

## VEDLEGG 7

### GENERELLE FORMLER OG VERDIER

**Betong:**

Velger fasthetsklasse: B55

$$f_{ck} = 55 \frac{\text{N}}{\text{mm}^2} \text{ (Standard Norge, 2004, tabell 3.1)}$$

$$\gamma_c = 1,5 \text{ (Standard Norge, 2008, tabell NA.2.1N)}$$

$$a_{cc} = 0,85 \text{ (Standard Norge, 2008, pkt. NA.3.1.6(1))}$$

$$f_{cd} = a_{cc} * \frac{f_{ck}}{\gamma_c} = 0,85 * \frac{55}{1,5} = 31,2 \frac{\text{N}}{\text{mm}^2} \text{ (Standard Norge, 2004, pkt. 3.1.6(1))}$$

$$f_{ctk,0.05} = 3,0 \frac{\text{N}}{\text{mm}^2} \text{ (Standard Norge, 2004, tabell 3.1)}$$

$$f_{ctd} = a_{cc} * \frac{f_{ctk,0.05}}{\gamma_c} = 0,85 * \frac{3,0}{1,5} = 1,7 \frac{\text{N}}{\text{mm}^2} \text{ (Standard Norge, 2004, pkt. 3.1.6(2))}$$

$$f_{cm} = 63 \frac{\text{N}}{\text{mm}^2} \text{ (Standard Norge, 2004, tabell 3.1)}$$

$$f_{ctm} = 4,2 \frac{\text{N}}{\text{mm}^2} \text{ (Standard Norge, 2004, tabell 3.1)}$$

$$E_{cm} = 38\,000 \frac{\text{N}}{\text{mm}^2} \text{ (Standard Norge, 2004, tabell 3.1)}$$

$$\varepsilon_{cu} = \varepsilon_{cu2} = 0,0031 \text{ gjelder for dimensjonerende tverrsnitt (Standard Norge, 2004, tabell 3.1)}$$

**Stål:**

Velger armering: B500NC

$$f_{yk} = 500 \frac{\text{N}}{\text{mm}^2} \text{ (Standard Norge, 2004, tabell 3.1)}$$

$$\gamma_s = 1,15 \text{ (Standard Norge, 2008, tabell NA.2.1N)}$$

$$f_{yd} = \frac{f_{yk}}{\gamma_s} = \frac{500}{1,15} = 434,8 \frac{\text{N}}{\text{mm}^2} \text{ (Standard Norge, 2004, figur 3.8)}$$

$$E_s = 2 * 10^5 \frac{\text{N}}{\text{mm}^2} \text{ (Standard Norge, 2004, pkt. 3.2.7(4))}$$

$$\varepsilon_{yd} = \frac{f_{yd}}{E_s} = \frac{434,8}{2 * 10^5} = 2,17 * 10^{-3} \text{ (Standard Norge, 2004, pkt. 5.8.8.3(1))}$$

**Andre verdier:**

$$\lambda = 0,8 - \frac{f_{ck} - 50}{400} = 0,8 - \frac{55 - 50}{400} = 0,788 \text{ (Standard Norge, 2004, pkt. 3.1.7(3))}$$

$$\eta = 1,0 - \frac{f_{ck} - 50}{200} = 1,0 - \frac{55 - 50}{200} = 0,975 \text{ (Standard Norge, 2004, pkt. 3.1.7(3))}$$

$$\alpha = 0,383 \text{ (Sørensen, 2013, s.37, tabell 4.2)}$$

$$K = 0,250 \text{ (Sørensen, 2013, s.38, tabell 4.3)}$$

$$t = 500\,000 \text{ timer (Standard Norge, 2004, pkt. 3.3.2(8))}$$

**Verdier for skjærberegninger:**

$$\text{Velger } \theta = 45^0$$

$$\cot\theta = \cot(45^0) = 1$$

$$\tan\theta = \tan(45^0) = 1$$

$$\text{Velger vertikale skjærbøyler} \Rightarrow \alpha = 90^0$$