

Stainless Steel Snapshot: Austenitic Steel

Did you know there are more than 100 grades of stainless steel? Stainless steel is made by adding varying amounts of chromium (Cr) and other alloying elements such as nickel (Ni) to iron and carbon to create a corrosion-resistant product. There are five primary grades of stainless steel: austenitic, ferritic, martensitic, duplex, and precipitation hardening.

Austenitic stainless steels, named after the UK metallurgist Sir W. C. Roberts-Austen, contain high amounts of chromium and nickel and are the most corrosion resistant, ductile, and weldable type of stainless steel. Here are some facts about austenitic stainless steels:



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Austenitic steel has excellent corrosion and heat resistance.



2

The 200 Series are commonly used in washing machine tubs and structural applications.



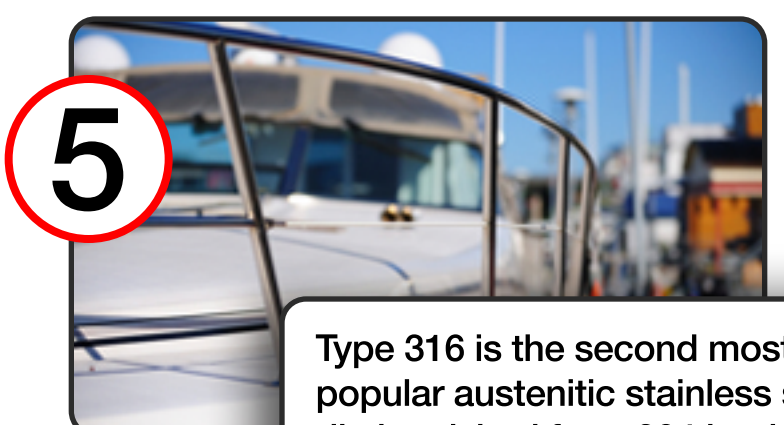
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The 300 Series are typically used in pots and pans, food equipment, chemical equipment, and architectural applications.



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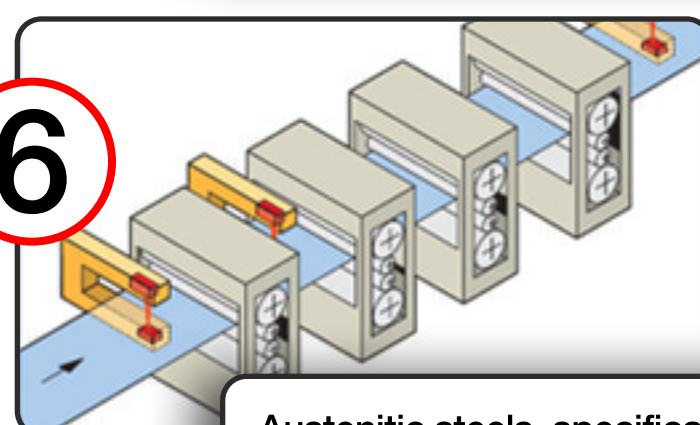
Type 304, the most widely used austenitic steel has applications in the industrial, architectural, and transportation fields. This grade is the material of choice in drawn stainless parts such as sinks, hollow-ware and saucepans.



5

Type 316 is the second most popular austenitic stainless steel, distinguished from 304 by the addition of molybdenum (Mo) for increased corrosion resistance and strength.

It's used to make surgical implants and food processing equipment. It's also used in marine environments because it resists pitting corrosion better than other grades of steel.



6

Austenitic steels, specifically grade 304, are easy to machine but must be measured to precise thickness specifications by processing the material through a cold rolling mill.



Get reliable elemental analysis for accurate steel grade identification and metal alloy verification for manufacturing quality assurance with a handheld X-ray fluorescence instrument.