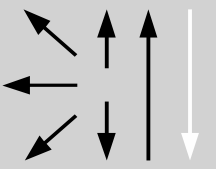


Classification						
EN ISO 17633-A		EN ISO 17633-B		AWS A5.22 / SFA-5.22		
T 19 9 L P M21 (C1) 1		TS 308L-F M21 (C1) 1		E308LT1-4(1)		
Characteristics and typical fields of application						
<p>Rutile flux-cored wire of T 19 9 L P / E308LT1 type for welding of stainless steels such as 1.4307 / 304L. The fast freezing slag offers excellent weldability and slag control in all positions. 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 wide arc ensures even penetration and side-wall fusion to prevent lack of fusion. Suitable for service temperatures from -196°C to 350°C. The scaling temperature is approximately 850°C in air. For flat and horizontal welding positions, BÖHLER EAS 2-FD (FOXcore 308L-T0) or Avesta FCW-2D 308L/MVR (FOXcore 308L-T0 DG) may be preferred.</p>						
Base materials						
<p>1.4301 X5CrNi18-10, 1.4306 X2CrNi19-11, 1.4307 X2CrNi18-9, 1.4311 X2CrNi18-9, 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</p>						
Typical analysis of all-weld metal						Ferrite WRC 92
	C	Si	Mn	Cr	Ni	FN
wt.-%	0.03	0.7	1.5	19.8	10.5	3 – 10
Mechanical properties of all-weld metal – typical values (minimum values)						
Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact work ISO-V KV J		
	MPa	MPa	%	20°C	-196°C	
u	380 (≥ 320)	535 (≥ 520)	39 (≥ 30)	70	38 (≥ 32)	
u untreated, as-welded – shielding gas Ar + 18% CO ₂						
Operating data						
	\varnothing mm	Wire feed m/min	Arc length mm	Current A	Voltage V	
	0.9	8.0 – 15.0	~ 3	100 – 160	22 – 27	
	1.2	6.0 – 13.0	~ 3	150 – 250	23 – 29	
	1.6	4.5 – 9.5	~ 3	200 – 360	23 – 28	
<p>Welding with standard GMAW power source with DC+ polarity. No pulsing needed. Backhand (drag) technique preferred with a work angle of approximately 80°. 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 rate for welding outdoors is 18 – 25 l/min. The heat input should not exceed 2.0 kJ/mm, the interpass temperature be limited to max. 150°C and the wire stick-out 15 – 20 mm. Post-weld heat treatment generally not needed. In special cases, solution annealing can be performed at 1050°C followed by water quenching.</p>						
Approvals						
TÜV (09117), DB (43.014.23), DNV GL, NAKS, CE						