Avesta Welding

P54 basic

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
4565	1.4565	S34565	–	–	–
254 SMO®	1.4547	S31254	–	–	–
654 SMO®	1.4652	S32654	–	–	–

Standard designations

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Characteristics

AVESTA P54 basic is a highly alloyed Cr-Ni-Mo electrode producing a fully austenitic weldment. P54 is specially developed for welding 254 SMO, 654 SMO and other 6 and 7Mo steel for use in highly oxidising environments, e.g. bleach washers in pulp and paper applications, especially those having neutral chloride dioxide conditions.

Welding data

DC+	Diam. mm	Current, A
	3.25	80 – 100

Typical analysis % (All weld metal)

C	Si	Mn	Cr	Ni	Mo	Cu	N
0.02	0.2	2.6	25.5	25.5	5.0	0.8	0.35

Ferrite 0 FN

Mechanical properties	Typical values (IIW)	Min. values EN 1600
Yield strength $R_{p0.2}$	500 N/mm²	–
Tensile strength R_m	700 N/mm²	–
Elongation A_5	20 %	–
Impact strength KV		
+20°C	50 J	
–70°C	30 J	
Hardness approx.	220 Brinell	

Interpass temperature: Max. 100°C.

Heat input: Max. 1.0 kJ/mm.

Heat treatment: Generally none.

Structure: Fully austenitic.

Scaling temperature: Approx. 1100°C (air).

Corrosion resistance: Superior resistance in near neutral chloride dioxide containing environments, such as D-stage bleachers.

Approvals

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Welding positions