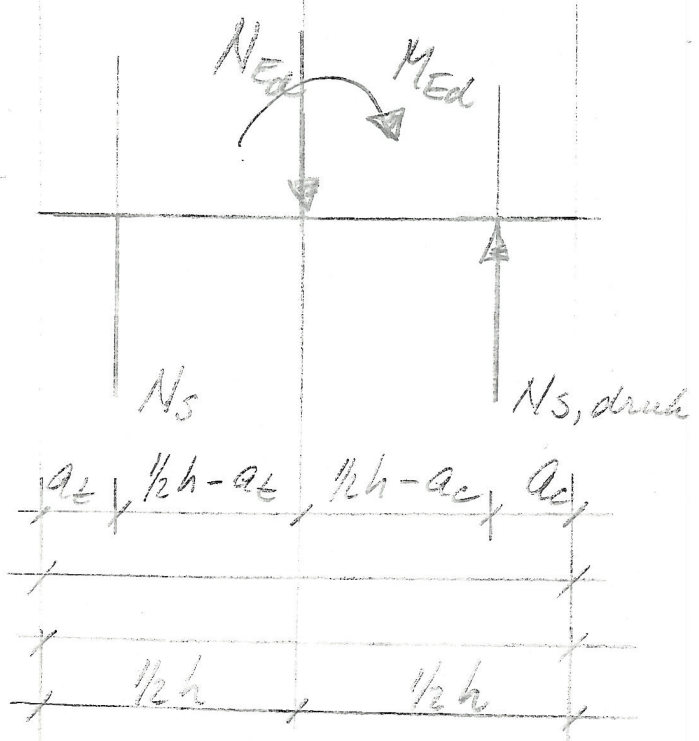
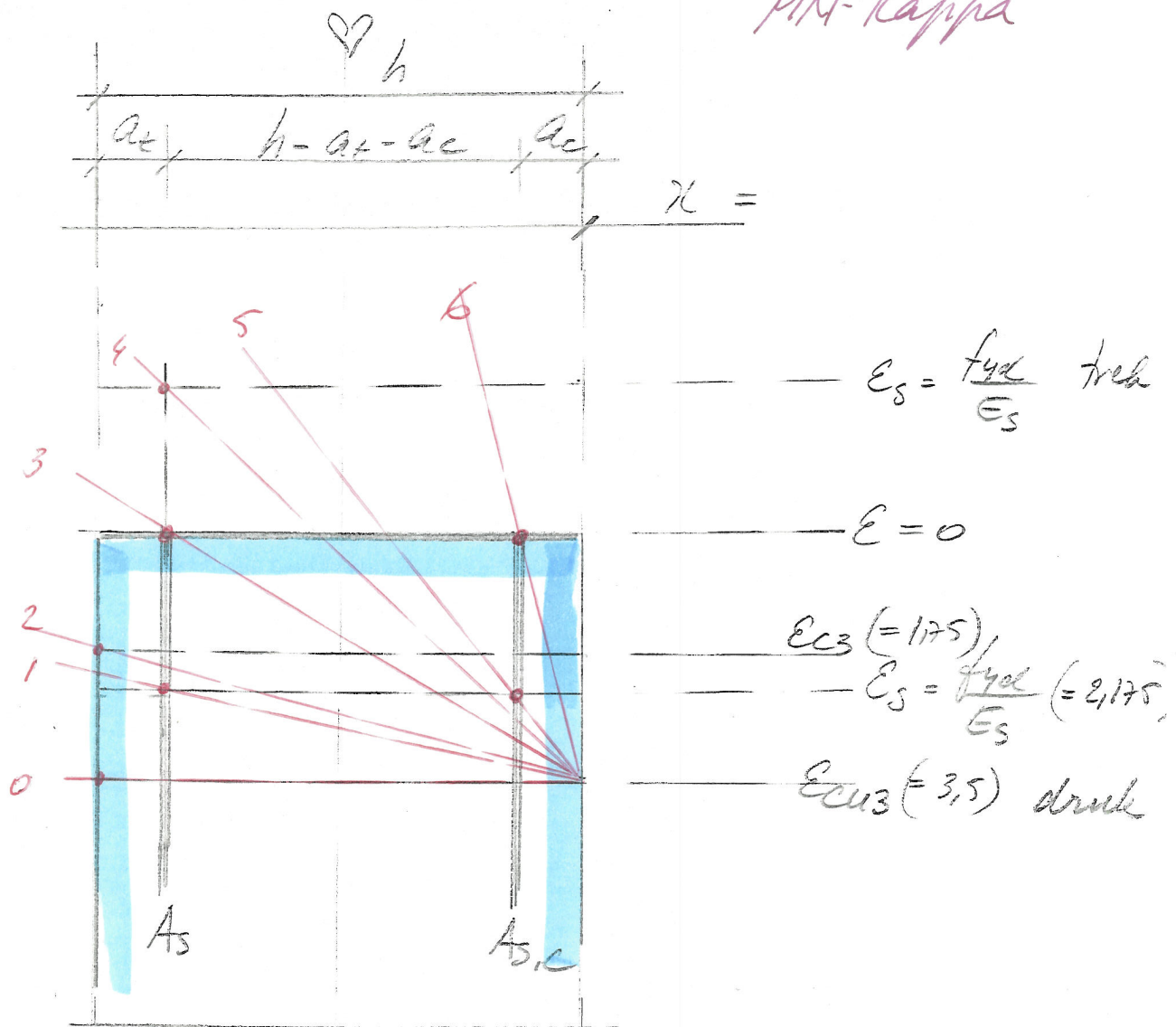
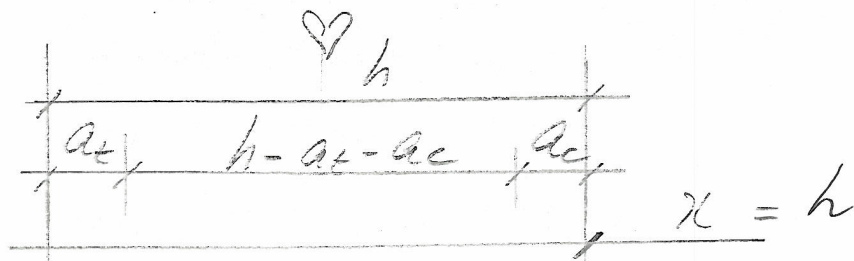


