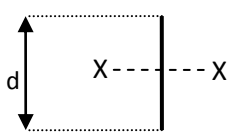
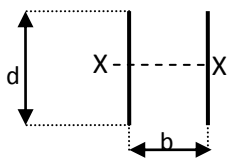
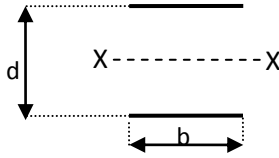
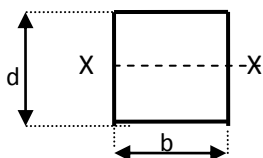
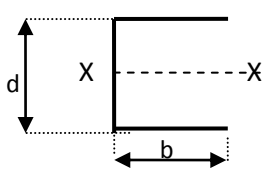
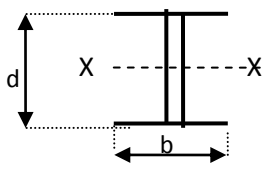
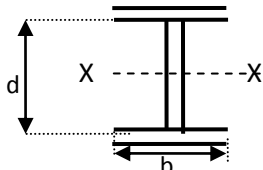
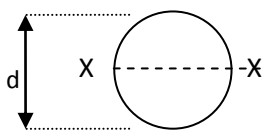


Properties of a Weld Treated as a Line

Outline of Welded Joint b=width d=depth	Section Modulus Bending (about horizontal axis X-X)	Polar Moment of Inertia
	$Z = \frac{d^2}{6}$	$J = \frac{d^3}{12}$
	$Z = \frac{d^2}{3}$	$J = \frac{d(3b^2 + d^2)}{6}$
	$Z = bd$	$J = \frac{b^3 + 3bd^2}{6}$
	$Z = bd + \frac{d^2}{3}$	$J = \frac{(b + d)^3}{6}$
	$Z = bd + \frac{d^2}{6}$	$J = \frac{(2b + d)^3}{12} - \frac{b^2(b + d)^2}{2b + d}$
	$Z = bd + \frac{d^2}{3}$	$J = \frac{b^3 + 3bd^2 + d^3}{6}$
	$Z = 2bd + \frac{d^2}{3}$	$J = \frac{2b^3 + 6bd^2 + d^3}{6}$
	$Z = \frac{\pi d^2}{4}$	$J = \frac{\pi d^3}{4}$