Thermanit 617

Stick electrode, high-alloyed, basic

Classifications

EN ISO 14172	AWS A5.11	Mat. No.
E Ni 6117 (NiCr22Co12Mo)	ENiCrCoMo-1 (mod.)	2.4628

Characteristics and typical fields of application

Thermanit 617 is suitable for joining high-temperature and similar nickel-base alloys, heat resistant austenitic and cast alloys.
The weld metal is resistant to hot-cracking and is used for service temperatures up to 1100° C.
Scale-resistance up to 1100° C in oxidizing and carburized atmospheres, e. g. gasturbines, ethylene production plants.
Thermanit 617 can be welded in all positions except vertical-down. It has a stable arc. The seam is finely rippled and notch-free. Easy slag removal.
Preheating temperature should be adjusted to the base material. Post weld heat treatments can be applied independently of the weld metal.

Base materials

2.4663 (NiCr23Co12Mo) - Alloy 617
2.4851 (NiCr23Fe)
1.4876 (X10 NiCrAlTi 32 21)
1.4859 (GX10 NiCrSiNb 32 20)

Typical analysis of all-weld metal

	C	Si	Mn	Cr	Mo	Ni	Co	Al	Ti	Fe
wt.-%	< 0.08	0.7	< 0.5	21.0	9.0	Bal.	11.0	1.2	0.5	1.0

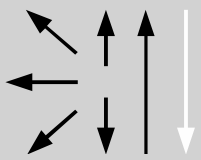
Structure: Austenite

Mechanical properties of all-weld metal

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
aw	400	700	30	100

Creep rupture properties: According to matching high temperature steels / alloys

Operating data



Polarity:	ø (mm)	L mm	Amps A
DC +	2.5	250	45 – 65
	3.2	300	65 – 105
	4.0	350	85 – 130

Welding instruction

Preheating	Post-weld heat treatment
None	Mostly none. If necessary, solution annealing at 1150 °C (2102 F)

Approvals

TÜV (06844), CE

All information provided is based upon careful investigation and intensive research.
However, we do not assume any liability for correctness and information is subject to change without notice.