

Austenitic Stainless Steel

Class of stainless steel alloys containing 11.5 to 26% Chromium, 3.5 to 22% Nickel and up to .25% Carbon. Grades in this group are more widely used than any other stainless steel group. Although most of the grades are Chromium-Nickel 300 series, the class also includes the Chromium-Manganese-Nickel 200 series. All of these alloys are hardenable by cold working only. These grades are usually non-magnetic and are used for pots and pans, kitchen utensils, brewery, tanks, sinks, wheel covers, hose clamps and strapping.

Corrosion

Destruction of metal by chemical or electrochemical reaction with its environment, simply said "eating away of metals".

Corrosion Resistance

The ability of a metal to withstand attack in an environment that is conducive to chemical or electrochemical reaction.

Galvanized Carbon Steel

Cold rolled steel that has been coated with Zinc via hot dipping or electro deposition to prevent rust.

Type 201 Stainless Steel

Type 201 is a chromium-nickel-manganese alloyed stainless steel. In the annealed condition this grade has excellent mechanical properties and strength. Due to its high work hardening rate, it possesses uniform elongation for improved stretchability for severe forming applications such as strapping bands and preformed hose clamps.

Type 304 Stainless Steel

Type 304 is an 18% chromium and 8% nickel alloyed stainless steel. It is the most often grade used in outdoor industrial applications. It offers good corrosion resistance and is weldable.

Type 316 Stainless Steel

Type 316 is a chromium-nickel alloy with the addition of molybdenum. The addition of molybdenum gives this grade superior corrosion resistance which warrants its use near salt water and in petro-chemical facilities. This grade exhibits excellent creep strength at elevated temperatures.

Mechanical Properties

Those properties that reveal the reaction of a metal to an applied stress. Tensile strength, yield strength, elongation, hardness, break strength, and bend ability are mechanical properties.

Tensile Strength

The value obtained by dividing the maximum load observed during tensile testing by the specimen cross sectional area prior to test initiation. Tensile strength is expressed in psi. (pounds per square inch), ksi (1000 pounds per square inch). Simply put, tensile strength is the maximum load a given cross section of material can withstand before breaking apart.

Yield Strength

The stress at which a material exhibits a specified limiting proportionality of stress to strain. Yield strength is specified in psi. (pounds per square inch), ksi (1000 pounds per square inch). Materials stressed beyond their yield strength will take permanent set; the magnitude of set depends upon the stretching incurred beyond the yield strength.

Elongation

The amount of permanent extension or stretching a material will undergo before fracture. The value is expressed as a percentage and is obtained by tensile testing. Elongation is an indication of the materials ductility. The higher the number the better the ductility.

Hardness

Measurement of a material's resistance to deformation.

Break Strength

Break strength is generally the tensile or compressive load required to fracture a sample.

Smooth-Seal

A patented design which results in the inside diameter surface to be almost smooth and free of major distortions. The lock is fitted between two dimple upsets in the band, which results in minimum inside surface protrusions. The end result will be nearly gap-free contact between the hose and the preformed clamp.