ALLOY 625
UNS N06625

C	Cr	Fe	Ni	Al	Ti	Co + TA
MAX		MAX	MIN	MAX	MAX	
0.10	20.0-23.0	.5.0	58.0	0.40	0.40	3.15-4.15

CHEMICAL COMPOSITION %

DESCRIPTION

Alloy 625 is a Nickel-Chromium alloy used for its high strength, excellent fabricability and outstanding corrosion resistance. Service temperatures range from cryogenic to 1800° F. Alloy 625 strength is derived from the stiffening effect of molybdenum and columbium 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.

DESIGN FEATURES

- Outstanding resistance to pitting, crevice corrosion, impingement corrosion and intergranular attack.
- Almost complete freedom from Chloride-induced stress corrosion cracking.
- Good resistance to mineral acids, such as nitric, phosphoric, sulphuric and hydrochloric acids.
- Good resistance to alkalis and organic acids.
- Good mechanical properties.

AVAILABILITY		SPECS
WELDED PIPE	1/2" - 8"	B444, B705
BUTT-WELD FITTINGS	1/2" - 8"	B366
FLANGES	1/2" - 8"	B444, B564, B16.5
BAR	1" - 4 1/2"	B446, B564
FORGINGS		B564

TYPICAL APPLICATIONS

Used for structures in contact with seawater and subject to high mechanical stresses

Flue gas scrubbers components

Chimney linings

Superphosphoric acid production equipment

Sour gas production tubes

Offshore industry, marine equipment

High tensile, creep, rupture strength, outstanding fatigue and thermal-fatigue strength; oxidation resistance; and excellent weldability and braze-ability make it a good choice in the aerospace industry

TENSILE REQ	
Tensile Strength	(KSI) 120
Yield Strength	(KSI) 60

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