

925-API NICKEL ALLOY - UNS N09925

MATERIAL DESCRIPTION

Alloy 925 (UNS N09925) is an age hardenable, Ni-base alloy with excellent strength, good ductility, good weldability, good formability, and excellent cryogenic & corrosion properties. Produced by vacuum induction melting followed by consumable remelting (vacuum arc or electroslag). Typical applications are valves, hangers, multi down hole & surface applications.

APPLICABLE SPECIFICATIONS

API 6ACRA, API 6A PSL 4
 ANSI/NACE MR0175/IS015156-3, ANSI/NACE MR0103
 FMC M40223, FMC M41102,
 WN-302
 ES-MA-67-2 ,
 BMS N235
 CMS-Z1KGK, 100679281.

HEAT TREATMENT

Intoco bar stock is in the Solution Annealed & Age Hardened condition

CHEMICAL ANALYSIS RANGE

ELEMENT	WEIGHT %	ELEMENT	WEIGHT %
C	0.025 max	Ti	1.90 – 2.40
Mn	1.00 max	Fe	22.0 min
P	0.020 max	Al	0.10 - 0.50
S	0.003 max	Mo	2.50 - 3.50
Si	0.35 max	Cu	0.23 max.
Ni	42.0 - 46.0	Nb	0.08 – 0.50
Cr	19.5 - 22.5		

TYPICAL MECHANICAL PROPERTIES (Min unless stated)

0.2% Yield ksi (MPa)	UTS ksi (MPa)	Ductility		Full size (10mm x 10mm) Charpy V Notch @ -76°F Ft-lbs (J)	Hardness HBW (HRC)
		%El 4D	%RA		
110 – 140 (758 – 965)	140 (965)	18	<u>(≤ 10" dia)</u> 25	35 (47) avg	258 - 352 (26- 38)
			<u>(>10" dia)</u> 20		

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