KESTRA 4829 MoW

Stick electrode, high-alloyed, rutile

Prior Welding

Classifications

EN ISO 3581-A	AWS A5.4	Wst.-Nr.
E 23 12 2 L R 3 2	E309LMo-17	1.4459

Characteristics and typical fields of application

Well suited for austenitic-ferrite joints, max. application temperature 300 °C (572 °F). Stainless, wet corrosion up to 350 °C (662 °F). For joining unalloyed/low alloy steels / cast steel grades or stainless / heat resistant Cr steels / cast steel grades to austenitic steels / cast steel grades.
For depositing intermediate layers when welding the clad side of plates of low carbon, nonstabilized or stabilized austenitic CrNiMo(N) austenitic metals.

Base materials

TÜV certified parent metals
Dissimilar joints of 1.4583 – X10CrNiMoNb18-12, 1.4429 – X2CrNiMoN17-13-3 and ferritic steels up to boiler steel S355N; high tensile, unalloyed and alloyed structural and quenched and tempered steels of matching parent metal or in combination; unalloyed and alloyed boiler or structural steels with high alloyed Cr, CrNi and CrNiMo steels. Ferrite-austenite-joints for steam boiler and pressure boiler construction. Weld cladding: for first layer of corrosion resistant cladding on P235GH, P265GH, S255N, P295GH, S355N - S500N; for first layer of corrosion resistant claddings on creep resistant quenched and tempered fine grained structural steels acc. To leaflet "AD-Merkblatt" HPO, group 3.

Typical analysis of all-weld metal (wt.-%)

C	Mn	Si	Cr	Mo	Ni
0.02	**0.8**	**0.7**	**23.0**	**2.7**	**12.5**

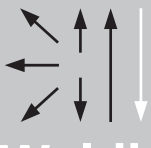
Structure: Austenite with part ferrite

Mechanical properties of all-weld metal – typical values (minimum values)

Heat-treatment	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact work ISO-V KV J	
	MPa	MPa	%	20°C	-20°C
u	**580** (≥ 350)	**720** (≥ 550)	≥ **25**	≥ **47**	≥ **32**

u: untreated, as welded

Operating data



Ø (mm)	Polarity:	L mm	Amps A
2.5	DC (+) / AC	350	60 - 80
3.2		350	80 - 120
4.0		350	100 - 160

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Welding instruction		
Materials	Preheating	Postweld heat treatment
Joining CrNi(Mo,N) austenitic steels to unalloyed/low alloy steels/ cast steel grades	According to ferritic parent metal; mostly not necessary	Annealing temperature max. 300 °C (572 °F), otherwise carbide precipitation in weld fusion zone, loss of toughness (risk of fracturing)
Joining CrNi(Mo,N) austenitic steels to stainless/heat resistant Cr steels/cast steel grades	According to ferritic parent metal	According to parent metals. Attention must be paid to resistance to intercrystalline corrosion and susceptibility of the austenitic metal side to embrittlement
Cladded plates and cast materials with austenitic CrNi(Mo,N) metal	According to parent metals	According to parent metals. Attention must be paid to resistance to intercrystalline corrosion and susceptibility of the austenitic metal side to embrittlement
Approvals		
TÜV (03010.)		