

248 SV

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
248 SV	1.4418	–	–	Z6 CND 16-05-01	2387

Standard designations

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Characteristics and welding directions

AVESTA 248 SV is designed for welding Outokumpu 248 SV and steel castings with corresponding composition. Applications include propellers, pumps, valves and shafts.

AVESTA 248 SV has high safety against cracking, superior to many other martensitic consumables. The weld metal properties, on the whole, are similar to those of the steel.

Preheating is normally unnecessary. In cases with heavy wall thicknesses or where considerable shrinkage stresses are to be expected, preheating up to 75 – 150°C is recommended.

Welding data

	Diameter mm	Current A	Voltage V
Short arc	1.20	130 – 160	20 – 22
Spray arc	1.20	190 – 260	24 – 28

Shielding gas

Ar + 2% O₂ or 2 – 3% CO₂.
Gas flow rate 12 – 16 l/min.

Chemical composition, wire (typical values, %)

C	Si	Mn	Cr	Ni	Mo
0.02	0.35	1.3	16.0	5.5	1.0

Ferrite 10%

Mechanical properties

	Typical values (IIW)*	Min. values EN ISO 12072
Yield strength R _{p0,2}	460 N/mm ²	–
Tensile strength R _m	840 N/mm ²	–
Elongation A ₅	23 %	–
Impact strength KV +20°C	80 J	–
Hardness	260 Brinell	–

* Annealed at 590°C for 4 hours.

Interpass temperature: Max. 150°C.

Heat input: Max. 2.0 kJ/mm.

Heat treatment: To stabilise the structure and to minimise the content of brittle martensite an annealing at 590°C for 4 hours followed by air cooling is recommended.

Structure: Austenite balanced with ferrite and martensite.

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

Corrosion resistance: The resistance to general and pitting corrosion is in level with that of ASTM 304.

Approvals

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