

CORROSIONS-RESISTANT STEELS - AUSTENITIC STEELS AND NON MAGNETIC STEELS

Application Segments

Oil & Gas / CPI

Available Product Variants

Long Products

Product Description

BÖHLER A220 is a low carbon, chromium-nickel-and molybdenum steel. Structure homogeneous, stable austenite. Weldable with analogous filler metal giving fully austenitic deposit. Resistant to intergranular corrosion in the temperature range up to 400°C. Does not require post-weld heat treatment. Resistance to acids having a reducing effect, like diluted sulphuric acid and hydrochloric acid is good. The steel is not susceptible to pitting, crevice and stress corrosion cracking in media containing chloride ions and possesses excellent resistance to the attack of urea. For optimum resistance, surfaces should be pickled. Cold forming properties are good. The steel is capable of taking a mirror finish.

Components for urea plants, pump heads, valve stems, condensers, reactors, strippers, scrubbers. Equipment and parts in the dyeing industry, textile, paper and leather, chemical, pharmaceutical and synthetic fibre industries.

Process Melting

Airmelted + ESR

Applications

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

Technical data

| Material designation | | Standards | |
|----------------------|--------------|------------|--------|
| 316L UG | Market grade | 10088-3 | EN ISO |
| 1.4435 | SEL | A182/A182M | ASTM |
| X2CrNiMo18-14-3 | EN | | |
| S31603 | UNS | | |
| F316 L | ASTM | | |

Chemical composition (wt. %)

| C | Si | Mn | P | S | Cr | Mo | Ni | N |
|------------|-----------|-----------|------------|------------|--------------|--------------|--------------|-----------|
| max. 0.030 | max. 1.00 | max. 2.00 | max. 0.045 | max. 0.030 | 16.0 to 18.0 | 2.00 to 3.00 | 10.0 to 15.0 | max. 0.10 |

Related to ASTM A182.

Delivery condition

Solution Annealed + Quenched

| | |
|------------------------|----------|
| Tensile Strength (MPa) | min. 485 |
| Yield Strength (MPa) | min. 170 |

Round Bars and Wire Rod (if any)

| Diameter mm | | |
|----------------|---|--------|
| ROLLED | | |
| 12.50 | - | 130.00 |
| FORGED | | |
| 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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ONE STEP AHEAD.