

Description

Alloy 825 is a nickel-iron-chromium alloy with additions of molybdenum, copper and titanium. This nickel steel alloy's chemical composition is designed to provide exceptional resistance to many corrosive environments. It is similar to Alloy 800, but has improved resistance to aqueous corrosion. It has excellent resistance to both reducing and oxidizing acids, to stress-corrosion cracking, and to localized attack such as pitting and crevice corrosion. Alloy 825 is especially resistant to sulfuric and phosphoric acids.

Product Capabilities

Form Name	Size Range	Schedules	Specifications
Welded Pipe	1/2"-36"	10S, 40S, 80S	ASTM B705 / ASME B705
Seamless Pipe	1/2"-36"	40S, 80S, 120, 160, XXH	ASTM B423 / ASME SB423
Buttweld Fittings	1/2"-36"	40S, 80S, 120, 160	ASTM B366 / ASME SB366
Flanges	1/2"-36"	150#, 300#	ASTM B564 / ASME SB564
Pressure Fittings	1/2"-2"	3000# THRD/SW	ASTM B564 / ASME SB564 ASTM B366 / ASME SB366

Limiting Chemical Composition %

C	Cr	Fe	Ni	Al	Ti	Cu	Mo
MAX 0.05	19.25-23.50	MAX 0.50	38.0-46.0	MAX 0.2	0.6-1.2	1.5-3.0	MAX 2.50-3.50

Typical Industrial Applications

- Chemical processing
- Pollution control
- Oil and gas well piping
- Nuclear fuel reprocessing
- Acid production

Tensile Requirements

Tensile Strength ksi (min.)	Yield Strength ksi (min.)
85	35