FOXcore 308L-T0

Flux-cored wire, high-alloyed, austenitic stainless

Classifications

EN ISO 17633-A	EN ISO 17633-B	AWS A5.22 / SFA-5.22
T 19 9 L R M21 (C1) 3	TS 308L-F M21 (C1) 0	E 308LT0-4(1)

Characteristics and typical fields of application

Rutile flux-cored wire of T 19 9 L R / E308LT0 type for welding of stainless steels such as 1.4307 / 304L. Easy handling and high deposition rate result in high productivity with excellent welding performance and very low spatter formation. Increased travel speeds as well as self-releasing slag with little demand for cleaning and pickling provide considerable savings in time and money. The wire shows good wetting behavior and results in a finely rippled surface pattern. The wide arc ensures even penetration and side-wall fusion to prevent lack of fusion. Suitable for service temperatures from –196ºC to 350ºC. The scaling tem-perature is approximately 850ºC in air. For welding in vertical-up and overhead positions, FOXcore 308L-T1 should be preferred.

Base materials

1.4301 X5CrNi18-10, 1.4306 X2CrNi19-11, 1.4307 X2CrNi18-9, 1.4311 X2CrNiN18-9,
1.4312 GX10CrNi18-8, 1.4541 X6CrNiTi18-10, 1.4546 X5CrNiNb18-10, 1.4550 X6CrNiNb18-10
UNS S30400, S30403, S30453, S32100, S34700
AISI 304, 304L, 304LN, 302, 321, 347

Typical analysis

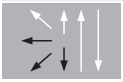
	C	Si	Mn	Cr	Ni	FN
wt.-%	0.03	0.7	1.5	19.8	10.5	3 – 12

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact energy ISO-V KV J		
	MPa	MPa	%	20°C	–120°C	–196°C
u	360 (≥ 320)	530 (≥ 520)	40 (≥ 30)	50	41	35 (≥ 32)

u untreated, as-welded – shielding gas M21 (Ar + 18% CO_2)

Operating data



Polarity	DC +	**Dimension mm**
Shielding gas (EN ISO 14175)	M21, (C1)	1.2
		1.6

Welding with standard GMAW power source with DC+ polarity. No pulsing needed. Backhand (drag) technique preferred with a work angle of approximately 80º. Ar + 15 – 25% CO2 as shielding gas offers the best weldability. 100% CO2 can be also used, but the voltage should be increased by 2 V. Suitable gas flow is 16 – 25 l/min. The heat input should not exceed 2.0 kJ/mm, the interpass temperature be limited to max. 150ºC and the wire stick-out 15 – 20 mm. Post-weld heat treatment generally not needed. In special cases, solution annealing can be performed at 1050ºC followed by water quenching.

Approvals

TÜV (05348), DB (43.014.14), DNV GL, CE