



**MATERIAL No.: S32750 / 1.4410**

**DESCRIPTION**

<b>EN symbol (short)</b>	X2CrNiMoN 25-7-4	<b>Density</b>	7,81
<b>UNS</b>	S 32750 2507	<b>lkg/dm<sup>3</sup></b>	
<b>AFNOR</b>		<b>Hardness (HB30)</b>	<=230
<b>BS</b>		<b>Composition</b>	chromium nickel molybdenum steels
		<b>Category</b>	Stainless steels steel, resistant to rust and acids
		<b>Structure</b>	austenitic ferritic Super duplex
		<b>Corrosion</b>	resistant to intergranular corrosion

**CHEMICAL COMPOSITION**

		<b>C</b>	<b>Si</b>	<b>Mn</b>	<b>S</b>	<b>P</b>	<b>Cr</b>	<b>Cu</b>	<b>Mo</b>	<b>N</b>	<b>Ni</b>	<b>W</b>	<b>Fe</b>
<b>1.4410</b>	<b>Min %</b>						24,00		3,00	0,24	6,00		
	<b>Max %</b>	0,03	1,0	2,00	0,015	0,035	26,00		4,50	0,35	8,00		

**PHYSICAL PROPERTIES**

<b>Property</b>		<b>Value</b>			
<b>Density: kg/dm<sup>3</sup></b>		7,81			
<b>Hardness: (HB30)</b>		<=230			
<b>magnetizable</b>		yes			
<b>Temperature</b>	<b>Specific heat</b>	<b>Thermal conductivity</b>	<b>Electric resistance</b>	<b>Modulus of elasticity</b>	<b>Expansion rate from</b>
<b>T</b>	<b>J / kgK</b>	<b>W/mK</b>	<b>μΩ · cm</b>	<b>kN/mm<sup>2</sup></b>	<b>70°F bis T</b>
<b>°C/F</b>	<b>(Btu /</b>	<b>(Btu·in / ft<sup>2</sup>·h·°F)</b>	<b>(Ω circ mill /</b>	<b>(10<sup>3</sup> ksi)</b>	<b>10<sup>-6</sup> / K</b>
<b>(°C/F)</b>	<b>lb °F)</b>		<b>ft)</b>		<b>(10<sup>-6</sup> / °F)</b>

20 / 68	500 (--)	15 (--)		200 (--)	
100 / 212				194 (--)	13,0 (--)
200 / 392				186 (--)	13,5 (--)
300 / 572				180 (--)	14,0 (--)
<b>Temperature</b>			<b>0,2% Yield strength in high temperatures</b>		
<b>°F</b>			<b>Rp 0,2</b>		
			<b>MpA /ksi</b>		
20 / 68			550 / 79,7		
100 / 212			450 / 62,2		
200 / 392			400 / 58,0		
250 / 482			380 / 55,1		

#### MECHANICAL PROPERTIES (20°C / 68°F)

<b>Yield strength Rp 0,2 MPa</b>	>=550/ >=79,7	
<b>1% Tensile strength Rp1,0 Mpa/ksi</b>	>=640/ >=92,8	
<b>Tensile strength Rm Mpa/ksi</b>	800-1000/116,0-145,0	
<b>Elongation A5 (%)</b>	<=20	
<b>impact work ISO-V (J)</b>	>=40/>=100	transverse/lengthwise

#### TEMPERATURE INFORMATION

<b>Solution heat treatment</b>	
<b>Working temperature</b>	1904 °F to 2048 °F
<b>Explanation report</b>	cool down: water
<b>Solution heat treatment</b>	
<b>Working temperature</b>	1832 °F to 2192 °F
<b>Explanation report</b>	cool down : air

#### STANDARDS / INFORMATION

<b>Standards</b>	<b>Description</b>
<a href="#">ASTM A 182</a>	Standard Specification for Forged or Rolled Alloy-Steel Pipe Flanges, Forged Fittings and Valves and Parts for High-Temperature Service
<a href="#">ASTM A 240</a>	sheet metal and ribbons from stainless Cr and Ni pressure containers
<a href="#">ASTM A 276</a>	Rods and cross-sections made of stainless and heat-resistant steel
<a href="#">ASTM A 479</a>	Rods and cross-sections made of stainless and heat-resistant steel used in boilers and other pressure tanks

<a href="#">DIN EN 10088-1 (09/2005)</a>	Stainless steels Part 1: List of stainless steels
<a href="#">DIN EN 10088-3 (09/2005)</a>	stainless steels. Technical delivery conditions for semi-finished products, bars, rods, wire selection and bright products of corrosion resisting steels for general and construction purposes
<a href="#">DIN EN 10217-7</a>	Welded steel pipes under compression load Pipes made from stainless steel
<a href="#">DIN EN 10297-2 (02/2006)</a>	Welded circular steel pipes for machine construction and general technical service stainless steel. Pipes made from stainless steel

#### **PROCESS INFORMATION**

##### **Welding**

<b>- Type</b>	manual arc welding MAG cored wire MAG solid wire submerged arc welding WIG
<b>- Add. material</b>	1.4501
<b>- Hints</b>	pre-heat 212°F (>10mm)

#### **MAIN FIELDS OF APPLICATION**

<b>Details of application</b>	good mechanical properties with high corrosion resistance
<b>Certifications</b>	listed in NACE Mr 01-75 for sour service
<b>Chemical Industry</b>	for processing nitric acid
<b>Oil field and geothermal applications</b>	
<b>Environmental technology</b>	sewage works
<b>Paper and pulp industry</b>	different components

#### **RANGE OF PRODUCTS**

<b>Product type</b>	<b>Product</b>
Plates / Sheets	plates/sheets plate/sheet cuts
Fittings	welded elbows welded reductions Welded T-pieces seamless elbows seamless reductions seamless T-pieces

	Other Fittings, Nipples
Pipes / Tubes	welded pipes/tubes seamless pipes/tubes
Bar steel	round bar steel

[Pipe/Tube/Fitting/Flange/Valve/Plate](#)

Stainless Steel/Nickel Alloy/Duplex

