Thermanit 20/16 SM

Solid Wire, stainless, high-alloyed, special applications

Classifications

EN ISO 14343-A

G Z 22 17 8 4 N L

Characteristics and typical fields of application

Solid wire of G Z 22 17 8 4 N L type. The fully austenitic weld metal is paramagnetic, seawater resistant and guarantees high ductility at low temperatures. For joining and cladding of non-magnetic CrNiMo(Mn,N) steel and cast grades like for seawater desalination plants, centrifuges, bleaching plants and in special shipbuilding.
Rel. magnetic permeability μ_r = 1,01 (at 8000 A/m). Service temperature max. 350ºC.

Base materials

1.3948 X4CrNiMnMoN19-13-8, 1.3951 X2CrNiMoN22-15, 1.3952 X2CrNiMoN18-14-3, 1.3957 X2CrNiMoNbN21-15, 1.3964 X2CrNiMnMoNNb21-16-5-3, 1.4569 GX2CrNiMoNbN21-15-4-3, 1.5662 X8X9
UNS S20910

Typical analysis

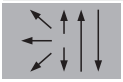
	C	Si	Mn	Cr	Ni	Mo	N
wt.-%	0.03	0.7	7.3	22.2	18.0	3.6	0.24

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	%	-60°C	20°C
u	460 (≥ 430)	660 (≥ 640)	33 (≥ 30)	(≥ 32)	100 (≥ 70)

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

Operating data



Polarity	DC+
Shielding gas (EN ISO 14175)	M12 M22 ArHeC 15/2

Dimension mm
1.0
1.2

Suggested heat input is max. 1.5 kJ/mm and interpass temperature max. 100ºC. Heat treatment generally not needed.

Approvals

DNV, WIWEB, CE