SPRICKVIDD LÅNGTIDSLAST **EK2**

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

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

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

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

$k_t := 0.4$ Långtidslast

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

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

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

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

Sprickavstånd $\quad \chi_1 = 1.2$

$c := t_s$ $\quad k_1 := \chi_1$ $\quad k_2 := 0.5$ $\quad k_3 := 7\cdot\frac{\phi_s}{c}$ $\quad k_4 := 0.425$

$c = 40$ $\quad k_1 = 1.2$ $\quad k_3 = 1.58$

$\phi_s = 9$ $\quad S_{rm} := k_3\cdot c + k_1\cdot k_2\cdot\frac{k_4\cdot\phi_s}{\rho_r} \qquad S_{rm} = 222.7$ mm

$5\cdot\left(c + \frac{\phi_s}{2}\right) = 222.5$ $\quad 1.3\cdot(h - x) = 164.4$

$$S_{rm} := if\left[s > 5\cdot\left(c + \frac{\phi_s}{2}\right), 1.3\cdot(h - x), S_{rm}\right] \qquad S_{rm} = 222.7 \text{ mm}$$

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

Sprickvidd $\quad \varepsilon_{cs} = 0$ $\quad w_k := \varepsilon_{smred}\cdot S_{rm}$

$$w_{kl} := if\left(\sigma_{cluk} \geq 0, w_k, 0\right) \qquad w_{kl} = 0.211 \text{ mm}$$