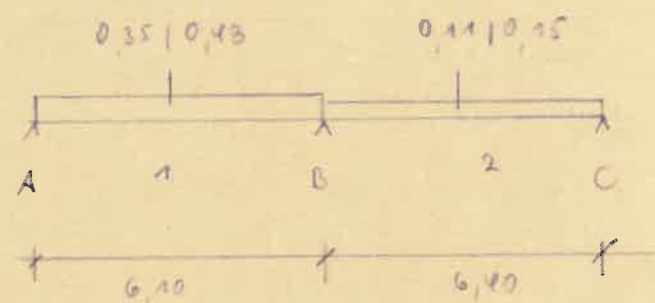


Durchlaufwirkung Pos 20 x - 22 x:



$$R_{1y} = \frac{0,35 \cdot 6,10^3}{4} = 19,88 \text{ N/mm}$$

$$R_{2y} = \frac{0,48 \cdot 6,10^3}{4} = 27,25 \text{ N/mm}$$

$$L_{2y} = \frac{0,11 \cdot 6,40^3}{4} = 7,21 \text{ N/mm}$$

$$L_{2y} = \frac{0,15 \cdot 6,40^3}{4} = 9,83 \text{ N/mm}$$

$$M_B = \begin{array}{|c|c|c|c|} \hline & & & \\ \hline \end{array}$$

$$25,00 \quad - 37,08 \quad - 31,46 \quad - 29,71$$

$$M_B = \begin{array}{|c|c|c|c|} \hline & - 1,48 \checkmark & - 1,38 & - 1,19 \\ \hline \end{array}$$

$$A = 0,48 \cdot 3,05 = \frac{1,38}{6,10} = 1,46 - 0,23 = 1,23 \text{ N/mm}$$

$$M_1 = M_{20x} = \frac{1,23^2}{0,96} = 1,58 \text{ N/mm}$$

$$B \text{ (nominalzuschlag)} = \frac{1,48}{6,10} + \frac{1,48}{6,40} = 0,24 + 0,23 = 0,47 \text{ N/mm}$$

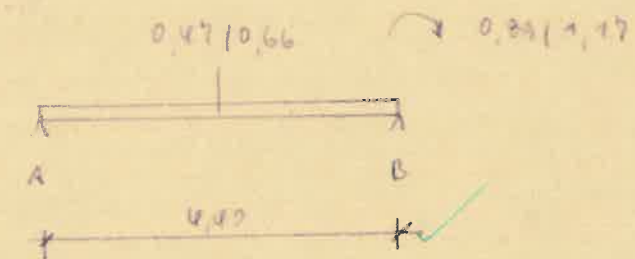
$$C = 0,15 \cdot 3,20 = \frac{1,19}{6,40} = 0,48 - 0,19 = 0,29 \text{ N/mm}$$

$$\text{min C} = 0,11 \cdot 3,20 = \frac{1,38}{6,40} = 0,35 - 0,22 = 0,13 \text{ N/mm}$$

$$M_2 = M_{22x} = \frac{0,29^2}{0,30} = 0,28 \text{ N/mm}$$

$$\text{max } M_{22x} = \frac{0,15 \cdot 6,40^2}{14,2} = \frac{0,67}{0,43} \text{ N/mm}$$

Durchlaufwirkung Pos 22 y - 21:



$$A_y = 0,66 \cdot 2,20 = \frac{0,89}{4,40} = 1,45 - 0,20 = 1,25 \text{ N/mm}$$

$$M = M_{22y} = \frac{1,25^2}{1,32} = 1,18 \text{ N/mm}$$

$$A_y \text{ (nominalzuschlag)} = \frac{1,17}{4,40} = 0,27 \text{ N/mm}$$

$$B_y = 0,27 + 0,19 + 0,63 \cdot 1,65 = 0,27 + 0,19 + 1,04 = 1,50 \text{ N/mm (ohne K } \Rightarrow \text{ Pos 22)}$$

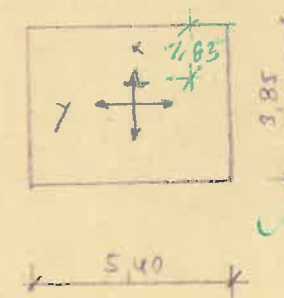
Pos 23:

$$E = \frac{540}{3,85} = 140$$

Nach Bahn geprüft

$$M_x = 1,59 \text{ N/mm}$$

$$M_y = 1,09 \text{ N/mm}$$

Lernnahme wie
in Pos 20.