

Gimme Ten (Facts, not to memorize, but to find ...)

And now something completely different: Did you know the meaning of:

Aging	The change in mechanical properties of a metal.
Axial	Along the longitudinal direction.
Brittle Fracture	Type of fracture with little or no plastic deformation.
Centroid	The centre of gravity of an area or volume.
Clamping Force	It is the tensile force resulted from the tightening process of the fastener. It can prevent slippage of the plates being connected and to prevent the bolts from becoming loose. This force is also known as <i>preload</i> .
Cold Working	Plastic deformation at room temperature which increases the strength of metal.
Corrosion	Gradual chemical or electrochemical attack on a metal by atmosphere, moisture, or other agents.
Elastic Limit	The maximum stress that a material will withstand without permanent deformation.
Elongation	The amount of permanent extension at any stage in a process that elongates a body continuously.
Fatigue	The tendency for a metal to break under conditions of repeated loading considerably below the material's ultimate tensile strength.
Flange	The parts of a channel or I-beam at right angles to the central section or web.

Hardening	The process that increases the hardness of metal by suitable treatment, usually involves heating and cooling.
Hydrogen Embrittlement	A condition of low ductility resulting from hydrogen absorption and subsequently developed internal pressure.
Load	A force that acts on a structure or a member.
Plastic Deformation	Permanent distortion of a material under an applied stress.
Stiffness (EI)	Product of modulus of elasticity and moment of inertia
Strain Aging	Aging induced by cold working.
Strain Hardening	An increase in hardness and strength caused by plastic deformation.
Stress	Ratio of load and cross-sectional area.
Stress Corrosion Cracking	Metal failure by cracking under combined action of corrosion and stress.
Torque	A twisting force that induces torsion in a member about its longitudinal axis.
Ultimate Strength	The value obtained by dividing the maximum load observed during tension test by the specimen's cross-sectional area before failure.
Yield Strength	The stress at which a material exhibits a specified limiting deviation from proportionality of stress to strain, i.e. a specified permanent strain.

If you didn't then you ought to go back and read the posted monographs on the webpage: http://www.sigi.ca/engineering/steel_design.html