## CORROSION AND HEAT RESISTANT STEEL

# 1.4501 (X2CrNiMoCuWN25-7-4)

Excellence in Specialty Steel

### Material Designation

| | |
|---|---|
| 1.4501 | DIN |
| S32760 | UNS |
| F55 | AISI |

### Standards

NORSOK M-630, MDS D57
ANSI/NACE MR0175/ISO 15156-3
ASTM A182, A276, A479
DIN EN 10088-3

### Chemical Composition Mass-%

| | C | Si | Mn | P | S | Cr | Ni | Mo | Cu | N | W |
|---|---|---|---|---|---|---|---|---|---|---|---|
| min. | - | - | - | - | - | 24,0 | 6,0 | 3,0 | 0,50 | 0,20 | 0,50 |
| max. | 0,030 | 1,00 | 1,00 | 0,030 | 0,010 | 26,0 | 8,0 | 4,0 | 1,00 | 0,30 | 1,00 |

Customer specific restrictions upon request

### Properties

25% Cr-Austenitic-ferritic steel (super duplex) with excellent resistance against corrosion, especially in media containing chloride (PREN > 40). Good mechanical properties.

### Delivery Condition

- Solution annealed (+AT)

### Application Area

High-strength components in environments requiring resistance to crevice and pitting corrosion.

### Typical Applications

- Chemical and petrochemical industry
- On- and offshore industry
- Piping and tank construction
- Pulp and paper industry

### Mechanical Properties

| Yield strength | | Tensile strength | | Elongation | Hardness | Impact toughness Charpy-V / - 46 °C | |
|---|---|---|---|---|---|---|---|
| [ksi] | [N/mm²] | [ksi] | [N/mm²] | [%] | [HBW] | [J] | [ft·lb] |
| ≥ 80 | ≥ 550 | ≥ 110 | ≥ 750 | ≥ 25 | ≤ 310 | ≥ 45 | ≥ 33 |

### Heat Treatment Guideline Values

| | Temperature [°C] | Cooling medium |
|---|---|---|
| Solution annealing (+AT) | 1040 - 1120 | Water |

### Quality

- ISO 9001
- ISO 14001
- ISO 50001
- Approvals acc. to standards like ABS, BV, DNV ...
- Customer specific approval certificates

### Innovation

- Fully automated ultrasonic testing up to dia. 39.3'' (1000 mm)
- $CO_2$-reduction by innovative heat treatment solutions

### Flexibility

- Product range from fine wire to forging
- Directly from stock close at hand

### Individuality

- Dimensions
- Tolerances
- Surface qualities
- Delivery conditions

### Your personal contact:

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