SENTRY™ MIRROR

"The vandal resistant mirror that lasts"

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In metallurgy, stainless steel, also known as inox steel, is a steel alloy, with a minimum of 10.5% chromium content by mass and a maximum of 1.2% carbon by mass.

Stainless steels are most notable for their corrosion resistance, which increases with increasing chromium content. Additions of molybdenum increases corrosion resistance. There are numerous grades of stainless steel with varying chromium and molybdenum contents to suit the environment the alloy must endure. Resistance to corrosion and staining, low maintenance, and familiar luster make stainless steel an ideal material for many applications where both the strength of steel and corrosion resistance are required.

There are four main families, two of which are mentioned here.

Austenitic stainless steel is the largest family of stainless steels, making up about two-thirds of all stainless steel production. They can be further subdivided into two sub-groups, 200 series and 300 series:

200 Series are chromium-manganese-nickel alloys, they possess approximately 50% higher yield strength than 300 series stainless steels. Decreasing nickel content and increasing manganese results in weak corrosion resistance.

300 Series are chromium-nickel alloys, 300 series is the largest group and the most widely used. Providing greater resistance to acids and to localized corrosion.

Ferritic stainless steels contain between 10.5% and 27% chromium with very little or no nickel .They are magnetic like carbon steel. As they do not contain Nickel, they cost less than austenitic grades and are now present in a wide range of industries. 400 Series stainless steels are used throughout many industries.

Appearance is identical: the only way to tell 400 from type 300 is with a magnet. 400 Series is magnetic; 300 Series is not.

An object fabricated in 300 type stainless steel can be expected to last for the lifetime of the building and will require little or no special maintenance due to unsightly and weakening corrosion.