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3.) U_4

$$\sigma_{max} = \frac{95,5 + 1,43(22,7 + 58,6)}{185,4} = \frac{211700}{185,4} =$$

1140 kg/cm² also überreifend.

4.) U_5

$$\sigma_{max} = \frac{104,5 + 1,43(24,7 + 64,3)}{185,4} = \frac{23177}{185,4} =$$

1250 kg/cm² also überreifend.

b.) Oberrüst

$$1. \delta_1: sk = 313 \text{ cm} \quad S^0 = -50,5t$$

$$S' = -11,9t$$

$$S'' = -31,5t$$

$$\text{Zwingsfunktionswert } i = \sqrt{\frac{J}{F}} = \sqrt{\frac{2470}{100,3}} = 4,97$$

$$\text{Zifflauktionsgrad } \lambda = \frac{L}{i} = \frac{313}{4,97} = 63$$

nach Tabelle 9 der Normen (S. 32).

$$\text{Druckzahl } w = 1,27$$

$$\sigma_k = 2200 \text{ kg/cm}^2$$

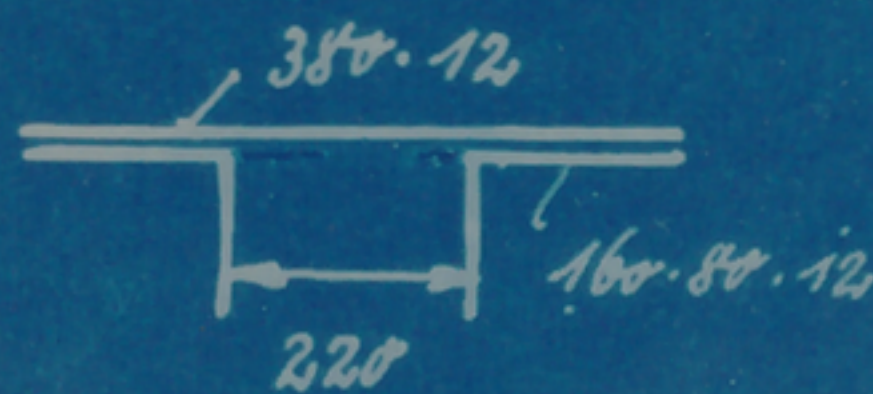
$$\sigma_{max} = w \cdot \frac{S^0 + \varphi \cdot (S' + S'')}{F} =$$

$$1,27 \cdot \frac{50,5 + 1,43(11,9 + 31,5)}{100,3} =$$

$$1,27 \cdot \frac{112,56}{100,3} = \frac{143000}{100,3} = 1420 \text{ kg/cm}^2$$

$$\sigma_{zul.} = 1400 \text{ kg/cm}^2$$

$$w = \frac{\sigma_{zul.}}{\sigma_k} \cdot \psi \quad \psi = \frac{1,27 \cdot 2200}{1420} = 2 \text{ fache Druckfunktionswert.}$$



$$F = 100,3 \text{ cm}^2$$

ohne Hinterrüst.

$$J_x = 2470 \text{ cm}^4$$