



904L

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
904L	1.4539	904L	904S13	Z2 NCDU 25-20	2562

Also for welding similar steels of the 20-25 CrNiMoCu-type.

Standard designations

EN 1600 E 20 25 5 Cu N L R
AWS A5.4 E385-17

Characteristics

AVESTA 904L AC/DC is a highly alloyed fully austenitic Cr-Ni-Mo-Cu electrode designed for welding ASTM 904L and similar types of stainless steel. 904L filler metal has a fully austenitic structure which makes it somewhat more sensitive to hot cracking than for example 316L. Welding should be performed taking great care about low heat input and interpass temperature.

Welding data

DC+ or AC	Diam. mm	Current, A
	2.5	50 – 75
	3.25	80 – 110
	4.0	100 – 150
	5.0	140 – 190

Weld deposit data at maximum welding current

Electrode diam. length mm mm					Metal recov. ~ %
	N	B	H	T	
2.5 350	0.69	59	1.09	56	139
3.25 350	0.65	35	1.53	67	139
4.0 400	0.69	20	2.29	80	143
5.0 400	0.69	13	3.37	83	138

Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Mo	Cu
0.02	0.7	1.2	20.5	25.0	4.5	1.5

Ferrite 0 FN

Mechanical properties

	Typical values (IIW)	Min. values EN 1600
Yield strength $R_{p0.2}$	400 N/mm ²	320 N/mm ²
Tensile strength R_m	565 N/mm ²	510 N/mm ²
Elongation A_5	34 %	25 %
Impact strength KV +20°C	70 J	
Hardness approx.	200 Brinell	

Interpass temperature: Max. 100°C.

Heat input: Max. 1.5 kJ/mm.

Heat treatment: Generally none (in special cases quench annealing at 1070 – 1100°C).

Structure: Fully austenitic.

Scaling temperature: Approx. 1000°C (air).

Corrosion resistance: Very good resistance in non-oxidising environments such as sulphuric acid (up to 90% conc.), phosphoric acid and organic acids. Good resistance to pitting and crevice corrosion in chloride containing solutions.

Approvals

- CE
- DB
- TÜV

Welding positions

