1.4550

	%C	%Si	%Mn	%P	%S	%Cr	%Ni	%Nb
X6CrNiNb18-10						17.0	9.00	10 x C
	≤0.08	≤1.00	≤2.00	≤0.045	≤0.015	19.0	12.00	1.00

STEEL PROPERTIES

1.4550, could be a steel immune to intergranular corrosion during a heat-treated state and after a sensitizing heat treatment. In terms of destination, is appreciate the 1H18N9T grade, however, is characterized by higher resistance to oxidation. Steel products are suitable for deep drawing and are fully weldable. The grade doesn't require additional heat treatment after welding. Conducted tests per PN-H-04630 in polish grade 0H18N12Nb test A show that the steel is proof against intergranular corrosion within the heat-treated state and after the sensitizing treatment. The 1.4550 grade is employed within the industry equipment manufacturing aqua fortis and derivatives, salts and fertilizers. Also utilized in cryogenics, within the pharmaceutical industry, within the food industry - in food processing plants, dairies, sugar factories, breweries, within the fuel industry, i.e., in refineries and petrochemical plants. Steel intended for pipelines, autoclaves, transport tanks, heat exchangers, absorption towers, pumps, coolers, and reactors.

EQUIVALENT GRADES

EN 10088-1	1.4550	X6CrNiNb18-10
AISI	347H	
AFNOR	Z6CNNb18-10	
BS	347S17	
JIS	SUS347	
UNS	S34709	

APPLICATIONS

For construction parts which should be resistant to scaling up to about 1050°C and extensively inured to the effect of sulphurous gases, especially above 900°C, is very low.

HEAT TREATMENT

Solution annealing.

1.4550

Mechanical properties at room temperature for 1.4547 as per EN 10088-3 in the usual delivery condition

Flat products with thickness *a*	Heat Treatment Condition	Hardness HB max.	0.2% Proof strength MPa. min.	Tensile Strength R_m MPa.	A % Min. Long Products
<160	+AT	230	205	510-740	40

Physical properties of 1.4550 as per EN 10088-1

Density Kg/dm^3	Linear Expansion Coefficient $10^{-6}k^{-1}$ Between 20°C and (°C)					Thermal conductivity W (m.K)		Specific Heat capacity kJ(kg.K)	Electrical resistivity $\Omega mm^2/m$ At 20°C	Magnetizability
	200°C	400°C	20°C	100°C	300°C	20°C	500°C			
7.9	16.5	17.5	-	16.0	17.0	15	18.0	500	0.73	No