

## Incoloy 25-6Mo

Incoloy 25-6Mo is a super-austenitic stainless steel and shows significantly higher resistance to localized corrosion in halide media, with superior mechanical properties. It is characterized by:

- very high resistance to pitting and crevice corrosion in halide media and in H<sub>2</sub>S containing sour environments
- virtual immunity under practical conditions to chloride-ion stress-corrosion cracking
- excellent general corrosion resistance in a wide range of media, both oxidizing and reducing
- improved mechanical properties over alloy 904L
- improved metallurgical stability over similar grades with only 18% nickel
- approved for pressure vessels from -196 to 400°C by ASME

### Chemical Composition, %

| element | Cr   | Ni   | Fe   | Cu  | Mo  | N    | C    | Mn  | Si  | P    | S    |
|---------|------|------|------|-----|-----|------|------|-----|-----|------|------|
| min.    | 19.0 | 24.0 | bal. | 0.5 | 6.0 | 0.15 |      |     |     |      |      |
| max.    | 21.0 | 26.0 |      | 1.5 | 7.0 | 0.25 | 0.02 | 2.0 | 0.5 | 0.03 | 0.01 |

*Chemical Composition according to ASTM. Some compositional limits of other specifications may vary slightly.*

### Designation and standards

| National Standards   | Material designation | Chemical composition | Rod and bar                  | Plate and sheet                | Strip                          | Wire                       | Seamless tube |
|----------------------|----------------------|----------------------|------------------------------|--------------------------------|--------------------------------|----------------------------|---------------|
| ASTM<br>ASME<br>NACE | UNS N08926           | MR 0175              | B649<br>SB649                | B625<br>SB625<br>A240<br>SA240 | B625<br>SB625<br>A240<br>SA240 | B649<br>SB649              | B677<br>SB677 |
| DIN                  |                      |                      | 1.4529<br>X1NiCrMoCuN25-20-7 | DIN 10088-1                    | DIN 10088-3                    | DIN 10088-2<br>DIN 10028-7 | DIN 10088-2   |

**Density** 8.06g/cm<sup>3</sup>

### Corrosion resistance

- excellent resistance to pitting and crevice corrosion in halide media
- high resistance to chloride-ion stress-corrosion cracking
- excellent resistance to a wide range of chemical media, even at higher temperatures and concentrations, incl. sulphuric acid, wet-process phosphoric acid, sour gas, seawater, salts and organic acids

### Applications

Typical applications are:

- seawater filtration systems and process hydraulic and reinjection piping systems in the offshore industry
- bleaching plants in cellulose pulp production
- polished rods for corrosive oil wells
- tubing and couplings, wire lines and flowline systems in sour gas production
- components for flue-gas desulphurization plants, such as dampers and stacks
- evaporators, heat exchangers, filters and mixers used in the manufacture of phosphoric acid
- sulphuric acid distribution systems and coolers
- concentration and crystallization of salts by evaporation

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