Formulas

1 ft^3 of steel = 490 lb.

1 m^3 of steel = 7 849 kg

Area of circle = $\pi \times \text{radius}^2$

Force = pressure × area

Gear pass frequency = rpm × # teeth

Pythagorean theorem : $a^2 + b^2 = c^2$

$$\text{rpm} = \frac{\text{cutting speed} \times 4}{\text{diameter}}$$

Shims to be added at point X = $G \times \frac{A}{B}$

$$\text{Sling stress} = \left(\frac{\text{length}}{\text{height}} \times \text{weight}\right) \div \text{\# of legs (to a maximum of 3 legs)}$$

Spacing of wire rope clips = 6 × wire rope diameter

Surface speed = rpm × π × diameter

Thermal expansion = $\Delta T \times$ length × coefficient of expansion

Volume of cube = a^3

Volume of cylinder = height × π × radius^2

Wire rope clips = 3 × diameter + 1 (up to and including 7/8 in. diameter)

Wire rope clips = 3 × diameter + 2 (1 in. diameter and larger)

Working load limit of a 6 × 19 wire rope = $\text{diameter}^2 \times 8$