

Alloy 825

(UNS N08825)

Availability:

Seamless Pipe: 1/2" - 8"
Welded Pipe: 8" - 12"
Butt-Weld Fittings: 1/2" - 8"
Flanges: 1/2" - 8"
Bar: 1" - 6"

Specifications:

ASTM B443, B705, B366, B425
B564
ASME SB443, SB705, SB366
SB925, SB564

Description:

Alloy 825 is a nickel-iron-chromium alloy with additions of molybdenum, copper and titanium. The alloy's chemical composition provides exceptional resistance to many corrosive environments. The nickel content is sufficient for resistance to chloride-ion stress corrosion cracking. The nickel, combined with molybdenum and copper, also gives outstanding resistance to reducing environments, such as those containing sulfuric and phosphoric acid. The molybdenum also aids resistance to pitting and crevice corrosion.

Typical Applications:

- Components for heating coils, tanks, crates
- Fuel element dissolvers (Sulfuric & nitric acids, caustic hydroxide)
- Sea water cooled heat exchangers; offshore product piping system tubes and components
- Pipelines carrying wet sulphur dioxide gas & pulp digesters in the paper making process
- Heat exchangers, evaporators, scrubbers

Tensile Requirements:

Tensile Strength Yield Strength
(KSI) = 85 (KSI) = 35

KSI can be converted to MPA (Megapascals) by multiplying by 6.895.

Chemical Composition %

C	Cr	Fe	Ni	Al	Ti	Cu	Mo	Si	S
MAX		MAX		MAX			MAX	MAX	MAX
0.05	19.5 - 23.5	22.0	38.0 - 46.0	0.2	0.6 - 1.2	1.5 - 3.0	2.5 - 3.5	0.50	0.03

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