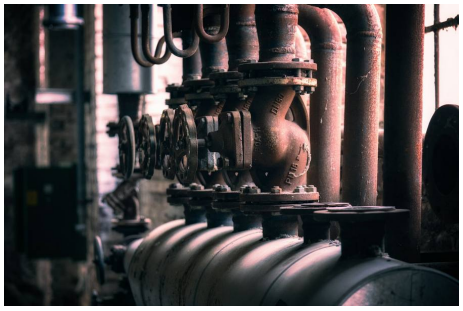
NICKEL ALLOYS

Advanced Materials. Engineered for Performance.

Alloy 800HT (Incoloy 800HT)



Nickel Alloys | UNS: N08811 | EN: 1.4959 / X8NiCrAlTi32-21 | Trade name: Incoloy 800HT

The creep-optimised version of Alloy 800. Controlled carbon plus a combined aluminium and titanium window of 0.85 - 1.20% gives far better creep rupture strength above 600 C, so 800HT is the grade for the hottest reformer and pigtail service rather than plain 800.

Stock status: Mill indent - Typical lead time: 4 - 8 weeks mill indent

Key features

- Creep rupture strength qualified for service above 600 C
- Controlled Al + Ti and grain size for long term stability
- Direct upgrade from Alloy 800 / 800H in reformer service
- Available as seamless pipe, BA finish tube and plate

Available forms & sizes

Form	Size range
Seamless Pipes & Tubes	1/2" - 16" NB, SCH 10S - SCH 160, seamless
Seamless Pipes & Tubes	6 - 88.9 mm OD tube, BA / bright annealed finish
Plates	3 - 50 mm thk, hot rolled and solution annealed
Round Bars	10 - 300 mm dia
Fittings	1/2" - 24" butt weld fittings and flanges

Chemical composition (%)

Element	Min	Max
Ni	30.0	35.0
Cr	19.0	23.0
Fe	39.5	-
C	0.06	0.10
Al + Ti	0.85	1.20

Mechanical properties

Property	Value	Unit

Property	Value	Unit
Yield Strength (0.2%)	170 min	MPa
Tensile Strength	450 min	MPa
Elongation	30 min	%
Condition	Solution annealed, grain size controlled	-

Physical properties

Property	Value	Unit
Density	7.94	g/cm3
Max Service Temperature	1100 (short term)	C

Standards

ASTM B409 / B407 / B408, ASME SB-409 / SB-407, ASME Code Case service above 600 C, EN 10204 3.1

Equivalent grades

N08811, 1.4959, Incoloy 800HT, Alloy 800H / 800HT

Industries served

Petrochemical, Refining, Fertiliser, Power Generation

Typical applications

- Steam reformer outlet pigtails and headers
- Ethylene cracking coils
- Radiant tubes and furnace hardware
- Hydrogen plant transfer lines

Live datasheet