

Classifications

EN ISO 14343-A	AWS A5.9 / SFA-5.9
25 20	ER310

Characteristics and typical fields of application

TIG rod of W 25 20 / ER310 type for welding high temperature steels such as ASTM 310S. Can as be used for welding ferritic chromium steels, 14 %-Mn steels and stainless to mild steel connections. Provides a fully austenitic weld metal and is therefore somewhat more sensitive to hot cracking than 316 grades. Welding should be performed with low heat input, interpass temperature and dilution with parent metal. Corrosion resistance: Initially intended for constructions running at high temperatures. Wet corrosion properties are moderate.

Max. application temperature	Sulfur-free	Max. 2 g S/Nm ³
Air and oxidizing combustion gases	1150°C	1100°C
Reducing combustion gases	1080°C	1040°C

Base materials

EN ASTM BS NF SS 4845, 1.4845, 310S, 310S16, Z8 CN 25-20 2361

Typical analysis

	C	Si	Mn	Cr	Ni	Ferrit
wt.-%	0.12	0.35	1.6	25.5	21.0	0 FN

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
	MPa	MPa	%	20°C
u	420 (≥350)	610 (≥ 550)	33 (≥20)	120 (≥ 75)

u untreated, as welded - shielding gas Ar

Operating data

	Polarity	DC-	Dimension mm
	Shielding gas (EN ISO 14175)	I1	1.6 × 1000
	Rod marking	+ ER 310	2.0 × 1000
			2.4 × 1000

Heat treatment: Generally none. Interpass temperature: Max. 100°C. Heat input: Max. 1.0 kJ/mm

Approvals

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