PRODUCT DATASHEET

ALLOY 800

Grade

Alloy 800, UNS NO8800, WN 1.4876, ASTM B408

Type

Nickel-iron-chromium alloy. Conditions: hot-rolled, annealed. Extruded. Can also be supplied cold drawn.

Overview

Alloy 800, 800H, and 800HT are nickel-iron-chromium alloys with good strength and excellent resistance to oxidation and carburization in high-temperature exposure. These nickel steel alloys are identical except for the higher level of carbon in alloy 800H/HT and the addition of up to 1.20 percent aluminium and titanium in Alloy 800HT. Alloy 800 was the first of these alloys and it was slightly modified into Alloy 800H. The nickel content makes the alloys highly

resistant to both carburisation and to embrittlement from precipitation of sigma phase. 800H+800T the grain size is controlled for improved creep strength properties.

Composition	
Element	**Weight%**
Carbon	0.1 max
Silicon	1 max
Manganese	1.5 max
Sulphur	0.015 max
Chromium	19 - 23
Nickel	30 - 35
Aluminium	0.15 - 0.6
Titanium	0.15 - 0.6
Manganese	1.5 max
Copper	0.75 max

Application

Furnace components, Steam / hydrocarbon reforming components, Petrochemical furnace cracker tubes, Electrical heating elements, Heat exchangers, Power generation, Pressure Vessels, Hydrocarbon plants

Mechanical Propeties

Typical Properties

Property	Values
0.2% Yeild Strength	22 KSI min (152 MPA min)
Ultimate Tensile Strength	75 KSI min (517 MPA min)

Notes: Three alloys are available - Alloy 800, 800H & 800HT