

SPRICKVIDD LÅNGTIDSLAST **EK2**

$$\sigma_{slmax} := \sigma_s(x) \cdot \frac{\left(h - x - t_s - \frac{\phi_s}{2}\right)}{d - x} \quad \sigma_{slmax} = 267.7$$

$$A := 2.5 \cdot (h - d) \quad B := \frac{h - x}{3} \quad C := \frac{h}{2} \quad D := (A \ B \ C) \quad \text{def} := \min(D) \quad \text{def} = 42.2 \quad \text{mm}$$

$$A = 111.3 \quad B = 42.2 \quad C = 85.0$$

Armeringsinnehåll

$$\rho_r := \frac{A_s}{b(h) \cdot \text{def}} \quad \rho_r = 0.0144$$

$k_t := 0.4$  Långtidslast

$$f_{ctk} = 1.80 \quad f_{cteff} := f_{ctm} \quad f_{cteff} = 2.56 \quad \sigma_{slmax} = 267.7 \quad E_{sk} = 200 \times 10^3$$

$$k_t \cdot \frac{f_{cteff} \cdot (1 + \alpha_{spr} \cdot \rho_r)}{\rho_r} = 77.9$$

Spricköppningstjorning

$$\varepsilon_{smred} := \frac{\sigma_{slmax} - k_t \cdot \frac{f_{cteff} \cdot (1 + \alpha_{spr} \cdot \rho_r)}{\rho_r}}{E_{sk}} \quad \varepsilon_{smred} = 948.720 \times 10^{-6}$$

$$\varepsilon_{smred} := \text{if} \left( \varepsilon_{smred} < 0.6 \cdot \frac{\sigma_{slmax}}{E_{sk}}, 0.6 \cdot \frac{\sigma_{slmax}}{E_{sk}}, \varepsilon_{smred} \right) \quad \varepsilon_{smred} = 948.720 \times 10^{-6}$$

Sprickavstånd

$$\chi_1 = 1.6$$

$$k_1 := \chi_1$$

$$c := t_s \quad k_2 := 0.5 \quad k_3 := 7 \cdot \frac{\phi_s}{c} \quad k_4 := 0.425$$

$$c = 40 \quad k_1 = 1.6 \quad k_3 = 1.58$$

$$\phi_s = 9 \quad S_{rm} := k_3 \cdot c + k_1 \cdot k_2 \cdot \frac{k_4 \cdot \phi_s}{\rho_r} \quad S_{rm} = 275.9 \quad \text{mm}$$

$$5 \cdot \left( c + \frac{\phi_s}{2} \right) = 222.5$$

$$1.3 \cdot (h - x) = 164.4$$

$$S_{rm} := \text{if} \left[ s > 5 \cdot \left( c + \frac{\phi_s}{2} \right), 1.3 \cdot (h - x), S_{rm} \right] \quad S_{rm} = 275.9 \quad \text{mm}$$

$$M = 18 \quad M_{cr} = 11$$

Sprickvidd

$$\varepsilon_{cs} = 0$$

$$w_k := \varepsilon_{smred} \cdot S_{rm}$$

$$w_{kl} := \text{if}(\sigma_{cluk} \geq 0, w_k, 0)$$

$$w_{kl} = 0.262 \quad \text{mm}$$