FERRITIC AND MARTENSITIC STEELS, INCL. PRECIPITAION HARDENING STEELS

Application Segments

Oil & Gas/CPI

Available Product Variants

Long Products* | Semi-Finished Products / Billet | Open Die Forgings

*) Presented data refer exclusively to long products. Please observe the detailed explanations at the end of the data sheet (pdf).

Product Description

BÖHLER N404 is a stainless soft-martensitic Cr steel with 5% nickel with molybdenum addition.
Due to the higher alloy content, the corrosion resistance of BÖHLER N404 is higher than that of stainless steels of type 1.4313. Due to the molybdenum addition, limited use in the maritime sector is also permissible. As a result of the chemical analysis and its microstructure, BÖHLER N404 is particularly insensitive to intergranular corrosion and very resistant to fatigue and stress corrosion cracking.
To achieve the best possible corrosion resistance with BÖHLER N404, it is essential to polish the surfaces concerned. Good mechanical properties in the quenched and tempered condition. This makes this material very suitable for use in the oil and gas sector. Very good low temperature properties. Recommended temperature of use: - 60 to 350°C.
Special heat treatment to max. 23 HRC is required for sour gas enviroment in petroleum engineering.
Fittings, pumps, compressors, centrifuges, hydroelectric machines, reactor technology, shipbuilding, chemistry, petroleum technology, aviation and refrigeration technology.

Process Melting

Airmelted

Applications

- Comp. for Chemical plants (incl. LNG, FGD, Urea, LDPE, etc.)
- Distributors or producers of standard parts without knowledge of final applications
- General Components for Mechanical Engineering
- Other Components
- Shafts
- Water Power
- Comp. for Industrial Gas Compressors
- Food processing Industry
- Mechanical Engineering
- Other Oil and Gas + CPI comps.
- Tubular Products, Flanges, Fittings
- Wellhead, X-mas trees and Manifolds (incl. Tubing hangers), BOPs
- Comps. for Food processing and Animal Feed
- Forging Applications
- Oil & Gas
- Pumps and High Pressure Components
- Valves and Actuators
- CPI (incl. LNG, Urea)

Technical data

Material designation	
1.4418	SEL
X4CrNiMo16-5-1	EN

Standards	
10088-3	EN ISO

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	N
max. 0.06	max. 0.70	max. 1.50	max. 0.040	max. 0.030	15.0 to 17.0	0.80 to 1.50	4.0 to 6.0	min. 0.020

Refers to EN ISO 10088-3 1.4418

Delivery condition

Annealed	
Hardness (HB)	max. 320
Tensile Strength (MPa | ksi)	max. 1,100 | 160

Hardened and Tempered | QT760	
Tensile Strength (MPa | ksi)	760 to 960 | 111 to 140
Yield Strength (MPa | ksi)	min. 550 | 80

Hardened and Tempered | QT900	
Tensile Strength (MPa | ksi)	900 to 1,100 | 131 to 160
Yield Strength (MPa | ksi)	min. 700 | 102

Round Bars and Wire Rod (if any)

Diameter					
mm			inch		
ROLLED					
12.50	-	130.00	0.492	-	5.118
FORGED					
130.10	-	500.00	5.122	-	19.685

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

Long Products: For additional specifications, technical requirements, and other dimensions, please contact our regional voestalpine BÖHLER sales companies.

Open Die Forgings: Product Variant may differ in terms of melting process, technical data, delivery, and surface condition as well as available product dimensions. Please contact the business unit Open Die Forgings of voestalpine BÖHLER Edelstahl GmbH & Co KG.

Semi-Finished Products: Product Variant may differ in terms of melting process, technical data, delivery, and surface condition as well as available product dimensions. Please contact the business unit Semi Finished Products of voestalpine BÖHLER Edelstahl GmbH & Co KG.

voestalpine BÖHLER Edelstahl GmbH & Co KG
Mariazeller Straße 25
8605 Kapfenberg, AT
T. +43/50304/20-0
E. info@bohler-edelstahl.at
https://www.voestalpine.com/bohler-edelstahl/de/

voestalpine
ONE STEP AHEAD.