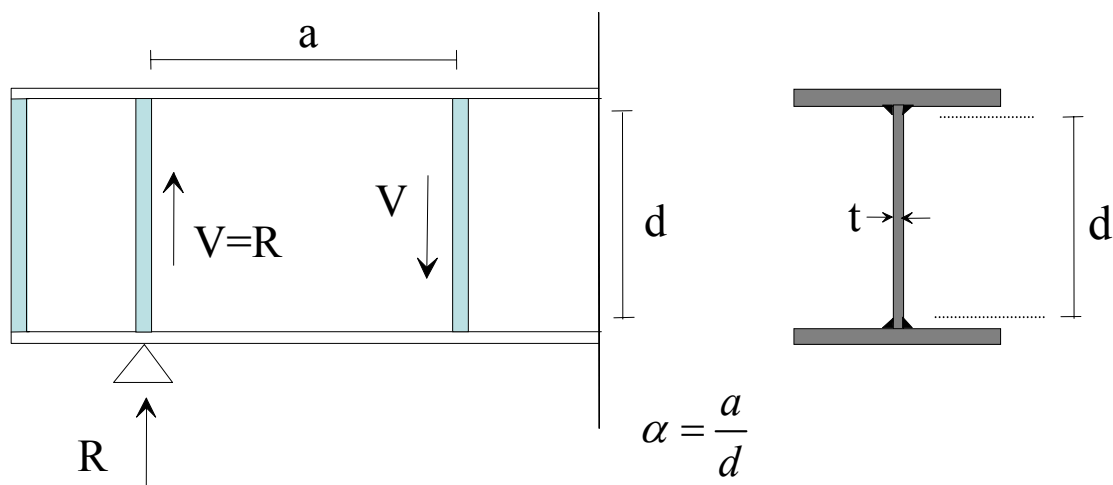


STRIŽNA NOSILNOST STOJIN



Kompaktna stojina (SIST EN 1993-1-1)

$$\frac{d}{t} \leq \frac{72}{\eta} \varepsilon \quad \alpha = \infty$$

ali

$$\frac{d}{t} \leq \frac{31}{\eta} \varepsilon \sqrt{k_{\tau}}, \quad \alpha \neq \infty$$

$$k_{\tau} = 5.34 \text{ brez prečnih ojačitev } (\alpha = \infty)$$

$$k_{\tau} = 4 + \frac{5.34}{\alpha^2} \text{ pri } \alpha < 1.0$$

$$k_{\tau} = 5.34 + \frac{4}{\alpha^2} \text{ pri } \alpha \geq 1.0$$

Vitka stojina (SIST EN 1993-1-5)

$$\frac{d}{t} > \frac{72}{\eta} \varepsilon \quad \alpha = \infty$$

ali

$$\frac{d}{t} > \frac{31}{\eta} \varepsilon \sqrt{k_{\tau}}, \quad \alpha \neq \infty$$

Reducirana strižna nosilnost vitke stojine

$$V_{bw,Rd} = \frac{\chi_w \cdot f_{yw} \cdot d \cdot t}{\sqrt{3} \cdot \gamma_{M1}}, \quad \chi_w = f(\bar{\lambda}_w, \eta)$$

Polna plastična strižna nosilnost

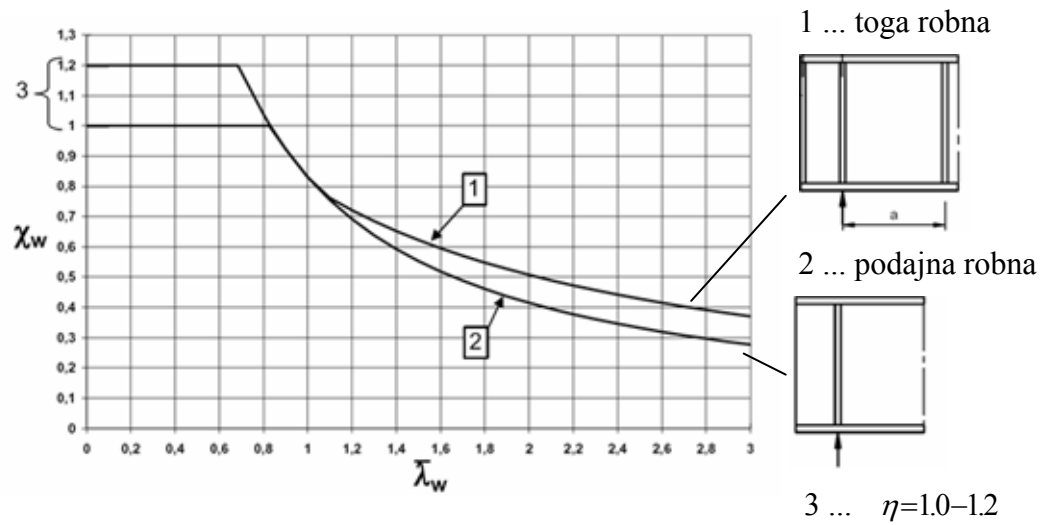
$$V_{pl,Rd} = \frac{\eta \cdot d \cdot t \cdot f_y}{\sqrt{3} \cdot \gamma_{M0}}$$

Pri čemer je η faktor utrjevanja materiala, $\eta = 1.0 - 1.2$.

