SLR AC/DC

Covered electrodes

www.avestawelding.com

For welding steel such as:

Outokumpu	EN	ASTM	SS*	BS*	NF*
4438	1.4438	317L	2367	317S12	Z3 CND 19-15-04
4439	1.4439	S317LMN	-	-	Z3 CND 18-14-05 Az

* Obsolete national standards, replaced by EN 10088.

Characteristics

AVESTA SLR AC/DC is a high-alloy low-carbon electrode with a rutile-acid type coating. It is suited for welding type 18 Cr 13 Ni 4 Mo austenitic stainless steels and similar. The enhanced Mo content compared to 317L/SNR provides an even better corrosion resistance, particularly in acid chloride containing environments.

AVESTA SLR AC/DC is primarily designed for horizontal welding, but can also be used in position welding.

Welding directions

AVESTA SLR should be welded using a short arc with its coating sliding along the workpiece. Both positive pole DC and AC can be used, but positive pole DC is preferable.

The best surface appearance is achieved by using a short arc and comparatively high amperage. However, since steels of this type are somewhat more susceptible to hot cracking than the ASTM 316L types it is advisable to avoid too high amperages. It is also important to allow the material to cool to below 100°C before the next run is welded.

Weld deposit data

Metal recovery approx. 110%

Packaging data

Diam. mm	Length mm	Weight/ capsule, kg	Approx. No. of electrodes/ capsule	Weight/ carton, kg
2.5	300	1.90	103	11.40
3.25	350	4.10	115	12.30
4.0	350	4.54	87	13.62

Standard designations

EN 1600	E 19 13 4 N L R
AWS A5.4	–

Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Mo
0.02	0.8	1.0	18.0	13.5	4.0
Ferrite	10 FN DeLong				

Mechanical properties	Typical values (IIW)		Min. values EN 1600	
Yield strength, $Rp_{0,2}$	490	N/mm²	350	N/mm²
Tensile strength, R_m	635	N/mm²	550	N/mm²
Elongation, A_5	31	%	25	%
Impact strength, KV				
+20°C	40	J		
-40°C	30	J		
Hardness approx.	225	Brinell		

Welding data

DC+ or AC	Diam., mm	Current, A
	2.5	50– 80
	3.25	80–120
	4.0	100–160

Interpass temperature: Max. 100°C.

Heat input: Max. 1.5 kJ/mm.

Heat treatment: Generally none. In special cases quench annealing at 1050°C.

Structure: Austenite with 5–10 % ferrite.

Scaling temperature: Approx. 850°C (air)

Corrosion resistance: Considerably higher resistance than ASTM 316L and slightly higher than 317L in acid and chloride containing environments.

Approvals: TÜV

Welding positions