm - } A_{s,obl}=9,42 \text{ cm}^2$$

$$s_{bcy} := \frac{M_{sd,y}}{\alpha \cdot b \cdot d_y^2 \cdot f_{cd}} \quad s_{bcy} = 0.051 \quad \xi := \frac{1 - \sqrt{1 - 2 \cdot s_{bcy}}}{0.8} \quad \xi = 0.066 \quad x := \xi \cdot d \quad x = 1.05 \text{ cm}$$

$$A_{s1y} := \frac{0.8 \cdot x \cdot b \cdot \alpha \cdot f_{cd}}{f_{yd}} \quad A_{s1y} = 2.8384 \text{ cm}^2 \quad \text{- przyjęto } \phi 12 \text{ co } 12 \text{ cm - } A_{s,obl}=9,42 \text{ cm}^2$$

-plyta P_05.1

$$q_d := 12.7 \cdot \frac{\text{kN}}{\text{m}} \quad h := 0.18 \cdot \text{m} \quad d := h - 0.02 \text{ m} \quad d = 16 \text{ cm}$$

$$l_{ox} := 5.40 \cdot \text{m} \quad l_{oy} := 6.13 \cdot \text{m} \quad b := 1 \cdot \text{m} \quad d_y := d - 1.20 \cdot \text{cm} \quad d_y = 14.8 \text{ cm}$$

$$\frac{l_{oy}}{l_{ox}} = 1.135 \quad \phi_{lx} := 0.0476 \quad \phi_{ly} := 0.0300 \quad \chi_1 := 0.636 \quad \alpha := 0.85$$

$$M_{sd,x} := q_d \cdot l_{ox}^2 \cdot \phi_{lx} \quad M_{sd,x} = 17.628 \text{ kN}\cdot\text{m} \quad M_{sd,px} := \frac{-\chi_1}{12} \cdot q_d \cdot l_{ox}^2 \quad M_{sd,px} = -19.628 \text{ kN}\cdot\text{m}$$

$$M_{sd,y} := q_d \cdot l_{oy}^2 \cdot \phi_{ly} \quad M_{sd,y} = 14.317 \text{ kN}\cdot\text{m} \quad M_{sd,py} := -\frac{1-\chi_1}{12} \cdot q_d \cdot l_{ox}^2 \quad M_{sd,py} = -11.233 \text{ kN}\cdot\text{m}$$

$$s_{bcx} := \frac{M_{sd,x}}{\alpha \cdot b \cdot d^2 \cdot f_{cd}} \quad s_{bcx} = 0.049 \quad \xi := \frac{1 - \sqrt{1 - 2 \cdot s_{bcx}}}{0.8} \quad \xi = 0.062 \quad x := \xi \cdot d \quad x = 0.995 \text{ cm}$$

$$A_{s1x} := \frac{0.8 \cdot x \cdot b \cdot \alpha \cdot f_{cd}}{f_{yd}} \quad A_{s1x} = 2.6901 \text{ cm}^2 \quad \text{- przyjęto } \phi 12 \text{ co } 12 \text{ cm - } A_{s,obl}=9,42 \text{ cm}^2$$

$$s_{bcy} := \frac{M_{sd,y}}{\alpha \cdot b \cdot d_y^2 \cdot f_{cd}} \quad s_{bcy} = 0.046 \quad \xi := \frac{1 - \sqrt{1 - 2 \cdot s_{bcy}}}{0.8} \quad \xi = 0.059 \quad x := \xi \cdot d \quad x = 0.943 \text{ cm}$$

$$A_{s1y} := \frac{0.8 \cdot x \cdot b \cdot \alpha \cdot f_{cd}}{f_{yd}} \quad A_{s1y} = 2.5501 \text{ cm}^2 \quad \text{- przyjęto } \phi 12 \text{ co } 12 \text{ cm - } A_{s,obl}=9,42 \text{ cm}^2$$

-plyta P_06.1

$$q_d := 12.7 \cdot \frac{\text{kN}}{\text{m}} \quad h := 0.18 \cdot \text{m} \quad d := h - 0.02 \text{ m} \quad d = 16 \text{ cm}$$

$$l_{ox} := 5.70 \cdot \text{m} \quad l_{oy} := 6.13 \cdot \text{m} \quad b := 1 \cdot \text{m} \quad d_y := d - 1.20 \cdot \text{cm} \quad d_y = 14.8 \text{ cm}$$