



## STAINLESS STEEL DEFINITIONS

### NON-MAGNETIC STAINLESS STEEL

- 303** The basic "18-8" chromium-nickel machining variation of stainless steel that is good for use in automatic machining operations. It resists corrosion to weather exposure, sterilizing solutions, most dyes, most organic and many inorganic chemicals, nitric acid and foods.
- 304** The most widely used of the stainless and heat resisting steels. Offers good corrosion resistance to many organic and inorganic chemicals, acids, dyes and its lack of magnetism makes it highly desirable for instruments. Has very good formability and is easily welded.
- 316** The addition of molybdenum to the "18-8" chromium-nickel stainless steel allows corrosion and pitting resistance as well as higher strength at elevated temperatures than T304. Used for pumps, valves, textile and chemical equipment, pulp & paper and marine applications.
- 316L** Extra low carbon variation of T316 to avoid carbide precipitation due to welding. Same excellent corrosion resistance of T316.
- 317/317L** Available in plate with increased chromium, nickel, and molybdenum contents to withstand higher corrosive and temperature applications.
- 321** The addition of titanium to the "18-8" chromium-nickel stainless steel allows this to overcome the danger of corrosion at extreme temperatures. T321 is non-magnetic in the annealed state and does not harden with heat treatment.
- 347** The addition of columbium and tantalum to the "18-8" chromium-nickel stainless steel allows this to overcome the danger of intergranular corrosion at extreme temperatures. T347 is non-magnetic in the annealed state and also does not harden with heat treatment.

*For additional information about the applications of these grades of non-magnetic stainless such as T317 and T347 etc., please ask our knowledgeable inside sales department.*

### MAGNETIC STAINLESS STEEL

- 410** The basic chromium grade of stainless steel that combines good corrosion resistance to natural food acids, basic salts, alkalis, fresh water and most atmospheres. With its ability to develop hardness and mechanical properties by conventional heat treating methods, T410 is good for applications such as valve parts, cutlery, machine parts in the food industry, pistons, screws, pump rods, etc.
- 416** The free-machining variation of T410 which has been modified by the addition of phosphorus and sulphur. T416 can be turned, threaded, formed or drilled and maximum corrosion resistance is obtained by hardening and polishing.
- 440C** A high-carbon chromium steel that can attain the highest hardness and mechanical properties of any standard stainless grade. In the hardened and stress relieved condition, T440 C has maximum hardness together with high strength and corrosion resistance from fresh water steam, gasoline, crude oil, etc.
- 17-4** A chromium-nickel grade of stainless steel that may be hardened by a simple low temperature heat treatment which eliminates scaling and prevents excessive distortion. It combines the high strength and hardness with corrosion resistance similar to T304, and its excellent machining and processing properties makes 17-4 useful in a variety of applications.
- TYPE 630**

Charlotte, NC

[www.carolinaspecialtymetals.com](http://www.carolinaspecialtymetals.com)

Georgetown, SC

Toll free: 800-467-5888

Toll free: 866-304-0640

Ph: 704-588-5888 Fx: 704-588-0982

Ph: 843-546-2800 Fx: 843-546-2720