MM-kappa



belastinggeval: alle gevallen in een figuur



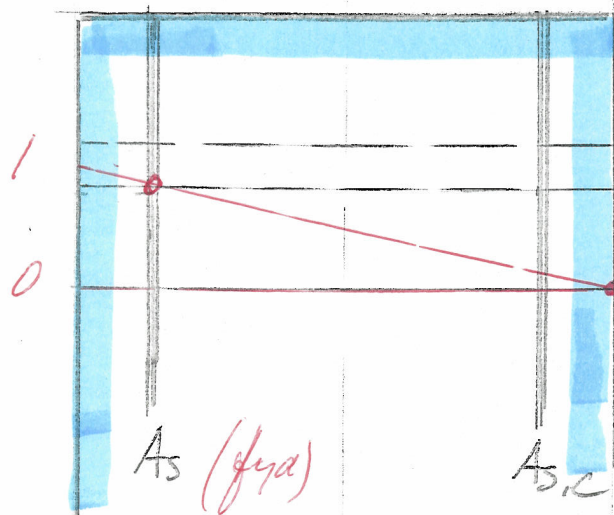
$$E_s = \frac{f_{yd}}{E_s} \text{ trek}$$

$$E = 0$$

$$E_{cu3} (= 1,75)$$

$$E_s = \frac{f_{yd}}{E_s} (= 2,175)$$

$$E_{cu3} (= 3,5) \text{ druk}$$



$$\Sigma H = 0$$

$$N_s = A_s \cdot f_{yd}$$

$$N_{s, \text{druk}} = A_{s,c} \cdot f_{yd}$$

$$N_c = b h f_{cd}$$

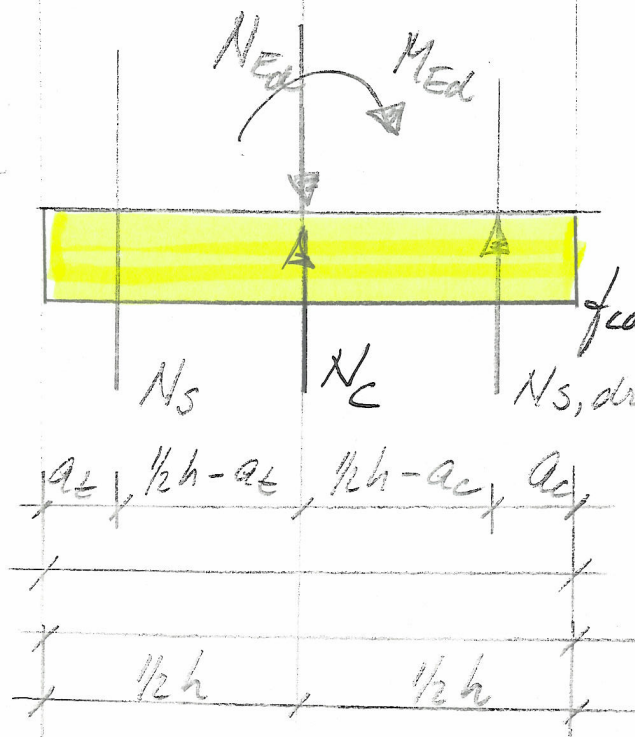
$$N_{ed}$$

$$\Sigma M = 0 \text{ moment arm}$$

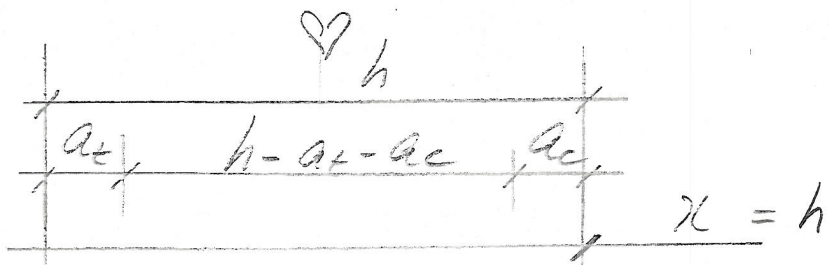
$$N_s: \frac{1}{2} h - a_t$$

$$N_{s, \text{druk}}: \frac{1}{2} h - a_c$$

$$N_c = 0$$



belastinggeval: D : E_{cu3} aan trek en druk zijde
 I : E_{cu3} aan drukzijde E_s aan trekzijde (=druk)



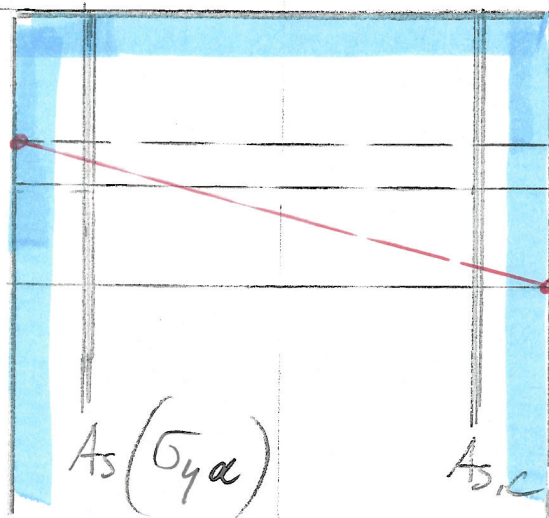
$$E_s = \frac{f_{yd}}{E_s} \text{ trek}$$