Priporočene vrednosti so:

za S235 do S460 $\eta = 1.2$

za jekla višje trdnosti $\eta = 1.0$



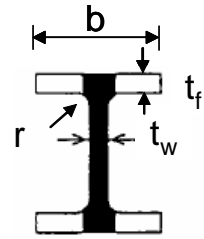
	Toga robna podpora	Podajna robna podpora
$\bar{\lambda}_w < 0,83/\eta$	η	η
$0,83/\eta \leq \bar{\lambda}_w < 1,08$	$0,83/\bar{\lambda}_w$	$0,83/\bar{\lambda}_w$
$\bar{\lambda}_w \geq 1,08$	$1,37/(0,7 + \bar{\lambda}_w)$	$0,83/\bar{\lambda}_w$

χ_w

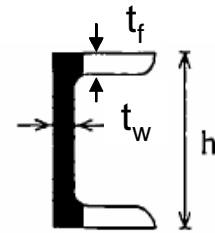
POVRŠINA STRIŽNEGA PREREZA A_V

Vročevaljani I in H profili, obtežba vzporedna stojini

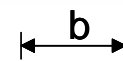
$$A - 2bt_f + (t_w + 2r)t_f \geq \eta h_w t_w$$



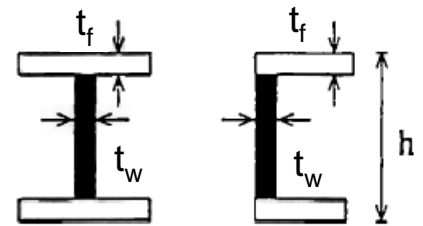
Vročevaljani U-profili, obtežba vzporedna stojini $A - 2bt_f + (t_w + r)t_f$



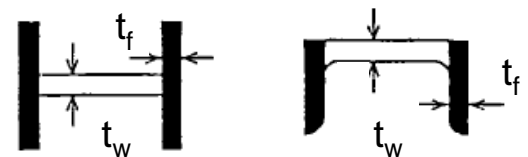
Vročevaljani T-profili, obtežba vzporedna stojini $0,9(A - bt_f)$



Varjeni I, H in škatlasti profili, obtežba vzporedna stojini $\eta \sum (h_w t_w)$



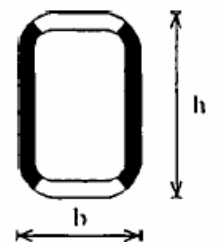
Varjeni I, H, U in škatlasti profili, obtežba vzporedna pasnicam $A - \sum (h_w t_w)$



Valjani pravokotni votli profili z enakomerno debelino stene:

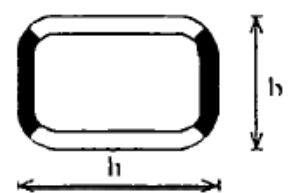
obtežba vzporedna višini profila

$$Ah/(b+h)$$



obtežba vzporedna širini profila

$$Ab/(b+h)$$

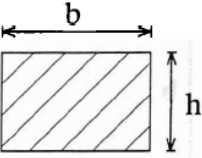
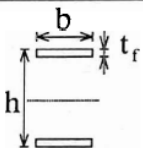
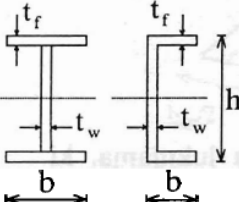
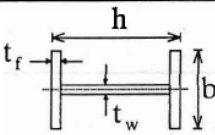
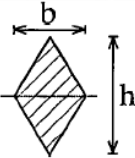
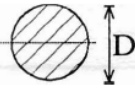
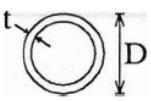


Okrogli votli profili in cevi z enakomerno debelino stene

$$2A/\pi$$



RAČUN GEOMETRIJSKIH KARAKTERISTIK RAZLIČNIH PREREZOV

Prerez	W_{el}	W_{pl}	$\alpha_{pl} = \frac{W_{pl}}{W_{el}}$
	$\frac{bh^2}{6}$	$\frac{bh^2}{4}$	1.5
	$bt_f (h-t_f)$	$bt_f (h-t_f)$	1.0
 * I,H,U prerezi, moćna os	$\frac{[bh^3 - (b-t_w)(h-2t_f)^3]}{6h}$	$bt_f(h-t_f) + \frac{t_w(h-2t_f)^2}{4}$	1.1 do 1.2 (1.15)
 I,H prerez, šibka os	$\frac{b^2t_f}{3} + \frac{t_w^3(h-2t_f)}{6b}$	$\frac{b^2t_f}{2} + \frac{t_w^2(h-2t_f)}{4}$	1.5 do 1.7 (1.67)
	$\frac{bh^3}{24}$	$\frac{bh^3}{12}$	2.0
	$\frac{\pi D^3}{32}$	$\frac{d^3}{6}$	1.7
	$\pi[D^4 - (D-2t)^4] \frac{1}{32D}$ $\pi D^2 t/4$ (pri $t \ll D$)	$D^3 \left[1 - \left[1 - \frac{2t}{D} \right]^3 \right] \frac{1}{6}$ $D^2 t$ (pri $t \ll D$)	pri $t = D/10$ 1.4 pri $t \ll D$ 1.27