Thermanit 22/09

TIG rod / wire, high-alloyed, duplex stainless

Classifications

EN ISO 14343-A	AWS A5.9 / SFA-5.9
W 22 9 3 N L	ER 2209

Characteristics and typical fields of application

TIG rod and wire of W 22 9 3 N L / ER2209 type for manual and automatic welding. Resistant to intercrystalline corrosion and wet corrosion up to 250ºC. Good resistance to stress corrosion cracking in chlorine and hydrogen sulfide-bearing environment. High Cr and Mo-contents provide resistance to pitting corrosion. For joining and surfacing work with matching and similar austenitic steel and cast steel grades.

Typical analysis

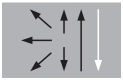
	C	Si	Mn	Cr	Ni	Mo	N
wt.-%	0.02	0.4	1.7	22.5	8.8	3.2	0.15

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	-40°C
u	600 (≥ 450)	720 (≥ 550)	33 (≥ 20)	100 (≥ 47)	≥ 47

u untreated, as-welded

Operating data



Polarity	DC-
Shielding gas (EN ISO 14175)	I1 Ar + 2% N2 Ar + 30% He + 2% N2

Dimension mm
0.8
1.2
1.6 × 1000
2.0 × 1000
2.4 x 1000
3.2 × 1000

Suggested heat input is 0.5 – 1.5 kJ/mm, interpass temperature max. 150ºC. Attention must be paid to embrittlement susceptibility of the parent metal. The root side corrosion resistance may be improved by use of nitrogen-based backing gas.

Approvals

TÜV (03343), DB (43.132.97), ABS, DNV, LR, NAKS, CE