

**Zadatak 7.24**

Zadano:  $b = 9 \text{ cm}$ ,  $h = 3 \text{ cm}$ .

**Rješenje:**

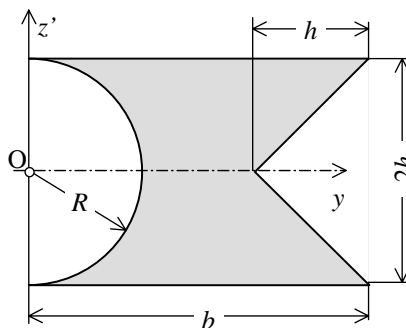
$$A = 30,863 \text{ cm}^2,$$

$$y_S = 4,96 \text{ cm}, \quad z_S = 0.$$

$$I_y = I_1 = 116,691 \text{ cm}^4,$$

$$I_z = I_2 = 87,175 \text{ cm}^4, \quad I_{yz} = 0,$$

$$\varphi_o = 0^\circ.$$



Slika uz zadatak 7.24

**Zadatak 7.25**

**Rješenje:**

$$A = 49,416 \text{ cm}^2,$$

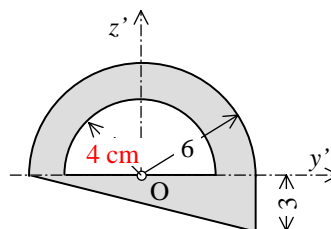
$$y_S = 0,7285 \text{ cm}, \quad z_S = 1,6864 \text{ cm},$$

$$I_y = 294,8763 \text{ cm}^4, \quad I_z = 598,1813 \text{ cm}^4,$$

$$I_{yz} = -114,7092 \text{ cm}^4,$$

$$I_1 = 636,678 \text{ cm}^4, \quad I_2 = 256,38 \text{ cm}^4,$$

$$\varphi_o = -18,552^\circ.$$



Slika uz zadatak 7.25

**Zadatak 7.26**

Presjek zadan na slici sastavljen je od pravokutnog profila  $150 \times 6 \text{ mm}$  i dva kutna profila L  $50 \times 100 \times 6 \text{ mm}$ .

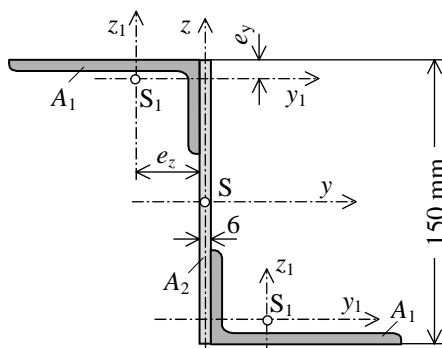
Odrediti položaj težišta, težišne i glavne težišne momente tromosti i položaj glavnih osi tromosti presjeka.

Za profil L  $50 \times 100 \times 6 \text{ mm}$ :

$$A_1 = 8,73 \text{ cm}^2, \quad e_y = 1,04 \text{ cm}, \quad e_z = 3,49 \text{ cm},$$

$$I_{y_1} = 15,3 \text{ cm}^4, \quad I_{z_1} = 89,7 \text{ cm}^4,$$

$$I_{y_1 z_1} = -21 \text{ cm}^4.$$



Slika uz zadatak 7.26

**Rješenje:**

$$I_y = 928 \text{ cm}^4, \quad I_z = 430,47 \text{ cm}^4,$$

$$I_{yz} = -469,48 \text{ cm}^4, \quad \varphi_o = 31,04^\circ,$$

$$I_1 = 1210,55 \text{ cm}^4, \quad I_2 = 147,92 \text{ cm}^4.$$