

253 MA

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
153 MA™	1.4818	S30415	–	–	2372
253 MA®	1.4835	S30815	–	–	2368

Standard designations

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Characteristics and welding directions

AVESTA 253 MA is designed for welding the high temperature steel Outokumpu 253 MA, used for example in furnaces, combustion chambers, burners etc. Both the steel and the consumable provide excellent properties at temperatures 850 – 1100°C.

The composition of the consumable is balanced to ensure crack resistant weld metal.

AVESTA 253 MA has a tendency to give a thick oxide layer during welding and hot rolling. Black plates and previous weld beads should be carefully brushed or ground prior to welding.

Welding data

Diameter, mm	Current, A	Voltage, V
1.20	60 – 80	9 – 11
1.60	80 – 110	10 – 12
2.00	100 – 130	14 – 16
2.40	130 – 160	16 – 18
3.20	160 – 200	17 – 19

Shielding gas

Ar (99.95%).

Gas flow rate 4 – 8 l/min.

Chemical composition, wire (typical values, %)

C	Si	Mn	Cr	Ni	N	Others
0.07	1.60	0.6	21.0	10.0	0.15	REM

Ferrite 9 FN
2 FN DeLong
WRC-92

Mechanical properties

	Typical values (IIW)	Min. values EN ISO 14343
Yield strength $R_{p0,2}$	520 N/mm ²	–
Tensile strength R_m	720 N/mm ²	–
Elongation A_5	32 %	–
Impact strength KV +20°C	140 J	
Hardness	210 Brinell	

Interpass temperature: Max. 150°C.

Heat input: Max. 1.5 kJ/mm.

Heat treatment: Generally none.

Structure: Austenite with 3 – 10% ferrite.

Scaling temperature: Approx. 1150°C (air).

Corrosion resistance: Excellent resistance to high temperature corrosion. Not intended for applications exposed to wet corrosion.

Approvals

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