317L/SNR AC/DC

www.avestawelding.com

Covered electrodes

For welding steel such as:

Outokumpu	EN	ASTM	SS*	BS*	NF*
4438	1.4438	317L	2367	317S12	Z3 CND 19-15-04

* Obsolete national standards, replaced by EN 10088.

Characteristics

AVESTA 317L/SNR AC/DC is a high-alloy electrode with a rutile-acid type coating intended for welding 18 Cr 14 Ni 3 Mo austenitic stainless steels and similar. The enhanced content of Cr, Ni and Mo compared to 316L provides even better corrosion resistance, particularly in acid chloride containing environments.

AVESTA 317L/SNR is a very good all-round electrode which can be used for position welding.

Welding directions

AVESTA 317L/SNR 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 212°F (100°C) before the next run is welded.

Weld deposit data

Metal recovery approx. 110%.

Packaging data

Diam. inch	Diam. mm	Length mminch	Weight/ capsule lbs	Electrodes/ capsule, approx.	Weight/ carton, lbs
5/64	2.0	250 / 10	3.0	139	18
3/32	2.5	300 / 12	7.4	207	24
1/8	3.25	350 / 14	9.1	115	27
5/32	4.0	350 / 14	10.0	87	30
3/16	5.0	350 / 14	10.0	57	30

Standard designations

AWS A5.4 E317L-17

Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Mo
0.02	0.7	0.9	19.0	13.0	3.7

Ferrite 10 FN DeLong

Mechanical properties	Typical values (IIW)			
Yield strength, $Rp_{0,2}$	485	N/mm²	70	ksi
Tensile strength, R_m	615	N/mm²	89	ksi
Elongation, A_5	31	%	31	%
Impact strength, KV				
+20°C	40	J	29	ft·lb
Hardness approx.	210	Brinell		

Welding data

DC+ or AC	Diam., inch	Current, A
	5/64	35– 60
	3/32	50– 80
	1/8	80–120
	5/32	100–160
	3/16	160–220

Interpass temperature: Max. 212°F (100°C).

Heat input: Max. 38.1 kj/in (1.5 kJ/mm).

Heat treatment: Generally none. In special cases quench annealing at 1922°F (1050°C).

Structure: Austenite with 5–10 % ferrite.

Scaling temperature: Approx. 1562°F (850°C) (air)

Corrosion resistance: Higher resistance than ASTM 316L in acid chloride containing solutions.

Approvals: -

Welding positions