$$E = 0$$

$$E_{c3} (= 1,75)$$

$$E_s = \frac{f_{yd}}{E_s} (= 2,175)$$

$$E_{cu3} (= 3,5) \text{ druk}$$



$$\Sigma H = 0$$

$$N_s = A_s \cdot \underline{\underline{\sigma_{yd}}}$$

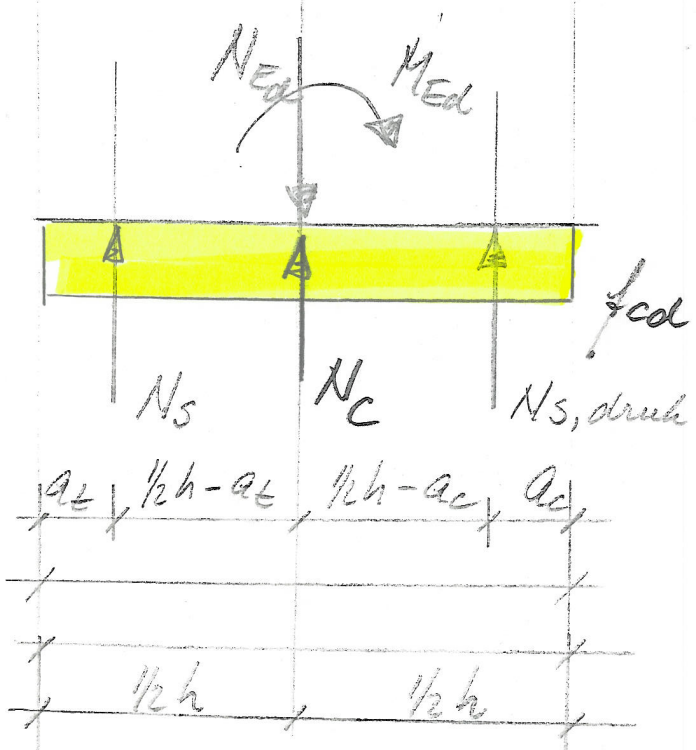
$$N_{s, \text{druk}} = A_{s,c} \cdot f_{yd}$$

$$N_c = b \cdot h \cdot f_{cd}$$

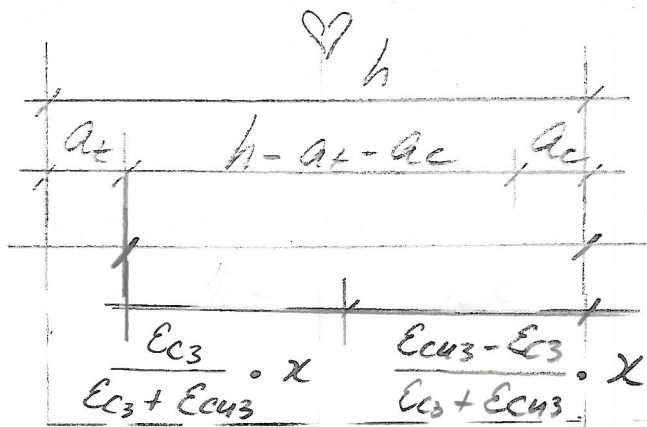
$$N_{ed} : \sigma_{yd} : E_s \cdot E_s$$

$$E_s = E_{c3} + \frac{a_t}{h} \cdot E_{cu3}$$

moment arm
als bij 1



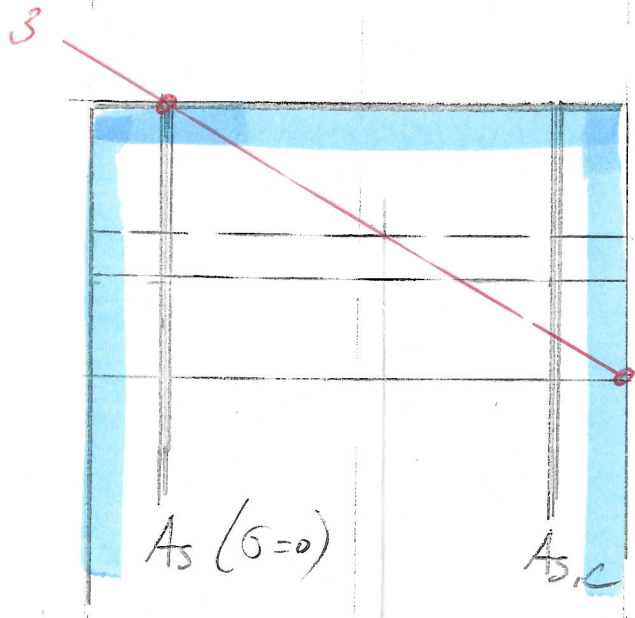
belastingen: 2 E_{cu3} aan drukzijde E_{c3} aan trekzijde



$$x = h - a_t$$

$$\frac{E_{c3}}{E_{c3} + E_{cu3}} \cdot x \quad \frac{E_{cu3} - E_{c3}}{E_{c3} + E_{cu3}} \cdot x$$

