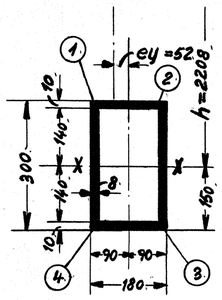
Spændinger i sidedrager ved bagagerumsdør:

Fag 4, højre side søjle III: $M_o = 2085300$ kg cm



$e_y = 41 + 11 = 52$ mm

$X_4 = -10115$ kg $\quad h = 2208$ mm

$X_4 \times h = -10115 \times 220{,}8 = -2232000$ kg cm

$M_x = 2085300 - 2243700 = \underline{-146700 \text{ kg cm}}$

$M_y = 10115 \times 5{,}2 = \underline{52600 \text{ kg cm}}$ (træk ①④)

$W_x = 700 \text{ cm}^3 \quad W_y = 476{,}4 \text{ cm}^3 \quad F = 80{,}8 \text{ cm}^2$

$$\sigma_1 = \frac{146700}{700} + \frac{52600}{476{,}4} + \frac{10115}{80{,}8} = 210 + 110 + 125 = \underline{+445 \text{ kg/cm}^2}$$

$$\sigma_2 = \frac{146700}{700} - \frac{52600}{476{,}4} + \frac{10115}{80{,}8} = 210 - 110 + 125 = \underline{+225 \text{ kg/cm}^2}$$

$$\sigma_3 = -\frac{146700}{700} - \frac{52600}{476{,}4} + \frac{10115}{80{,}8} = -210 - 110 + 125 = \underline{-195 \text{ kg cm}^2}$$

$$\sigma_4 = -\frac{146700}{700} + \frac{52600}{476{,}4} + \frac{10115}{80{,}8} = -210 + 110 + 125 = \underline{15 \text{ kg/cm}^2}$$

Fag 4, venstre side søjle IV:

$M_o = 2586300$ kg cm $\quad X_4 = -10115$ kg $\quad h = 2208$ mm

$X_4 \times h = -10115 \times 220{,}8 = -2232000$ kg cm

$M_x = 2586300 - 2232000 = \underline{354300 \text{ kg cm}}$

$M_y = 10115 \times 5{,}2 = 52600$ kg cm (træk i ①④)

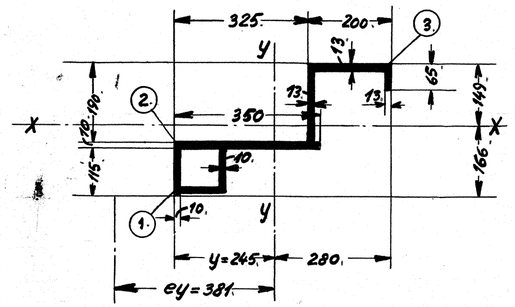
$$\sigma_1 = -\frac{354300}{700} + \frac{52600}{476{,}4} + \frac{10115}{80{,}8} = -507 + 110 + 125 = \underline{-272 \text{ kg cm}^2}$$

$$\sigma_2 = -\frac{354300}{700} - \frac{52600}{476{,}4} + \frac{10115}{80{,}8} = -507 - 110 + 125 = \underline{-492 \text{ kg/cm}^2}$$

$$\sigma_3 = \frac{354300}{700} - \frac{52600}{476{,}4} + \frac{10115}{80{,}8} = +507 - 110 + 125 = \underline{+522 \text{ kg/cm}^2}$$

$$\sigma_4 = \frac{354300}{700} + \frac{52600}{476{,}4} + \frac{10115}{80{,}8} = +507 + 110 + 125 = \underline{+742 \text{ kg/cm}^2}$$

Fag 8-9. Indstigning venstre side:



$M_o = 2263800$ kg cm $\quad X_{8-9} = -8800$ kg $\quad h = 2207$ mm

$X_{8-9} \times h = -8800 \times 220{,}7 = -1946000$ kg

$M_x = 2263800 - 1946000 = \underline{317800 \text{ kg cm}} \quad e_y = 372 + 11 = 383$ mm

$M_y = 8800 \times 38{,}3 = \underline{337000 \text{ kg cm}}$ (træk i ① og ②)

$$\sigma_1 = \frac{317800}{799} + \frac{337000}{1360} + \frac{8800}{123{,}4} = 398 + 248 + 72 = \underline{+718 \text{ kg/cm}^2}$$

$$\sigma_2 = \frac{317800}{3220} + \frac{337000}{1360} + \frac{8800}{123{,}4} = 99 + 248 + 72 = \underline{+419 \text{ kg/cm}^2}$$

$$\sigma_3 = -\frac{317800}{887} - \frac{337000}{1190} + \frac{8800}{123{,}4} = -358 - 283 + 72 = \underline{-569 \text{ kg cm}^2}$$

Indstigning højre side 187 mm fra IX

$M_o = 1701100$ kg cm $\quad X_{8-9} = -8800$ kg $\quad h = 2207$ mm

$X_{8-9} \times h = -8800 \times 220{,}7 = -1946000$ kg cm

$M_x = 1701100 - 1946000 = \underline{-244900 \text{ kg cm}}$

$M_y = 8800 \times 38{,}3 = \underline{337000 \text{ kg cm}}$ (træk i ① og ②)

$$\sigma_1 = \frac{244900}{799} + \frac{337000}{1360} + \frac{8800}{123{,}4}$$

$$\sigma_1 = -307 + 248 + 72 = \underline{+13 \text{ kg/cm}^2}$$

$$\sigma_2 = -\frac{244900}{3220} + \frac{337000}{1360} + \frac{8800}{123{,}4}$$

$$\sigma_2 = -76 + 248 + 72 = \underline{+244 \text{ kg/cm}^2}$$

$$\sigma_3 = \frac{244900}{887} - \frac{337000}{1190} + \frac{8800}{123{,}4}$$

$$\sigma_3 = +276 - 283 + 72 = \underline{+65 \text{ kg/cm}^2}$$

Stk.	Betegnelse	Pos.	Materiale kvalitet	Model nr. eller materiale størrelse	rå / færdig Vægt/stk.
		5			
		4			
		3			
		2			
		1			

Tegn.	E.U. 24/1-50	Rev.	E.U. 30/11-50	Afd.	IV L
Kalk.	B.F. 27/11-50	Norm.		Dato	

Dato	Rettelse	Indeks

Målestok:

FRICHS

Anvendelse: Diesel-el.motorvogn 500/550 HK-Mo

Stykliste nr.: —

Tegningens benævnelse: Beregning af vognside.

Tegningens nummer: 18W – 1.145.

Indeks:

FRICHS nr. 148