

$g_N = 130 \text{ cm}$; $h_F = 90 \text{ cm}$; Schräge 80° ;
 Sparren $12/18$, Abschnitt 80° ; Pfetten $16/16$.
 Ges.: Pfettenhöhe 1, alle Maße für den Schifter 1
 und den schrägen Sparren.

Normalprofil, Schifter 1

$$\alpha = \tan^{-1} \frac{90}{130} = \underline{34,695^\circ}$$

$$\gamma_{sSp} = \tan^{-1} \frac{130}{80} = \underline{58,392^\circ}$$

$$x_S = \frac{12}{\sin \gamma_{sSp}} = \underline{14,09 \text{ cm}}$$

$$a_{Sch1} = 60 + 12 - 14,09 = \underline{57,91 \text{ cm}}$$

$$g_{Sch1} = 57,91 * \tan \gamma_{sSp} = \underline{94,1 \text{ cm}}$$

$$l_{Sch1} = \frac{94,1}{\cos 34,695^\circ} = \underline{114,45 \text{ cm}}$$

$$V_{Sch1} = 12 * \tan \gamma_{sSp} = \underline{19,5 \text{ cm}}$$

$$l_{s1,Sch1} = \frac{35}{\cos 34,695^\circ} = \underline{42,57 \text{ cm}}$$

$$t_{Sp} = \frac{18}{6} = 3, \text{ cm} \quad 0 = 15 \text{ cm}$$

$$O_V = \frac{15}{\cos 34,695^\circ} = \underline{18,24 \text{ cm}}$$

$$H_{Pf1} = 35 * \tan 34,695^\circ - 18,24 = \underline{5,99 \text{ cm}}$$

Schräger Sparren

$$g_{sSp} = \frac{80}{\cos \gamma_{sSp}} = \underline{152,64 \text{ cm}}$$

$$\alpha_{sSp} = \tan^{-1} \frac{90}{152,64} = \underline{30,524^\circ}$$

$$l_{sSp} = \frac{90}{\sin 30,524^\circ} = \underline{177,2 \text{ cm}}$$

Probe:

$$l_{sSp} = \sqrt{130^2 + 80^2 + 90^2} = \underline{177,2 \text{ cm}}$$

$$g_{s1,sSp} = \frac{35}{\sin \gamma_{sSp}} = \underline{41,1 \text{ cm}}$$

$$l_{s1,sSp} = \frac{41,1}{\cos 30,524^\circ} = \underline{47,71 \text{ cm}}$$

$$g_{s2,sSp} = \frac{122}{\sin \gamma_{sSp}} = \underline{143,25 \text{ cm}}$$

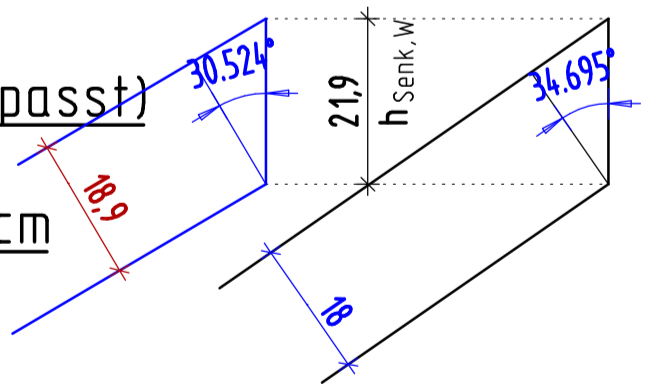
$$l_{s2,sSp} = \frac{143,25}{\cos 30,524^\circ} = \underline{166,3 \text{ cm}}$$

$$V_{sSp} = \frac{12}{\tan \gamma_{sSp}} = \underline{7,38 \text{ cm}}$$

$$ah_{sSp} = 7,38 * \sin 30,524^\circ = \underline{3,75 \text{ cm}}$$

Schräge Sparrenhöhe (angepasst)

$$h_{Senk,W} = \frac{18}{\cos 34,695^\circ} = \underline{21,89 \text{ cm}}$$



$$h_{sSp} = 21,89 * \cos 30,524^\circ = \underline{18,86 \text{ cm}}$$

$$h_{sSp} = 18,86 + 3,75 = \underline{22,61 \text{ cm}}$$

Saumabschnitt schräger Schifter

$$\alpha_{A,U} = 80^\circ - 34,695^\circ = 45,305^\circ$$

h_S frei gewählt, 10 cm

$$x_N = \frac{10}{\tan 45,305^\circ} = 9,89 \text{ cm}$$

$$x_{sSp} = \frac{9,89}{\sin \gamma} = 11,62 \text{ cm}$$

$$\alpha_{Ab,sSp} = \tan^{-1} \frac{10,00}{11,62} + 30,524^\circ = \underline{71,245^\circ}$$

