AVESTA 253 MA

Welding wire TIG

Classification

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Characteristics and typical fields of application

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.

Base Materials

Outokumpu 153 MA, 253 MA, EN 1.4818, 1.4835, ASTM S30415, S30815, SS 2372, 2368.

Typical analysis of solid wire (wt.-%)

C	Si	Mn	Cr	Ni	N
0.07	1.60	0.60	21.0	10.0	0.15

Mechanical properties of all-weld metal

Heat treatment	Yield strength R_e N/mm^2	Tensile strength R_m N/mm^2	Elongation (L_0=5d_0)	Impact work ISO-V KV J
	MPa	MPa	%	+ 20 °C
As Welded	520	720	32	140

Hardness Approx. 210 Brinell

Operating data

Heat Input	: Max. 1.5 kJ/mm
Interpass temperature	: Max. 150°C
Scaling Temperature	: Approx. 1150°C
Shielding Gas	: Ar (99.95%).
Gas Flow	: rate 4 – 8 l/min.

Approvals

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Size, Packaging and Electrical Operating Data

Size (mm)	Kg / Tube	Kg / Box	Voltage (V)	Amperage (A)
2.40	5.0	20.0	16 – 18	130 – 160