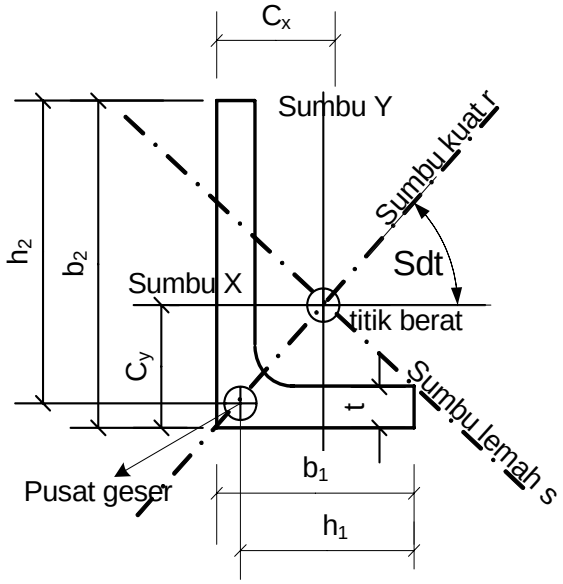
BESARAN PENAMPANG PROFIL SIKU TIDAK SAMA KAKI



Satuan metrik

lihat tabel hal.40

Data Penampang: Profil L40.80.6

Momen Inersia Sumbu Y dan Sumbu X	$Ix := 44.9cm^4$	$Iy := 7.59cm^4$
Momen Inersia Sumbu Kuat dan Lemah	$Ir := 47.6cm^4$	$Is := 4.9cm^4$
Sudut Sumbu Kuat dan Lemah	$Sdt := atan(0.259)$	$Sdt = 14.52\ deg$
Luas Penampang	$A := 6.89cm^2$	
Tinggi total profil	$b2 := 80mm$	
Lebar sayap	$b1 := 40mm$	
Tebal profil	$t := 6mm$	
Jari2 sudut flens-badan	$r := 7mm$	
Koordinat pusat berat dari tepi atas flens	$Cx := 0.88cm$	$Cy := 2.85cm$

Besaran Penampang

$$Sx := \frac{Ix}{b2 - Cy} \qquad Sx = 8.72\,cm^3$$

$$Sy := \frac{Iy}{b1 - Cx} \qquad Sy = 2.43\,cm^3$$

$$rx := \sqrt{\frac{Ix}{A}} \qquad rx = 2.55\,cm$$

$$ry := \sqrt{\frac{Iy}{A}} \qquad ry = 1.05\,cm$$

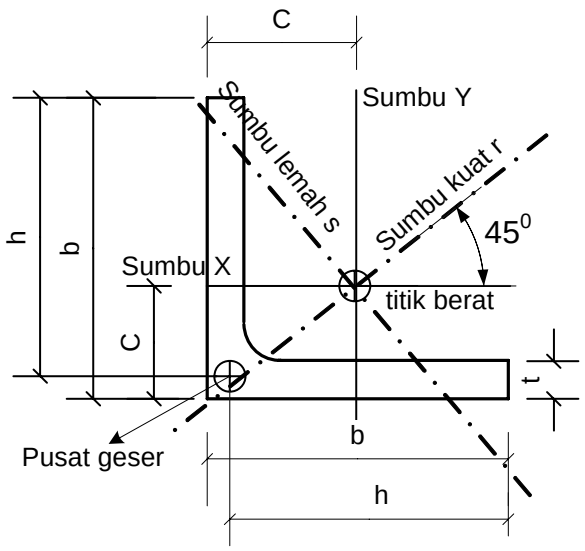
$$h1 := b1 - 0.5 \cdot t \qquad h1 = 37.00\,mm$$

$$h2 := b2 - 0.5 \cdot t \qquad h2 = 77.00\,mm$$

$$Cw := \frac{1}{36}\left(h1^3 \cdot t^3 + h2^3 \cdot t^3\right) \qquad Cw = 3.04\,cm^6$$

$$J := \frac{1}{3}\left(h1 \cdot t^3 + h2 \cdot t^3\right) \qquad J = 0.82\,cm^4$$

BESARAN PENAMPANG PROFIL SIKU SAMA KAKI



Satuan metrik

lihat tabel hal.37

Data Penampang: Profil L50.50.5

Momen Inersia Sumbu Y dan Sumbu X	$Ix := 11cm^4$	$Iy := Ix$
Momen Inersia Sumbu Kuat dan Lemah	$Ir := 17.4cm^4$	$Is := 4.59cm^4$
Sudut Sumbu Kuat dan Lemah	$Sdt := 45deg$	
Luas Penampang	$A := 4.8cm^2$	
Lebar profil	$b := 50mm$	
Tebal profil	$t := 5mm$	
Jari2 sudut flens-badan	$r := 7mm$	
Koordinat pusat berat dari tepi atas flens	$C := 1.4cm$	

Besaran Penampang

$$Sx := \frac{Ix}{b - C} \qquad Sx = 3.06\,cm^3$$

$$Sy := \frac{Iy}{b - C} \qquad Sy = 3.06\,cm^3$$

$$rx := \sqrt{\frac{Ix}{A}} \qquad rx = 1.51\,cm$$

$$ry := \sqrt{\frac{Iy}{A}} \qquad ry = 1.51\,cm$$

$$h := b - 0.5 \cdot t \qquad h = 47.50\,mm$$

$$Cw := \frac{2}{36}\left(h^3 \cdot t^3\right) \qquad Cw = 744249.13\,mm^6$$

$$J := \frac{2}{3}\left(h \cdot t^3\right) \qquad J = 0.40\,cm^4$$