Thermanit 309L Mo

Solid Wire, stainless, high-alloyed, special applications

Classifications

EN ISO 14343-A	AWS A5.9 / SFA-5.9
23 12 2 L	ER309LMo(mod.)

Characteristics and typical fields of application

Solid wire of type 309L Mo / 23 12 2 L for welding dissimilar joints of un-alloyed and stainless steels and for cladding on low-alloyed steels. The all-weld-metal ensures a high resistance against cracking and is also suitable for welding of high strength steels. When used for surfacing the composition is more or less equal to that of ASTM 316 from the first run.

Base materials

Dissimilar joints of un- or low-alloyed steels with stainless steels. Cladding on low-alloyed steels.

Typical analysis

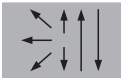
	C	Si	Mn	Cr	Ni	Mo	FN
wt.-%	0.02	0.35	1.50	21.50	15.0	2.70	8 (WRC 92)

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	390 (≥ 350)	610 (≥ 550)	32 (≥ 30)	75 (≥60)	60 (≥ 47)

u - untreated, Shielding gas Ar + 2 % O2

Operating data



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

Dimension mm
0.8
1.0
1.2

Preheating and heat treatment: In general none. For joints with low-alloyed steels stress relieved annealing is recommended in some cases. Please take care about the embrittlement of the base material in detail! Interpass temperature max. 150ºC Heat input max. 2.0 kj/mm.
Shielding gas: Ar + 2 % O2 or Ar + 2 – 3 % CO2

Approvals

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