

A286/660 NICKEL ALLOY - UNS S66286

MATERIAL DESCRIPTION

Is an austenitic precipitation-hardenable stainless steel that is generally configured for long-term and high-temperature use, with a service temperature reaching up to 700 °C.

It is considered as an iron-based superalloy due to its high strength and resistance to corrosion at high temperatures.

Used in aviation and power engineering for heavy-duty rotors, gas turbine blades, steam turbines, pressure equipment parts and reactors, jet engines and rockets, exhaust systems. Also used in cryogenics.

APPLICABLE SPECIFICATIONS

ASTM A453/A453M GRADE A & D

ASTM A638/A638M GRADE 660 TYPE 1

API 6A – PSL 3

Wr No 1.4980, UNS S66286

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

M36101, M36100

PED 2014/68/EU

HEAT TREATMENT

Intoco bar stock is in the Solution Annealed & Aged condition

CHEMICAL ANALYSIS RANGE

ELEMENT	WEIGHT %	ELEMENT	WEIGHT %
C	0.08 max	Ti	1.9 – 2.35
Mn	2.00 max	Fe	Balance
S	0.025 max	Al	0.35 max
Si	1.0 max	Mo	1.00 - 1.50
Ni	24.0 - 27.0	V	0.10- 0.50
Cr	13.5 - 16.0	B	0.001 – 0.010

TYPICAL MECHANICAL PROPERTIES (Min unless stated)

ASTM A453 Grade	0.2% Yield ksi (MPa)	UTS ksi (MPa)	Ductility		Stress Rupture @ 1200°F (650°C)			Hardness HBW (HRC)
			%El 4D	%RA	Stress ksi (Mpa)	Time to Rupture (h)	Elongation (%)	
A	85 (585)	130 (895)	15	18	56 (385)	100	5	248–341 (24–37)
D	<u>≤2" dia</u> 105 (725)	<u>≤2" dia</u> 130 (895)	15	18	-	-	-	248-321 (24-35)
	<u>>2" dia</u> 95 (655)	<u>>2" dia</u> 120 (825)						

The data contained in this datasheet is for informational purposes only.

Information may be revised at any time without prior notice.

Intoco Special Steels makes no representation or warranty of any kind (express or implied) and assumes no liability with respect to the accuracy or completeness of the information contained herein.

Although the data is believed to be representative of the product, the actual

characteristics or performance of the product may vary from what is shown in this publication.

Nothing contained in this publication should be construed as guaranteeing the product for a particular use or applications

CONTACT DETAILS

Email: sales@intoco.co.uk

Telephone: 01452 712519