

# CORROSIONS-RESISTANT STEELS - AUSTENITIC STEELS AND NON MAGNETIC STEELS

## Application Segments

Oil & Gas / CPI

## Available Product Variants

Long Products

## Product Description

BÖHLER A405 is a stainless austenitic Cr-Ni-Mo steel with nitrogen content and extremely low carbon content. Resistant to intergranular corrosion up to 400°C. Heat treatment after welding is not required. Required surface finish: pickled. Very good cold formability. Very good polishability. The chemical composition has been optimised for specific use in urea systems. It is a modified austenitic stainless steel 310L with low carbon and silicon content and nitrogen addition to stabilise and strengthen the austenitic phase. The alloy has been specially developed for improved corrosion resistance properties in urea carbonate environments. The grade is also suitable for wet corrosive environments due to its high chromium, molybdenum and nitrogen content (PREN > 33). For components with the highest resistance requirements to boiling, concentrated nitric acid and solutions with a high chloride content at high temperatures, as well as for highly stressed systems in the urea industry, e.g. urea separators or complementary products (pipes, fittings, etc.).

## Process Melting

Airmelted + ESR

## Applications

- > Components for Chemical plants (incl. LNG, FGD, Urea, LDPE, etc.)
  - > CPI (incl. LNG, Urea)
- > Other Oil and Gas + CPI components
  - > Oil & Gas, CPI & Renewables
- > Oil & Gas / CPI
  - > Tubular Products, Flanges, Fittings

## Technical data

Material designation		Standards	
1.4466	SEL	10088-3	EN ISO
X1CrNiMoN25-22-2	EN	A182/A182M	ASTM
S31050	UNS		
A182-F310MoLN	ASTM		

## Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	N
max. 0.030	max. 0.40	max. 2.00	max. 0.030	max. 0.015	24.0 to 26.0	2.00 to 3.00	21.0 to 23.0	0.10 to 0.16

Related to ASTM A182.

## Delivery condition

## Solution Annealed + Quenched

Tensile Strength (MPa)	min. 540   min
Yield Strength (MPa)	min. 255   min

## Round Bars and Wire Rod (if any)

Diameter mm	
<b>ROLLED</b>	
12.50	130.00
<b>FORGED</b>	
130.10	600.00

More information regarding MOQ, length and tolerance upon request. Flat Bars upon request.

If other available product variants are listed in addition to long products, please note that these may differ in terms of melting process, technical data, delivery and surface condition as well as available product dimensions. For mandatory technical specifications, other requirements and dimensions, please contact our regional voestalpine BÖHLER sales companies. The data contained in this brochure is merely for general information and therefore shall not be binding on the company. We may be bound only through a contract explicitly stipulating such data as binding. Measurement data are laboratory values and can deviate from practical analyses. The manufacture of our products does not involve the use of substances detrimental to health or to the ozone layer.

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