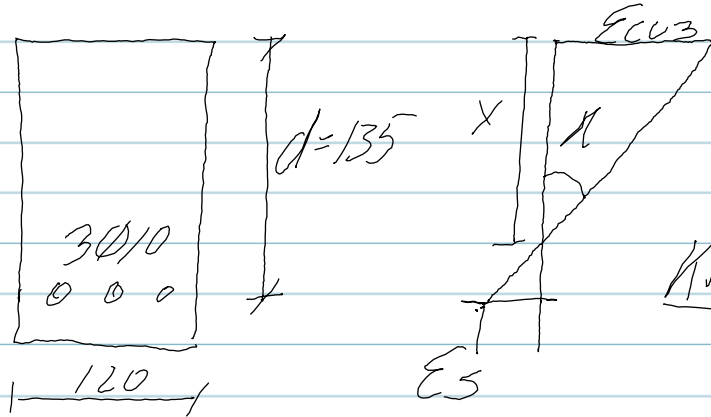


DTU. Betonkonstruktioner



$$\text{KRAV: } \epsilon_{yd} \leq \epsilon_s \leq \epsilon_{uh}$$

$$f_{yk} = 550 \text{ MPa} \Rightarrow f_{yd} = 550 / 1.2 = 458 \text{ MPa} \Rightarrow$$
$$\epsilon_{yd} = f_{yd} / E_s = 458 / 2 \cdot 10^5 = 2.29 \%$$

$$\epsilon_{uh} \geq 5 \% \quad \text{klasse B}$$
$$f_{tk} = 20 \text{ MPa} \Rightarrow \epsilon_{cu3} = 3.5 \%$$

$$x = y / \lambda = 65.24 / 0.8 = 81.55 \text{ mm}$$

$$\epsilon_s = \frac{\epsilon_{cu3}}{x} (d - x) = \frac{3.5 \%}{81.55} (135 - 81.55) = 2.294 \%$$

$$\epsilon_{yd} = 2.29 \% \leq \epsilon_s = 2.294 \% \leq \epsilon_{uh} = 5 \%$$

OK!