Metal Stamping Formulas

Inch Tons Blanking

$$BE = T \times Mt \times 0.5$$

Inch Tons Drawing

$$DE = T \times Dl \times 0.63$$

Stripping Tonnage

$$P = 1.7 \times L \times Mt$$

Blanking Formula

$$T = \frac{L \times Mt \times Ss}{2000}$$

Blanking Diameter for Drawing

$$BD = \sqrt{d + (4 \times d \times h)}$$

Minimum Draw Diameter

$$MD = BD \times 0.6$$

Press Slide Velocity

$$V = 0.5233 \times SPM \times \sqrt{(Ps \times Ws) - Ws}$$

Inch Tons Energy Capacity

$$ITC = T \times PRP$$

Blank Holder Pressure

$$BHP = 0.20 \times T$$

Tonnage Round Hole

$$T = 3.14 \times d \times Mt \times Ms$$

BD = Blank Diameter
BE = Blanking Energy (Inch Tons)
BHP = Blank Holder Pressure
d = diameter
DE = Draw Energy (Inch Tons)
Dl = Draw length
h = height
ITC = Inch Tons Capacity
L = Length of Cut
MD = Minimum Diameter
Mt = Material Thickness
PRP = Press Stroke Length
Ps = Press Stroke Length
SPM = Strokes Per Minute
Ss = Material Shear Strength
St = Stripping Tonnage
T = Tonnage
V = Press Slide Velocity
Ws = Work Stroke Length