

## Classifications

<b>EN ISO 14343-A</b>	<b>AWS A5.9 / SFA-5.9</b>
W 25 20 Mn	ER310 (mod.)

## Characteristics and typical fields of application

TIG rod of W 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 <sup>3</sup>
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 G-X40CrSi17, 1.4742 X10CrAl18, 1.4762 X10CrAl 25, 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 <sub>p0.2</sub>	Tensile strength R <sub>m</sub>	Elongation A (L <sub>0</sub> =5d <sub>0</sub> )	Impact energy ISO-V KV J
	MPa	MPa	%	–40°C
u	420 (≥ 350)	630 (≥ 550)	33 (≥ 20)	128 (≥ 32)

u untreated, as-welded – shielding gas Ar

## Operating data

	<b>Polarity</b>	DC-	<b>Dimension mm</b>
	<b>Shielding gas (EN ISO 14175)</b>	I1	1.6 × 1000
	<b>Rod marking</b>	+ ER310 (mod.)	2.0 × 1000
			2.4 × 1000
			3.2 × 1000

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

## Approvals

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