

ALLOY 400 - UNS N04400

MATERIAL DESCRIPTION

Alloy 400 is a Nickel alloy, primarily composed of nickel and copper, with small amounts of iron, manganese, carbon, and silicon. Resistant to corrosion from many aggressive agents, including rapidly flowing seawater. Alloy 400 can be fabricated readily by hot- and cold-working, machining, and welding. It is commonly used in marine, aerospace, oil production & refining applications.

APPLICABLE SPECIFICATIONS

API 6A 20 ANNEX M

ASTM B164, ASME SB164

ASTM B564, ASME SB564 (Chemistry & Mechanicals Only)

BS 3076-89 NA13 (Chemistry Only)

QQ-N-281 (Except 4.4.5) Class A Form 1

ANSI/NACE MR0175/ISO15156-3, ANSI/NACE MR0103

PED 97/23/EC

HEAT TREATMENT

Intoco bar stock is in the Stress Relieved condition

CHEMICAL ANALYSIS RANGE

ELEMENT	WEIGHT %	ELEMENT	WEIGHT %
Ni	63.0 Min	Cu	28.0 – 34.0
Fe	2.5 Min	Mn	2.0 Max
C	0.2 Max	Si	0.5 Max
S	0.015 Max	Co	2.0 Max
Al	0.5 Max	P	0.02 Max
Pb	0.006 Max	Sn	0.006 Max
Zn	0.02 Max	Ni+Co	63.0 – 70.0

TYPICAL MECHANICAL PROPERTIES (Min unless stated)

0.2% Yield ksi (MPa)	UTS ksi (MPa)	Ductility		Hardness HBW (HRC)
		%El 4D	%RA	
40 (275)	80 (551)	30	-	332 (35) Max