

Classifications

EN ISO 14343-A

W 21 10 N

Characteristics and typical fields of application

TIG rod of W 21 10 N type designed for welding the high temperature steel 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. Scaling resistance up to 1150°C (Air). Excellence resistance to high temperature corrosion. Not intended for applications exposed to wet corrosion.

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

Micro structure: Austenite with 2 to 8 % ferrite.

Base materials

1.4835 X9CrNiSiNcE21-11-2, 1.4818 X6CrNiSiNcE19-10

UNS S30815, S30415

Outokumpu 253 MA®, 153 MA™

Typical analysis

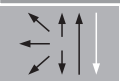
	C	Si	Mn	Cr	Ni	N	FN
wt.-%	0.07	1.6	0.6	21	10.0	0.16	2

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength R _{p0.2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact energy ISO-V KV J	Hardness
	MPa	MPa	%	20°C	HB
u	520 (≥ 420)	720 (≥ 600)	35 (≥ 30)	140 (≥ 80)	210

u untreated, as-welded – shielding gas Ar

Operating data

	Polarity	DC-	Dimension mm
	Shielding gas (EN ISO 14175)	I1	1.6 × 1000
	Rod marking	+ W 21 10 N	2.0 × 1000
			2.4 × 1000
			3.2 × 1000

Preheating and heat treatment are generally not necessary.

Suggested heat input is max. 1.5 kJ/mm, interpass temperature max. 150°C

Approvals

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