



MATERIAL No.: S32750 / 1.4410

DESCRIPTION

EN symbol (short)	X2CrNiMoN 25-7-4	Density	7,81
UNS	S 32750 2507	lkg/dm³	
AFNOR		Hardness (HB30)	<=230
BS		Composition	chromium nickel molybdenum steels
		Category	Stainless steels steel, resistant to rust and acids
		Structure	austenitic ferritic Super duplex
		Corrosion	resistant to intergranular corrosion

CHEMICAL COMPOSITION

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

PHYSICAL PROPERTIES

Property		Value					
Density: kg/dm³		7,81					
Hardness: (HB30)		<=230					
magnetizable		yes					
Temperature	Specific heat	Thermal conductivity	Electric resistance	Modulus of elasticity	Expansion rate from		
T	J / kgK	W/mK	μΩ · cm	kN/mm²	70°F bis T		
°C/F	(Btu /	(Btu·in / ft²·h·°F)	(Ω circ mill /	(10³ ksi)	10⁻⁶ / K		
(°C/F)	lb °F)		ft)		(10⁻⁶ / °F)		

20 / 68	500 (--)	15 (--)		200 (--)	
100 / 212				194 (--)	13,0 (--)
200 / 392				186 (--)	13,5 (--)
300 / 572				180 (--)	14,0 (--)
Temperature			0,2% Yield strength in high temperatures		
°F			Rp 0,2		
			MpA /ksi		
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)

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

TEMPERATURE INFORMATION

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

STANDARDS / INFORMATION

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

DIN EN 10088-1 (09/2005)	Stainless steels Part 1: List of stainless steels
DIN EN 10088-3 (09/2005)	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
DIN EN 10217-7	Welded steel pipes under compression load Pipes made from stainless steel
DIN EN 10297-2 (02/2006)	Welded circular steel pipes for machine construction and general technical service stainless steel. Pipes made from stainless steel

PROCESS INFORMATION

Welding

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

MAIN FIELDS OF APPLICATION

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

RANGE OF PRODUCTS

Product type	Product
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

