FERRITIC STAINLESS STEEL ACX 515	
EN DESIGNATION	ASTM DESIGNATION
1.4510	430Ti
X3CrTi17	S43035

DESCRIPTION

ACX 515 is a variation of ACX 500 with titanium content. This element gives the steel very good resistance to intergranular corrosion. This addition makes it improve its weldability, since it enhances tenacity and ductility. Moreover, it exhibits good drawing conditions.

CHEMICAL COMPOSITION

C	Si	Mn	P	S	Cr	Ti
≤0.050	≤1.00	≤1.00	≤0.040	≤0.015	16.00-18.00	≥0.20+4 (C+N)

APPLICATIONS

- Washing machines
- Tubes
- Exhaust systems

MECHANICAL PROPERTIES AFTER COLD ROLLING AND FINAL ANNEALING

$Rp_{0.2}$	> 240 N/mm²
Rm	420 - 600 N/mm²
Elongation	> 23%
Hardness	< 185 HB

PHYSICAL PROPERTIES

At 20ºC it has a density of 7.7 kg/dm³ and a specific heat of 460 J/kg·K

	20ºC	100ºC	200ºC	300ºC	400ºC	500ºC
Modulus of elasticity (GPa)	220	215	210	205	195	-
Mean coefficient of linear expansion between 20ºC (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·mm²/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)	T 23 12 L
ER 308L	ER 308L	308L
ER 316L	ER 316L	ER 316L

CORROSION RESISTANCE

Thanks to the titanium stabilization, ACX 515 has good intergranular corrosion resistance. As ferritic stainless steel has 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.

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