

$$\xi = \frac{x}{d}$$

$$\xi_R = \frac{x_R}{d}$$

$$n \phi D \rightarrow A_s = \dots \text{ cm}^2$$

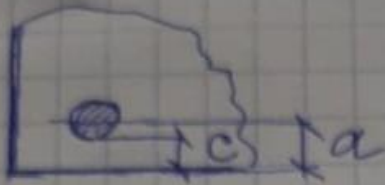
$$A_{c1} \rightarrow f_{yd} = \dots \text{ MPa}$$

$$\gamma_{c1} =$$

$$C_{w/\mu} \rightarrow f_{cd} = \dots \text{ MPa} \cdot \gamma_{c1}$$

$$b \times h, \text{ cm}$$

$$1. d = h - a, \text{ cm}$$



$$a = c + 0,5\phi, \text{ cm}$$

$$2c \leq c \leq \phi$$



$$a = c + 1,5\phi, \text{ cm}$$

$$2. \omega = \alpha - \beta \cdot f_{cd} = \dots = [0, \text{ cm}]$$

$$\alpha = 0,85$$

$$\beta = 0,08$$

$$3. \gamma_{c1} = 1 \rightarrow \sigma_{sc,u} = 400 \text{ MPa}$$

$$\gamma_{c1} = 0,9 \rightarrow \sigma_{sc,u} = 500 \text{ MPa}$$

$$4. \xi_{SR} = \frac{\omega}{1 + \frac{\sigma_{SR}}{\sigma_{sc,u}} \left(1 - \frac{\omega}{1.1}\right)} = \dots$$

$$\sigma_{SR} \rightarrow f_{yd}$$

$$5. x = \frac{A_s \cdot f_{yd}}{b \cdot f_{cd}} = \dots, \text{ cm}$$

$$6. x_{CR} = \xi_R \cdot d = \dots, \text{ cm}$$

$$7. x \leq x_{CR}$$

$$\begin{aligned} 7. \text{ TAR. } 8. M_u &= A_s \cdot f_{yd} \cdot (d - 0,5x) \\ &= \dots \text{ kH} \cdot \text{ cm} [100] = \text{ kH} \cdot \text{ m} \end{aligned}$$

$$7. \text{ Hi } 8. M_u = b \cdot x_{CR} \cdot f_{cd} (d - 0,5x_{CR})$$