$$E_s = \frac{f_{yk}}{E_s} \text{ trek}$$



$$E = 0$$

$$E_{c3} (= 17,5) / E_s = \frac{f_{yk}}{E_s} (= 2,175)$$

$$E_{cu3} (= 3,5) \text{ druk}$$

$$\Sigma H = 0$$

$$N_s = 0$$

$$N_{sd} = A_{s,c} \cdot f_{yd}$$

$$N_c = \alpha \cdot b \cdot x \cdot f_{cd}$$

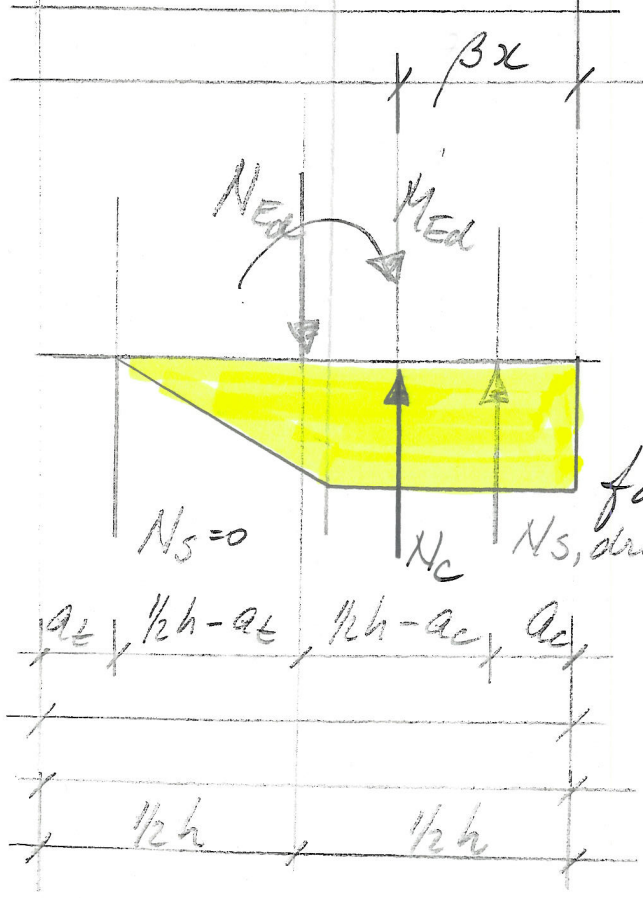
$$N_{Ed}$$

moment arm

$$N_s = n \cdot t$$

$$N_{sd,du} = \frac{1}{2} h - a_c$$

$$N_c = \frac{1}{2} h - \beta x$$



$$N_s = 0$$

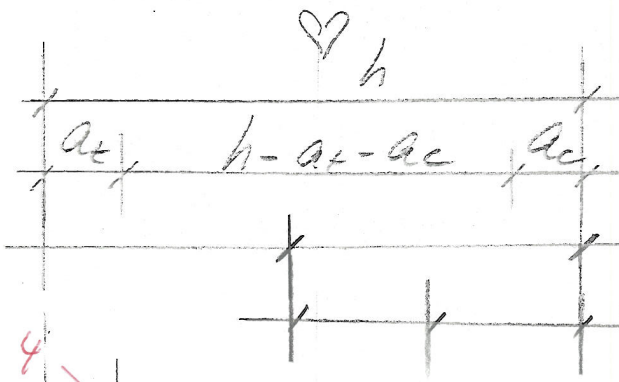
$$N_c$$

$$N_s, \text{druk}$$

$$a_t, \frac{1}{2} h - a_t, \frac{1}{2} h - a_c, a_c$$

$$\frac{1}{2} h, \frac{1}{2} h$$

belasting geval: 3 E_{cu3} aan druk zijde $E=0$ trekwapening



$$\xi = \frac{E_{cu3}}{E_{cu3} + E_s} \cdot (h - a_t)$$

verdeling als bij 3

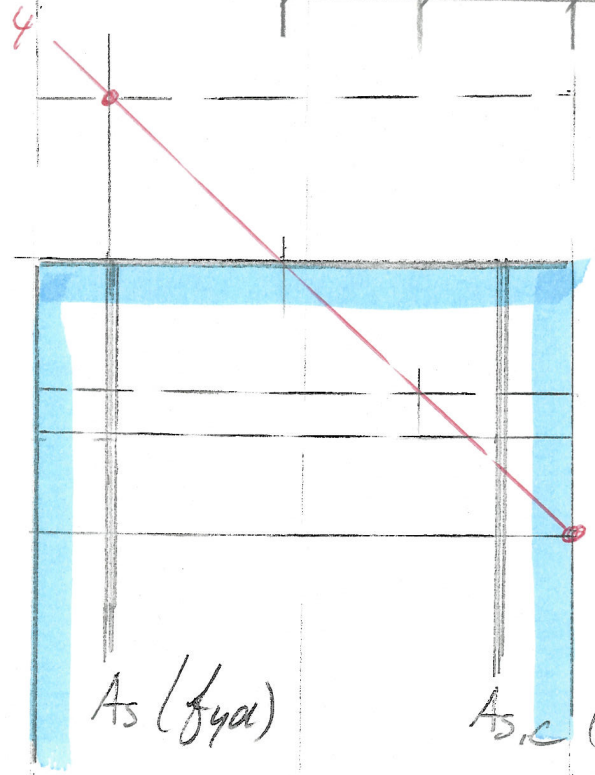
$$E_s = \frac{f_{yk}}{E_s} \text{ trek}$$

