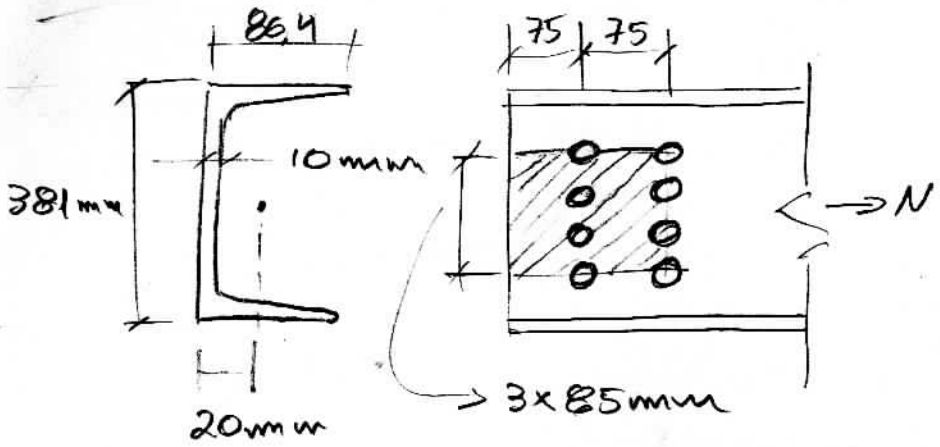
AM1-4.4



d = 22mm

TABELA:

$A_g = 64{,}2\ cm$

ESB: $R_{dt} = A_g \times f_y / \gamma_{a1} = 64{,}2\,cm \times 35\,kN/cm^2 / 1{,}1 = \underline{2042{,}72\,kN}$

RSL: $A_e = C_t \cdot A_n$

$\phi = 2{,}2\,cm + 0{,}35\,cm = 2{,}55\,cm$

$A_o = 2{,}55\,cm \cdot 1\,cm = 2{,}55\,cm^2$

$A_n = A_g - 4 \cdot 2{,}55\,cm^2 = 54\,cm^2$

$C_t = 1 - e_c / L_c = 1 - \frac{2\,cm}{7{,}5\,cm} = \underline{0{,}7333}$

$A_e = 0{,}7333 \times 54\,cm^2 = 39{,}6\,cm^2$

$R_{dt} = A_e \times f_u / \gamma_{a2} = 39{,}6\,cm^2 \times 45\,kN/cm^2 / 1{,}35$

$R_{dt} = \underline{1320\,kN/cm^2}$

CISALHAMENTO DE BLOCO:

$A_{gv} = (2 \times 7{,}5\,cm) \times 1\,cm = 15\,cm^2 \times 2 = 30\,cm^2$

$A_{nv} = 15\,cm^2 - 1{,}5 \cdot 2{,}55\,cm^2 = 11{,}175\,cm^2 \times 2 = 22{,}35\,cm^2$

$A_{nt} = (3 \times 8{,}5\,cm - 3 \times 2{,}55) \times 1 = 17{,}85\,cm^2$

$$R_{dt} = \frac{(0{,}6 \cdot 45 \cdot 22{,}35 + 45 \cdot 17{,}85)}{1{,}35} \leq \frac{(0{,}6 \cdot 35 \cdot 30 + 45 \cdot 17{,}85)}{1{,}35}$$

$R_{dt} = \boxed{1042\,kN} \leq 1061{,}67\,kN$