

Classifications

EN ISO 14343-A	AWS A5.9 / SFA-5.9
G 25 20 Mn	ER310 (mod.)

Characteristics and typical fields of application

Solid wire of G 25 20 Mn / ER310 (mod.) type for joining and surfacing of matching / similar heat resisting, rolled, forged and cast steels, e.g. in annealing shops, hardening shops, steam boiler construction, crude oil industry and the ceramics industry. Service temperatures between 650 – 900°C should be avoided due to the risk of embrittlement. Resistance to scaling up to 1150°C (2102°F).

Atmosphere	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

1.4586 X5NiCrMoCuNb22-18, 1.4710 GX30CrSi6, 1.4713 X10CrAl7, 1.4724 X10CrAl13, 1.4740 GX40CrSi17, 1.4742 X10CrAl18 1.4762 X10CrAl25, 1.4826 GX40CrNiSi22-9, 1.4840 GX15CrNi25-20, 1.4841 X15CrNiSi25-20, 1.4845 X12CrNi25-21, 1.4828 X15CrNiSi20-12, 1.4837 GX40CrNiSi25-12, 1.4840 GX15CrNi25-20, 1.4846 GX40CrNi25-21
 UNS S31000, S31400, S44600
 AISI 305, 310, 314, 446

Typical analysis

	C	Si	Mn	Cr	Ni
wt.-%	0.13	0.9	3.2	24.6	20.5

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	-196°C
u	400 (≥ 350)	620 (≥ 550)	38 (≥ 20)	95 (≥ 47)	(≥ 32)

u untreated, as-welded – shielding gas Ar + 2.5% CO₂

Operating data

	Polarity	DC+	Dimension mm
	Shielding gas (EN ISO 14175)	M13	0.8
			1.0
			1.2

Preheating and interpass temperatures for ferritic steels 200 – 300°C.

Shielding gas: Ar + 2 – 3% CO₂

Approvals

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