$$E = 0$$

$$E_{cu3} (= 1,75)$$

$$E_s = \frac{f_{yd}}{E_s} (= 2,175)$$

$$E_{cu3} (= 3,5) \text{ druk}$$



$$\Sigma H = 0$$

$$N_s = A_s \cdot f_{yd}$$

$$N_{s,druk} = A_{s,c} \cdot f_{yd}$$

$$N_c = \alpha \cdot b \cdot \xi \cdot f_{cd}$$

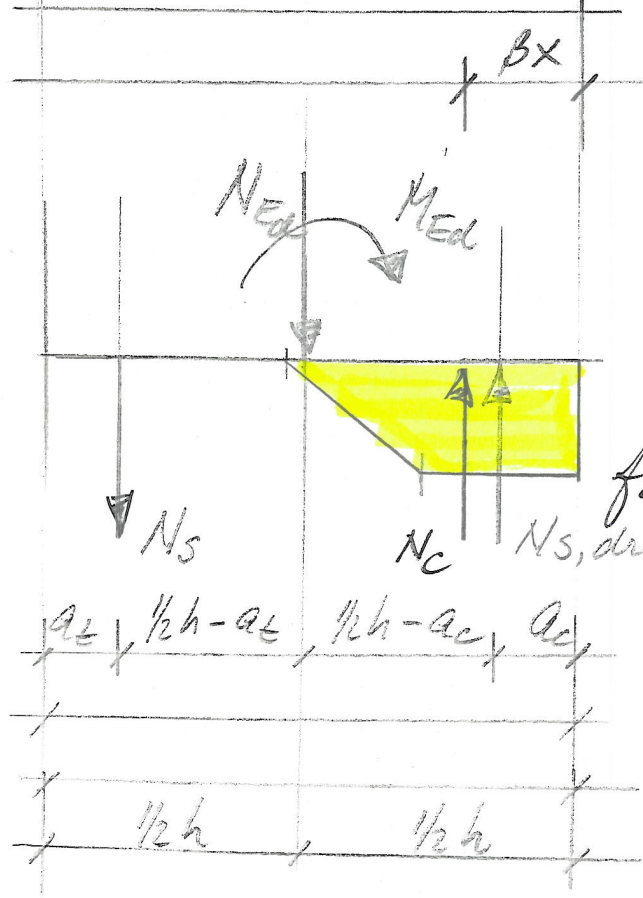
$$N_{ed}$$

Moment arm

