

$$W_x \geq \frac{174400}{2150} = 81,1 \text{ cm}^3 \rightarrow 2 \text{ [} 120 \text{ } W_x = 121,7 \text{ cm}^3$$

$$J_x = 728 \text{ cm}^4$$

$$f = \frac{(5 \times 17,80 : 1,2) \times 280^4}{384 \times 2,05 \times 10^6 \times 728} = 0,8 \text{ cm} \leq \frac{280}{350} = 0,8 \text{ cm}$$

BELKI PRZYKŁADO 2 [120

BK3 $q = 5,80 + 1,0 = 6,80$

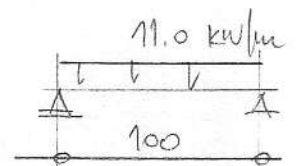
$$M = 0,125 \times 2,80^2 \times 6,80 = 6,66 \text{ kNm} \rightarrow W_x \geq 31 \text{ cm}^3$$

PROJEKTO 2 [100 $W_x = 41,2 \text{ cm}^3 \times 2 \quad J_x = 412 \text{ cm}^4$

$$f = \frac{5 \times (6,8 : 1,2) \times 280^4}{384 \times 2,05 \times 10^6 \times 412} = 0,5 \text{ cm} < \frac{280}{350} = 0,8 \text{ cm}$$

STRÓP PRZY WINDZIE BW

ZE STRÓPU - $P + q + q = (9,43 ; 11,37) \text{ kN/m}^2$



$$R = 0,5 \times (2,60 - 0,8) \times 1,05 \times (11,37) = 10,74 \text{ kN/m}$$

BW1

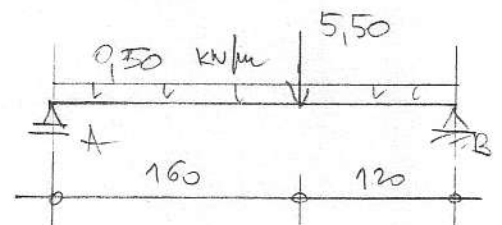
$$M = 0,125 \times 1,0 \times 11,0 = 1,37 \text{ kNm}$$

$$R = 0,5 \times 11 \times 1 = 5,5 \text{ kN}$$

BW2

$$R_e = 0,7 + 2,35 = 3,05 \text{ kN}$$

$$R_B = 0,7 + 3,15 = 3,75 \text{ kN}$$



$$M = 3,75 \times 1,20 - 0,5 \times 1,20^2 \times 0,5 = 4,5 - 0,36 = 4,14 \text{ kNm}$$

$$W_x \geq \frac{42000}{2150} = 19,53 \text{ cm}^3 \rightarrow \text{ [100 - } W_x = 41,2 \text{ cm}^3 \quad J_x = 206 \text{ cm}^4$$

$$\text{ [120 - } W_x = 60,7 \text{ cm}^3 \quad J_x = 364 \text{ cm}^4$$

$$R \text{ } 100 \times 100 \times 5 - W_x = 52,31 \text{ cm}^3$$

$$J_x = 261,5 \text{ cm}^4$$

$$f = \frac{(550 \times 280^3) : 1,1}{48 \times 2,05 \times 10^6 \times 261,4} = 0,42 \text{ cm}$$

$$(206) \quad 0,54 \text{ cm}$$