Thermanit H-347

TIG rod, high-alloyed, austenitic stainless, stabilized

Classifications

EN ISO 14343-A	AWS A5.9 / SFA-5.9
W 19 9 Nb	ER347

Characteristics and typical fields of application

Solid wire TIG rod of W 19 9 Nb / ER347 type for joining and surfacing application with matching and similar stabilized and non-stabilized austenitic CrNi(N)-steels and cast steel grades. Service temperatures from -196ºC to 400ºC. Corrosion resistance similar to matching stabilized austenitic CrN-steels .

Base materials

1.4301 X5CrNi18-10, 1.4306 X2CrNi19-11, 1.4311 X2CrNiN18-9, 1.4312 GX10CrNi18-8, 1.4541 X6CrNiTi18-10, 1.4546 X5CrNiNb18-10, 1.4550 X6CrNiNb18-10, 1.4552 GX5CrNiNb19-11
UNS S30400, S30403, S30453, S32100, S34700
AISI 347, 321,302, 304, 304L, 304LN

Typical analysis

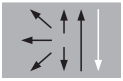
	C	Si	Mn	Cr	Ni	Nb
wt.-%	0.05	0.5	1.8	19.5	9.5	≥ 12×C

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	420 (≥350)	600 (≥ 550)	30 (≥ 25)	100 (≥ 65)	(≥ 27)

u untreated, as-welded – shielding gas Ar

Operating data



Polarity	DC-
Shielding gas (EN ISO 14175)	I1
Rod marking	+ W 19 9 Nb / ER 347

Dimension mm
1.0 × 1000
1.2 × 1000
1.6 x 1000
2.0 × 1000
2.4 x 1000
3.2 x 1000
4.0 x 1000

Suggested heat input is max. 1.5 kJ/mm and interpass temperature max. 100ºC. Post-weld heat treatment generally not needed. In special cases, solution annealing can be performed at 1050ºC followed by water quenching. Can be used for cladding, which normally requires stress relieving at approximately 590ºC.

Approvals

TÜV (09475), DB (43.132.21), CE