HEAT-RESISTING STEELS

Application Segments

Oil & Gas / CPI

Available Product Variants

Long Products

Product Description

BÖHLER H500RB (Alloy 800, 800HT) is an austenitic, high-temperature iron-nickel-chromium alloy with good creep rupture strength at temperatures above 600°C. This material also has good resistance in oxidising, carburising and sticking atmospheres with good workability.
With a nickel content of more than 30%, this material has little tendency to precipitate sigma phase. In addition to the good mechanical long-term properties, BÖHLER H500RB is resistant to oxidation and carburisation up to approx. 1000°C. In certain temperature ranges, it shows resistance to sulphurous media.
The original Alloy 800 is increasingly being replaced in the market by the variants 800H and HT. These can be solution annealed and therefore have improved creep rupture properties at high temperatures.
The material BÖHLER H500RB fulfils the properties of Alloy 800 as well as Alloy 800H and 800HT by controlled contents of carbon, aluminium, titanium, silicon and manganese as well as controlled sum content of Al + Ti. In the case of Alloy 800H and HT, special solution annealing significantly increases the creep rupture strength at temperatures above 600°C.

Process Melting

Airmelted

Applications

- Chemical industry - general
- Oil & Gas / CPI
- Oil & Gas, CPI & Renewables
- Heat Exchanger
- Burner Nozzles
- Other Oil and Gas + CPI components
- High temperature components
- Fasteners, Bolts, Nuts
- Tubular Products, Flanges, Fittings

Technical data

Material designation	
Alloy 800	Market grade
Alloy 800H	
Alloy 800HT	
1.4876	SEL
1.4959	
X10NiCrAlTi32-21	EN
X8NiCrAlTi32-21	
N08800	UNS
N08810	
N08811	

Standards	
10302	EN ISO
B408	ASTM

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Ni	Cu	Ti	Al	Fe
0.06 to 0.10	max. 1.0	max. 1.5	max. 0.045	max. 0.015	19.0 to 23.0	30.0 to 35.0	max. 0.75	0.25 to 0.60	0.25 to 0.60	min. 39.5

Refers to ASTM B408 - Alloy N08800 N08810 N08811 | Al + Ti 0.85 - 1.20

Delivery condition

Solution Annealed + Quenched

Tensile Strength (MPa)	min. 515
Yield Strength (MPa)	min. 205

Round Bars and Wire Rod (if any)

Diameter mm		
ROLLED		
12.50	-	130.00
FORGED		
130.10	-	203.20

More information regarding MOQ, lengths and tolerances upon request.Flat bars on request.

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ONE STEP AHEAD.