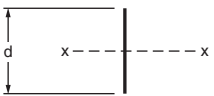
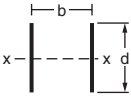
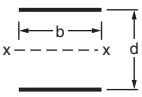

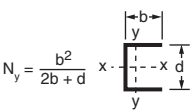
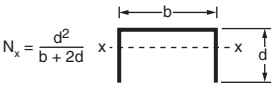
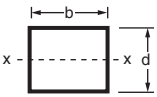
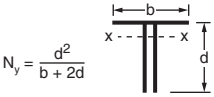
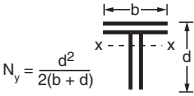
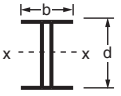



Outline of Welded Joint	Bending (About Horizontal Axis $x - x$), in ²	
b = Width d = Depth	Twisting, in ³	
	$S_w = \frac{d^2}{6}$	$J_w = \frac{d^3}{12}$
	$S_w = \frac{d^2}{3}$	$J_w = \frac{d(3b^2 + d^2)}{6}$
	$S_w = bd$	$J_w = \frac{b^3 + 3bd^2}{6}$
 $N_y = \frac{b^2}{2(b+d)}$ $N_x = \frac{d^2}{2(b+d)}$	$S_w = \frac{4bd + d^2}{6} = \frac{d^2(4b+d)}{6(2b+d)}$ top bottom	$J_w = \frac{(b+d)^4 - 6b^2d^2}{12(b+d)}$
 $N_y = \frac{b^2}{2b+d}$	$S_w = bd + \frac{d^2}{6}$	$J_w = \frac{(2b+d)^3}{12} - \frac{b^2(b+d)^2}{2b+d}$
 $N_x = \frac{d^2}{b+2d}$	$S_w = \frac{2bd + d^2}{3} = \frac{d^2(2b+d)}{3(b+d)}$ top bottom	$J_w = \frac{(b+2d)^3}{12} - \frac{d^2(b+d)^2}{b+2d}$
	$S_w = bd + \frac{d^2}{3}$	$J_w = \frac{(b+d)^3}{6}$
 $N_y = \frac{d^2}{b+2d}$	$S_w = \frac{2bd + d^2}{3} = \frac{d^2(2b+d)}{3(b+d)}$ top bottom	$J_w = \frac{(b+2d)^3}{12} - \frac{d^2(b+d)^2}{b+2d}$
 $N_y = \frac{d^2}{2(b+d)}$	$S_w = \frac{4bd + d^2}{3} = \frac{4bd^2 + d^3}{6b + 3d}$ top bottom	$J_w = \frac{d^3(4b+d)}{6(b+d)} + \frac{b^3}{6}$
	$S_w = bd + \frac{d^2}{3}$	$J_w = \frac{b^3 + 3bd^2 + d^3}{6}$
	$S_w = 2bd + \frac{d^2}{3}$	$J_w = \frac{2b^3 + 6bd^2 + d^3}{6}$