Thermanit 310 Mn

TIG rod, high-alloyed, austenitic stainless, heat resistant

Classifications

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

Characteristics and typical fields of application

TIG rod of W 25 20 Mn / ER310 (mod.) type for analogous, heat resisting, rolled, forged and cast steels, e.g. in annealing shops, hardening shops, steam boiler construction, the crude oil industry and the ceramics industry. Fully austenitic deposit. Preferably employed for applications involving the attack of oxidizing, nitrogen-containing or low-oxygen gases. In sulfurous atmospheres cap passes should be made with BöHLER FA-IG / BöHLER FOX FA. The temperature range between 650ºC and 900ºC should be avoided owing to the risk of embrittlement.

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

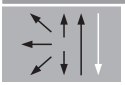
	C	Si	Mn	Cr	Ni
wt.-%	0.13	0.9	3.2	24.6	20.5

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

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A (L_0=5d_0)	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



Polarity	DC-
Shielding gas (EN ISO 14175)	I1
Rod marking	+ ER310 (mod.)

Dimension mm
1.6 × 1000
2.0 × 1000
2.4 × 1000
3.2 × 1000

Preheating and interpass temperatures for ferritic steels 200 – 300ºC.
Shielding gas: Ar. Gas flow: 8 – 12 l/min.
Polarity: DC-

Approvals

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