Thermanit 308 H

Solid wire, high-alloyed, austenitic stainless, heat resistant

Classifications

EN ISO 14343-A	AWS A5.9 / SFA-5.9
G 19 9 H	ER308H

Characteristics and typical fields of application

Solid wire of G 19 9 H / ER308H type for welding heat and creep-resistant austenitic stainless steels such as 18Cr-10Ni and similar. The consumable has an enhanced carbon content when compared to 1.4307 / 308L. This provides improved creep resistance properties, which is advantageous at service temperatures up to 400ºC. Short term service temperatures up to 600ºC are possible. Good resistance to general corrosion.
The microstructure is austenite with 5 – 10% ferrite.

Base materials

1.4301 X5CrNi18-10, 1.4541 X6CrNiTi18-10, 1.4550 X6CrNiNb18-10, 1.4878 X8CrNiTi18-10, 1.4948 X7CrNi18-9
UNS S30400, S30409, S32100, S34700
AISI 304, 304H, 321, 321H, 347, 347H

Typical analysis

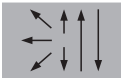
	C	Si	Mn	Cr	Ni	FN
wt.-%	0.05	0.4	1.8	20	9.0	9

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	Hardness
	MPa	MPa	%	20°C	HB
u	400 (≥ 350)	610 (≥ 550)	37 (≥ 30)	100 (≥ 47)	210

u untreated, as-welded – shielding gas Ar + 2% CO_2

Operating data



Polarity	DC+
Shielding gas (EN ISO 14175)	M12 M13

Dimension mm
1.0
1.2

Suggested heat input is max. 2.0 kJ/mm and interpass temperature max. 150ºC. Post-weld heat treatment generally not needed. In special cases, solution annealing can be performed at 1050ºC followed by water quenching.
Shielding gas: Ar + 2% O_2, Ar + 2 – 3% CO_2

Approvals

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