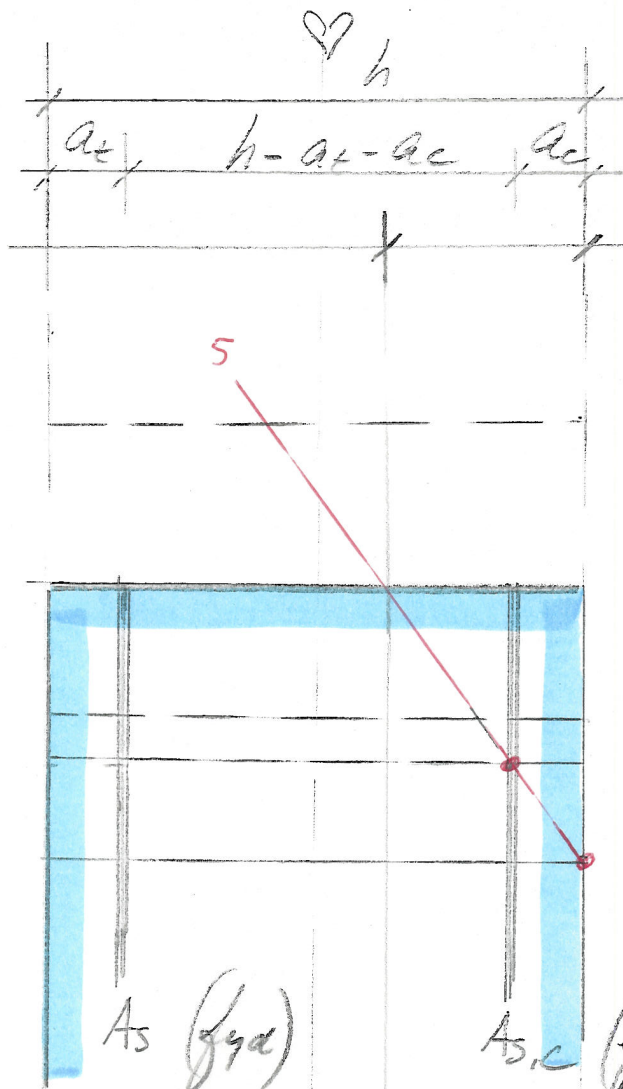
$$N_s : \frac{1}{2} h - a_t$$

$$N_{s,druk} : \frac{1}{2} h - a_c$$

$$N_c : \frac{1}{2} h - \beta x$$



belastingen: $4 E_{cu3}$ aan drukzijde E_s (trek) trekzijde



$$\chi = \frac{E_{cu3} \cdot a_c}{E_{cu3} - E_s}$$

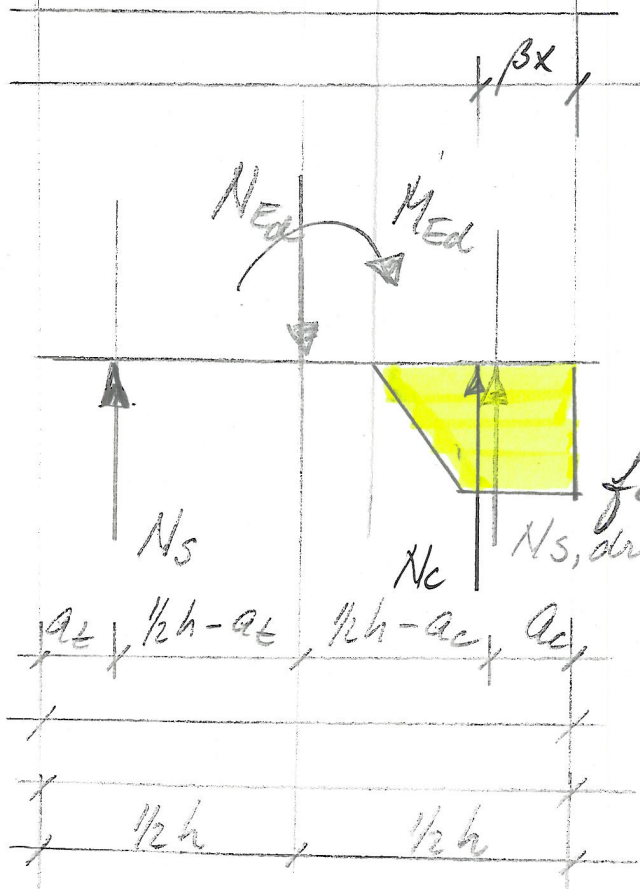
$$E_s = \frac{f_{yd}}{E_s} \text{ trek}$$

