Thermanit GE-316L Cryo

Solid wire, high-alloyed, austenitic stainless, cryogenic

Classifications

EN ISO 14343-A	AWS A5.9 / SFA-5.9
G 19 12 3 L	ER316L

Characteristics and typical fields of application

GMAW solid wire of type G 19 12 3 L / ER316L with controlled weld metal ferrite content (3-6 FN), particularly for good cryogenic toughness and lateral expansion down to –196 °C like specified for LNG applications. Max. service temperature 400 °C.

Base materials

1.4401 X5CrNiMo17-12-2, 1.4404 X2CrNiMo17-12-2, 1.4435 X2CrNiMo18-14-3, 1.4436 X3CrNiMo17-13-3, 1.4571 X6CrNiMoTi17-12-2, 1.4580 X6CrNiMoNb17-12-2, 1.4583 X10CrNiMoNb18-12, 1.4409 GX2CrNiMo 19-11-2 UNS S31603, S31653; AISI 316L, 316Ti, 316Cb

Typical analysis

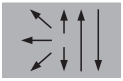
	C	Si	Mn	Cr	Ni	Mo	FN
wt.-%	≤ 0.02	0.35	1.9	18.5	12.8	2.6	3 – 6

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	%	–196°C	–196°C
u	430 (≥ 320)	580 (≥ 510)	35 (≥ 25)	≥ 32	≥ 0.38

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

Operating data



Polarity	DC+	Dimension mm
Shielding gas (EN ISO 14175)	M12	1.0
		1.2

Approvals

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