

Inertia calculation for C-section

Item	Area mm ²	y-bar mm	A*y mm ³	A*y ² mm ⁴	I ₀ mm ⁴
Part A	1500	5	7500	37500	12500
Part B	2920	156	455520	71061120	20747573
Part C	1000	307	307000	94249000	8333
Total	5420	142.07	770020	165347620	20768407

Total area = 5420 mm²
 N.A. = 142.07 mm above base

$$I_{NA} = \Sigma I_0 + \Sigma A*y^2 - A*y^2$$

$$\begin{aligned}
 I_{NA} &= 186116027 \\
 &\quad - 109396827 \\
 I_{NA} &= \underline{76719200} \text{ mm}^4
 \end{aligned}$$