$$E = 0$$

$$E_{cu3} (= 1,75)$$

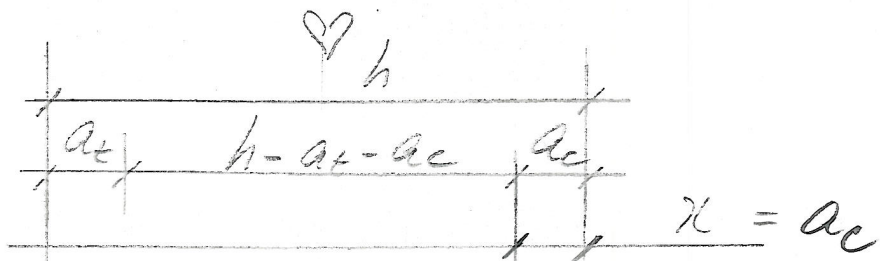
$$E_s = \frac{f_{yd}}{E_s} (= 2,175)$$

$$E_{cu3} (= 3,5) \text{ druk}$$



overige waarden
als bij 4

belastinggeval: 5 E_{cu3} aan drukzijde E_s bij drukwapening



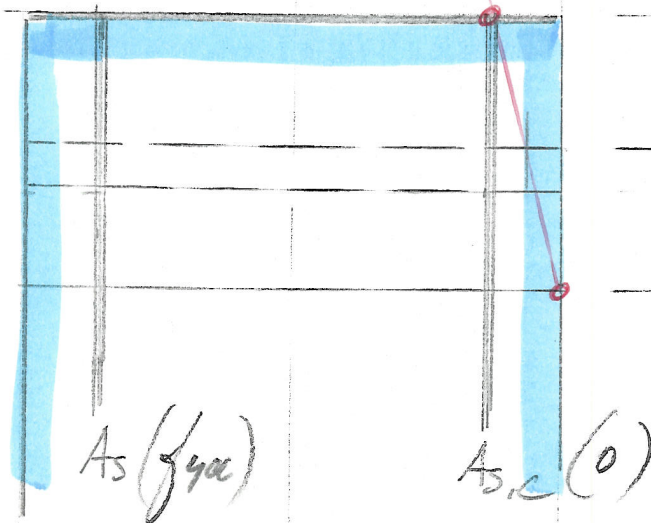
$$E_s = \frac{f_{yd}}{E_s} \text{ trek}$$

$$E = 0$$

$$E_{cu3} (= 1,75)$$

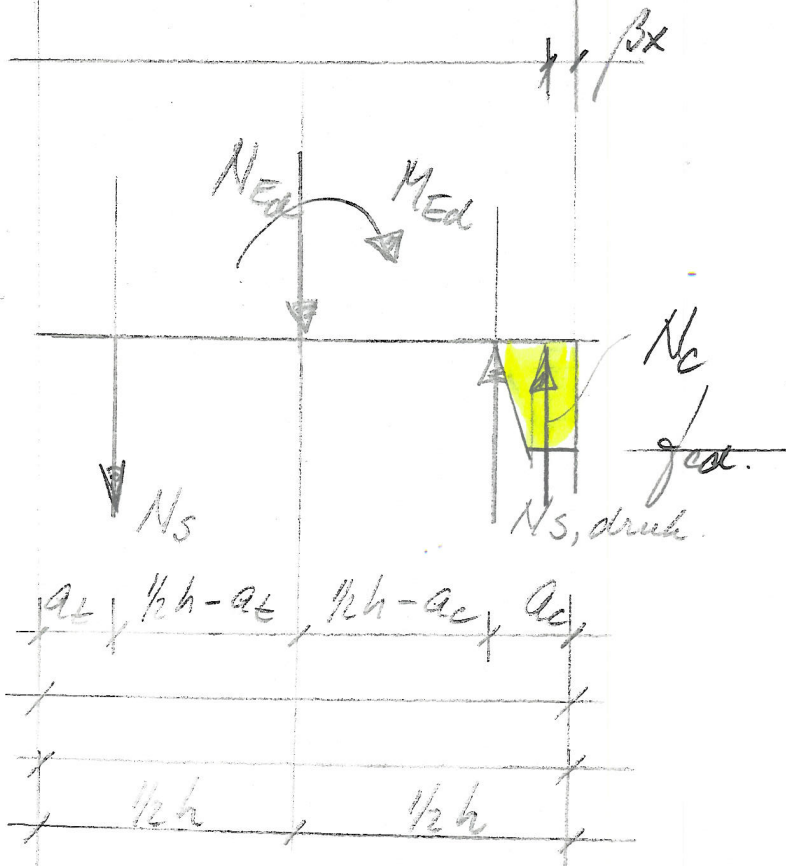
$$E_s = \frac{f_{yd}}{E_s} (= 2,175)$$

$$E_{cu3} (= 3,5) \text{ druk}$$



$$N_{s, \text{druk}} = 0$$

overgevoerde als bij 4.



belastingen: ξ E_{cu3} aan druk zijde, $E=0$ druk wapening