Avesta 317L/SNR

TIG rod, high-alloyed, high corrosion resistant

Classification

EN ISO 14343-A	AWS A5.9
W 19 13 4 L	ER317L

Characteristics and typical fields of application

Avesta 317L/SNR is designed for welding type 18 Cr 14 Ni 3 Mo austenitic stainless steels and similar. The enhanced content of chromium, nickel and molybdenum compared to 316L gives improved corrosion properties in acid chloride containing environments.

Structure: Austenite with 5 – 10 % ferrite.

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

Corrosion resistance:

Better resistance to general, pitting and intercrystalline corrosion in chloride containing environments than ASTM 316L. Intended for severe service conditions, i.e. in dilute hot acids.

Base materials

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

Typical analysis of the solid wire (wt.-%)

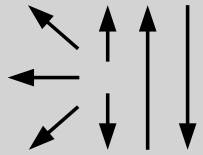
	C	Si	Mn	Cr	Ni	Mo	Ferrite
wt.-%	0.02	0.4	1.7	19.0	13.5	3.5	9 FN (WRC-92)

Mechanical properties of all-weld-metal

Heat treatment	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation (L_0=5d_0)	Impact work ISO-V KV J	Hardness
	MPa	MPa	%	+20 °C	Brinell
u	440	630	28	100	200

u untreated, as welded – Shielding gas Ar + 1 – 5 % H_2

Operating data



Polarity	Shielding gas:	ø (mm)
DC (+)	Ar (99.95 %) Ar + 1 – 5 % H_2 Ar + 20 – 30 % He Gas flow rate: 4 – 8 l/min	2.4

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

Interpass temperature: Max. 100 °C.

Heat input: Max. 1.5 kJ/mm.

Approvals

-