



For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
Over-alloyed electrode for surfacing unalloyed steel, joint welding molybdenum-alloyed stainless steel to unalloyed steel and welding clad material.					

Standard designations

EN 1600	E 23 12 2 L R
AWS A5.4	E309MoL-17

Characteristics

AVESTA P5 is a highly alloyed low carbon electrode corresponding to AWS A5.4 E309MoL-17. The electrode is designed for dissimilar welding between stainless and mild or low-alloy steels but can also be used for overlay welding, providing an 18 Cr 8 Ni 2 Mo deposit from the very first layer. It can also be used for welding high-strength steels such as Hardox® and Armax®.

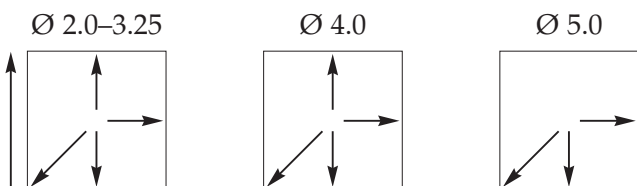
Welding data

DC+ or AC	Diam. mm	Current, A
	2.0	30 – 60
	2.5	45 – 80
	3.25	70 – 120
	4.0	90 – 160
	5.0	150 – 220

Weld deposit data at maximum welding current

Electrode diam. mm	length mm					Metal recov. ~ %
		N	B	H	T	
2.0	300	0.55	134	0.76	35	115
2.5	300	0.58	74	1.06	46	112
3.25	350	0.59	44	1.59	52	112
4.0	450	0.63	25	2.14	66	109
5.0	450	0.67	16	3.12	70	108

Welding positions



Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Mo
0.02	0.8	0.8	22.5	13.5	2.5

Ferrite 20 FN WRC-92

Mechanical properties

	Typical values (IIW)	Min. values EN 1600
Yield strength R _{p0.2}	490 N/mm ²	350 N/mm ²
Tensile strength R _m	640 N/mm ²	550 N/mm ²
Elongation A ₅	30 %	25 %
Impact strength KV +20°C	30 J	
Hardness approx.	220 Brinell	

Interpass temperature: Max. 150°C.

Heat input: Max. 2.0 kJ/mm.

Heat treatment: Generally none. For constructions that include low-alloy steels in mixed joints, a stress-relieving annealing stage may be advisable. However, this type of alloy may be susceptible to embrittlement-inducing precipitation in the temperature range 550 – 950°C.

Structure: Austenite with 15 – 20% ferrite.

Scaling temperature: Approx. 950°C (air).

Corrosion resistance: Superior to 316L. The corrosion resistance obtained in the first layer when surface welding corresponds to that of ASTM 316.

Approvals

- CE
- CWB
- DB
- DNV
- TÜV