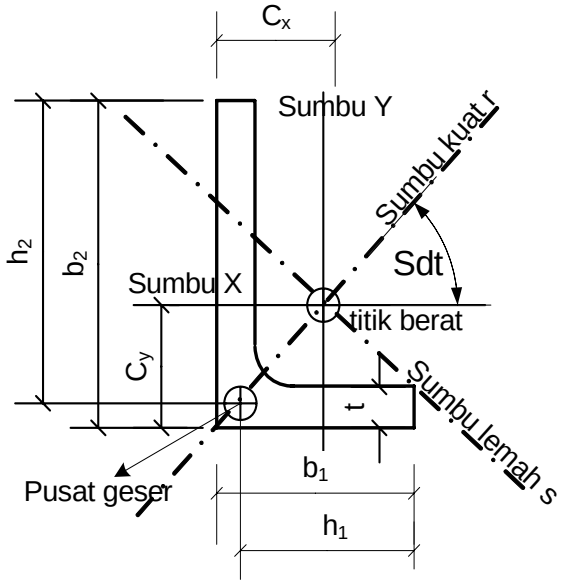
BESARAN PENAMPANG PROFIL SIKU TIDAK SAMA KAKI



Satuan metrik

lihat tabel hal.40

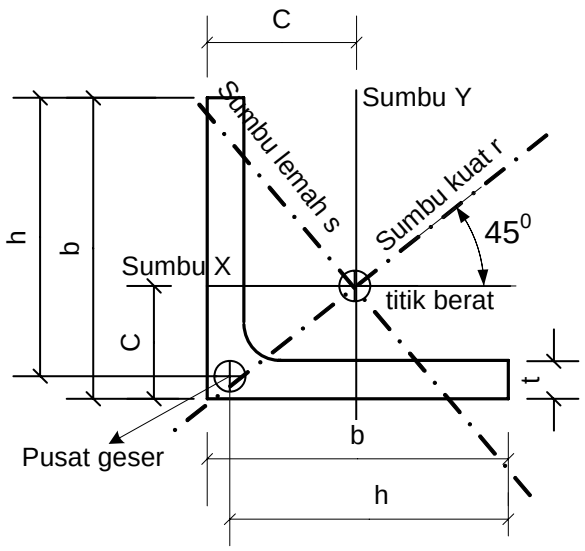
Data Penampang: Profil L40.80.6

Momen Inersia Sumbu Y dan Sumbu X	$Ix := 545cm^4$	$Iy := 93cm^4$
Momen Inersia Sumbu Kuat dan Lemah	$Ir := 578cm^4$	$Is := 59.8cm^4$
Sudut Sumbu Kuat dan Lemah	$Sdt := atan(0.261)$	$Sdt = 14.63\,deg$
Luas Penampang	$A := 23.6cm^2$	
Tinggi total profil	$b2 := 150mm$	
Lebar sayap	$b1 := 75mm$	
Tebal profil	$t := 11mm$	
Jari2 sudut flens-badan	$r := 10.5mm$	
Koordinat pusat berat dari tepi atas flens	$Cx := 1.65cm$	$Cy := 5.37cm$

Besaran Penampang

$Sx := \frac{Ix}{b2 - Cy}$	$Sx = 56593.98\,mm^3$
$Sy := \frac{Iy}{b1 - Cx}$	$Sy = 15897.44\,mm^3$
$rx := \sqrt{\frac{Ix}{A}}$	$rx = 4.81\,cm$
$ry := \sqrt{\frac{Iy}{A}}$	$ry = 1.99\,cm$
$h1 := b1 - 0.5 \cdot t$	$h1 = 69.50\,mm$
$h2 := b2 - 0.5 \cdot t$	$h2 = 144.50\,mm$
$Cw := \frac{1}{36}\left(h1^3 \cdot t^3 + h2^3 \cdot t^3\right)$	$Cw = 123964108.43\,mm^6$
$J := \frac{1}{3}\left(h1 \cdot t^3 + h2 \cdot t^3\right)$	$J = 94944.67\,mm^4$

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

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

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

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

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

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

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

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