FERRITIC STAINLESS STEEL ACX 525	
EN DESIGNATION	ASTM DESIGNATION
1.4511	430Nb
X3CrNb17	--

DESCRIPTION

ACX 525 is a variation of ACX 500 with niobium. This element gives better intergranular corrosion resistance. Niobium improves weldability preventing intergranular corrosion and fragility. It also makes possible the best surface finish quality. Drawability is also improved.

CHEMICAL COMPOSITION

C	Si	Mn	P	S	Cr	Nb
≤0.05	≤1.00	≤1.00	≤0.040	≤0.015	16.00-18.00	12 x C - 1.00

APPLICATIONS

- Exhaust systems
- Diffusion bottoms for induction pots
- Tubes

MECHANICAL PROPERTIES AFTER COLD ROLLING AND FINAL ANNEALING

$Rp_{0.2}$	>240 N/mm^2
Rm	430 - 600 N/mm^2
Elongation	> 23%
Hardness	< 180 HB

PHYSICAL PROPERTIES

At 20^{0}C has a density of 7.7 kg/dm^3 and a specific heat of 460 J/kg·K

	20^{0}C	100^{0}C	200^{0}C	300^{0}C	400^{0}C	500^{0}C
Modulus of elasticity (GPa)	220	215	210	205	195	-
Mean coefficient of linear expansion between 20^{0}C (10^{-6} x K^{-1}) and	-	10	10	10.5	10.5	11
Thermal conductivity (W/m·K)	25	28	30	31.5	33	34
Electrical resistivity (Ω·mm^2/m)	0.60	0.75	0.95	1.10	1.20	1.30

WELDING

The recommended consumable electrodes are:

Shielded electrodes	Wires and rods	Hollow electrodes
E 23 12 L	G 23 12 L (GMAW) W 23 12 L (GTAW) P 23 12 L (PAW) S 23 12 L (SAW) ER 308L ER 316L	T 23 12 L
ER 308L		308L
ER 316L		ER 316L

CORROSION RESISTANCE

Thanks to niobium stabilization, ACX 525 has good intergranular corrosion resistance. As ferritic stainless steel, it exhibits good stress corrosion cracking resistance.

SURFACE CLEANING

Wash the surface with neutral soap and water applied with a cloth or a brush without scratching the stainless steel. Then, always rinse the stainless steel with water to remove completely the cleaning agent. Finally, it is recommended to dry the surface to preserve a good superficial condition. In severe environments, a frequent cleaning is strongly recommended.

SPECIFICATIONS

It can be delivered according to EN 10088-2 and ASTM A-480/A-480M standard requirements.