

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 in furnaces, combustion chambers, burners etc. The steel as well as the consumable provides excellent properties at temperatures 850 – 1100°C.

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

Welding data

Diameter, mm	Current, A	Voltage, V
2.40	300 – 400	29 – 33

Welding flux: AVESTA Flux 801 or 805.

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

Approvals

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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	DeLong			
		2 FN	WRC-92			

Chemical composition, all weld metal (typical values in combination with flux, %)

Flux	C	Si	Mn	Cr	Ni	FN ¹⁾
801	0.07	2.1	0.2	21.0	9.0	14
805	0.07	1.8	0.2	21.5	9.0	15

¹⁾ According to DeLong.

Mechanical properties

Typical values (IIW) in combination with flux 801

Yield strength $R_{p0.2}$	470 N/mm ²
Tensile strength R_m	690 N/mm ²
Elongation A_5	39 %
Impact strength KV +20°C	90 J

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).