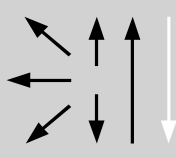


Classifications							
EN ISO 17633-A		EN ISO 17633-B			AWS A5.22		
T 19 12 3 L P M21/C1 1		TS 316L-F M21/C1 1			E316LT1-4/-1		
Characteristics and typical fields of application							
<p>Designed for welding EN 1.4436 / ASTM 316L type stainless steels with excellent resistance to general, pitting and intergranular corrosion in chloride containing environments. Intended for severe service conditions, e.g. in dilute hot acids. Also suitable for welding steels that are stabilized with titanium or niobium, such as EN 1.4571 / ASTM 316Ti for service temperatures not exceeding 400°C. For higher temperatures a niobium-stabilized consumable such as BÖHLER SAS 4 PW-FD is required.</p> <p>Avesta FCW 316L/SKR-PW has a stronger arc and a faster freezing slag compared to the 2D type. It is designed for all-round welding and can be used in all positions without changing the parameter settings. Very good slag detachability and almost no spatter formation. Due to the fast freezing rutile slag, the weldability is excellent also in the vertical-up and overhead positions.</p>							
Base materials							
EN 1.4401 X5CrNiMo17-12-2, 1.4404 X2CrNiMo17-12-2, 1.4409 GX2CrNiMo19-11-2, 1.4429 X2CrNiMoN17-12-3, 1.4432 X2CrNiMo17-12-3, 1.4435 X2CrNiMo18-14-3, 1.4436 X3CrNiMo17-12-3, 1.4571 X6CrNiMoTi17-12-2, 1.4580 X6CrNiMoNb17-12-2, 1.4583 X10CrNiMoNb18-12; UNS S31600, S31603, S31635, S31640, S31653; AISI 316L, 316Ti, 316Cb; Outokumpu 4436, 4432, 4429, 4571							
Typical analysis of all-weld metal							Ferrite WRC-92
	C	Si	Mn	Cr	Ni	Mo	FN
wt.-%	0.03	0.7	1.5	19.0	12.0	2.7	3 – 10
Mechanical properties of all-weld metal – typical values (minimum values)							
Heat treatment	Yield strength R _{p0.2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J			Hardness
	MPa	MPa	%	20°C	-20°C	-120°C	HB
u	430 (≥ 320)	560 (≥ 520)	34 (≥ 30)	65	55	40	210
u untreated, as-welded – shielding gas Ar + 18 % CO ₂							
Operating data							
	Polarity	Wire feed m/min	Current A	Voltage V	Arc length mm	Ø (mm)	
	DC+	8.0 – 15.0	100 – 160	22 – 27	~ 3	0.9	
		6.0 – 15.0	150 – 280	22 – 30	~ 3	1.2	
4.5 – 9.5		200 – 350	23 – 28	~ 3	1.6		
Ar + 15 – 25 % CO ₂ offers the best weldability. 100 % CO ₂ can be also used, but the voltage should be increased by 2 V. Suitable gas flow rate for welding outdoors is 20 – 25 l/min. Suggested heat input is max. 2.0 kJ/mm, interpass temperature max. 150°C and wire stick-out 15 – 20 mm. The scaling temperature is approx. 850°C in air. Post weld heat treatment is generally not needed. In special cases, solution annealing can be performed at 1050°C followed by water quenching.							
Approvals							
TÜV (10746.), CWB, DB (43.014.40), DNV GL, CE, ABS							