Thermanit JE-308L Cryo

Solid wire, high-alloyed, austenitic stainless, cryogenic

Classifications

EN ISO 14343-A	AWS A5.9 / SFA-5.9
G 19 9 L	ER308L

Characteristics and typical fields of application

Solid wire G 19 9 L / ER308L type for welding 1.4306 / 304L, 304LN steel grades. Controlled weld metal ferrite content, particularly for good cryogenic toughness and lateral expansion down to –196ºC. Max. service temperature 350ºC.

Base materials

1.4301 X5CrNi18-10, 1.4306 X2CrNi19-11, 1.4307 X2CrNi18-9, 1.4311 X2CrNiN18-9, 1.4312 GX10CrNi18-8, 1.4541 X6CrNiTi18-10, 1.4546 X5CrNiNb18-10, 1.4550 X6CrNiNb18-10
UNS S30400, S30403, S30453, S32100, S34700
AISI 304, 304L, 304LN, 302, 321, 347

Typical analysis

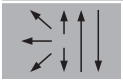
	C	Si	Mn	Cr	Ni	FN
wt.-%	≤ 0.02	0.5	1.7	20	10.5	3 – 6

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		Lateral expansion mm
	MPa	MPa	%	20°C	–196°C	–196°C
u	410 (≥ 320)	540 (≥ 510)	38 (≥ 35)	110 (≥ 100)	50 (≥ 32)	≥ 0.38

u untreated, as-welded – shielding gas Ar + 2.5% CO_2

Operating data



Polarity	DC+
Shielding gas (EN ISO 14175)	M12

Dimension mm
1.0

Suggested heat input is max. 1.5 kJ/mm and interpass temperature max. 150ºC.
Post-weld heat treatment generally not needed. In special cases, solution annealing can be performed at 1000ºC followed by water quenching.
Shielding gas: Ar + 2 – 3% CO_2

Approvals

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