

INCONEL® nickel-chromium alloy 625 (UNS N06625/W.Nr. 2.4856) is used for its high strength, excellent fabricability (including joining), and outstanding corrosion resistance. Service temperatures range from cryogenic to 1800°F (982°C). Strength of INCONEL alloy 625 is derived from the stiffening effect of molybdenum and niobium on its nickel-chromium matrix; thus precipitation-hardening treatments are not required. This combination of elements also is responsible for superior resistance to a wide range of corrosive environments of unusual severity as well as to high-temperature effects such as oxidation and carburization.

FEATURES

- Excellent mechanical properties at both extremely low and extremely high temperatures
- Outstanding resistance to pitting, crevice corrosion and intercrystalline corrosion
- Almost complete freedom from chloride induced stress corrosion cracking
- High resistance to oxidation at elevated temperatures up to 1050C
- Good resistance to acids, such as nitric, phosphoric, sulfuric and hydrochloric, as well as to alkalis makes possible the construction of thin structural parts of high heat transfer.

APPLICATIONS

- Components where exposure to sea water and high mechanical stresses are required
- Oil and gas production where hydrogen sulfide and elementary sulfur exist at temperature in excess of 150°C
- Components exposed to flue gas or in flue gas desulfurization plants.
- Flare stacks on offshore oil platforms
- Hydrocarbon processing from tar-sand and oil-shale recovery projects

TECHNICAL INFORMATION

Chemistry

El. Químico		% Máx.
C	C Carbon	0.10
Mn	Manganese	0.50
P	Phosphorus	0.015
S	Sulphur	0.015
Si	Silicon	0.50
Ni	Nickel	58.0
Cr	Chromium	20.0-23.0
Mo	Molibdenum	8.0-10.0
Fe	Iron	5.0
Al	Aluminium	0.40
Nb+Ta	Niobium+Tantalum	3.15-4.15
Co	Cobalt	1.0
Ti	Titanium	0.40

Mechanical properties according standard

Norm ASTM	Cond.	Rm mín.	Rp 0,2% mín.	E4d mín.%	Conditions info
B-443	a.1	120 (827)	60 (414)	30	a= Grade 1: Annealed 1600°F (871°C) min. b= Grade 2: Annealed 2000°F (1093°C) min., with or without subsequent stabilization anneal at 1800°F (982°C) min to increase resistance to sensitization. 1= Cold rolled plate and bar 2= Hot rolled plate up to 0.375! (9.5 mm) incl. 3= Cold rolled plate up to 0.375" (9.5 mm) incl. 4= Hot & cold rolled plate and bar *= Diám. or distance between parallel surfaces up to 4" (102 mm) incl. **= Diám. or distance between parallel surfaces >4" (102 mm) y up to 10" (254 mm) incl.
	a.2	110 (758)	55 (379)	30	
	a.3	110 (758)	55 (379)	30	
	b.4	100 (690)	40 (276)	30	
B-444	a	120 (827)	60 (414)	30	
	b	100 (690)	40 (276)	30	
B-446	a*	120 (827)	60 (414)	30	
	b	100 (690)	40 (276)	30	
B-564	a*	98 (680)	39 (270)	30	
	a**	84 (580)	39 (270)	15	
B-704	a	120 (827)	60 (414)	30	
	b	100 (690)	40 (276)	30	
B-705	a	120 (827)	60 (414)	30	
	b	100 (690)	40 (276)	30	

PRODUCTS



ROUND BAR
Diam. 10 to 400 mm
ASTM B-446



DIN / ASA FLANGES
1/2" to 24" 150lbs - 3000lbs
ASTM B-443



SEAMLESS PIPE
1/2" to 8" SCH10 to SCH80S
ASTM B-444 / B-704 / B-705



PLATE - FLAT PRODUCTS
Thickness 0.5 to 40 mm
ASTM B-564



WELDED PIPE
Diam. 10 to 400 mm
ASTM B-444 / B-704 / B-705



BW, SW, High pressure FITTINGS
1/2" to 24" SCH10 TO SCH80S
ASTM B-366

