



ALLOY 400

UNS N04400



C	CU	MN	NI	S	SI	FE
MAX		MAX	MIN	MAX	MAX	MAX
0.3	28.0 - 34.0	2.0	63.0	0.024	0.50	2.5

CHEMICAL COMPOSITION %

DESCRIPTION

Alloy 400 is used for its excellent combination of corrosion resistance, strength, ductility and weldability. The corrosion resistance in seawater is especially good under high velocity conditions. Alloy 400 also is generally not susceptible to stress corrosion cracking.

DESIGN FEATURES

- Outstanding resistance to neutral and alkaline salt.
- One of few metallic materials which can be used in contact with fluorine, hydrofluoric acid, hydrogen fluoride and their derivatives.
- High resistance to caustic alkalis.
- Can be used in contact with dilute solutions of mineral acids such as sulfuric and hydrochloric, particularly if they are non-aerated.
- Resistance to chloride induced stress corrosion cracking.
- Good mechanical properties from sub-zero temperatures up to 1020°F

TYPICAL APPLICATIONS

- Feed-water and steam generator tubing in power plants
- Brine heaters and evaporator bodies in salt plant
- Sulfuric and hydrofluoric acid alkylation plant
- Industrial heat exchangers
- Cladding for crude oil distillation columns
- Splash-zone sheathing in offshore structures
- Propeller and pump shafts for seawater service
- Plant for uranium refining and isotope separation in the production of nuclear fuel

AVAILABILITY

SPECS

FLANGES	1/2" - 8"	B160, B564, B16.5
FORGINGS		B564
TUBING	1/4", 3/8", 1/2"	B165

TENSILE REQUIREMENTS

TENSILE STRENGTH	(KSI) 70 min
YIELD STRENGTH 5" AND UNDER OVER 5"	(KSI) 28 (KSI) 25
ELONGATION	35% MIN.

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

- Pumps and valves used in the manufacture of chlorinated hydrocarbons
- Monoethanolamine (MEA) reboiler tubes