Thermanit 617

TIG rod, high-alloyed, nickel-base

Classifications

EN ISO 18274	AWS A5.14 / SFA-5.14
S Ni 6617 (NiCr22Co12Mo9)	ERNiCrCoMo-1

Characteristics and typical fields of application

Nickel-base solid wire TIG rod of S Ni 6617 (NiCr22Co12Mo9) / ERNiCrCoMo-1 type for joining and surfacing applications with matching and similar heat resistant steels and alloys. Resistant to scaling up to 1100ºC, high temperature resistant up to 1000ºC. High resistance to hot gases in oxidizing and carburizing atmospheres.

Base materials

1.4558 X2NiCrAlTi32-20, 1.4859 GX10NiCrNb38-18 / GX10NiCrNb32-20, 1.4861 X10NiCr32-20, 1.4876 X10NiCrAlTi32-20 / X10NiCrAlTi 32-21, 1.4877 X6NiCrNbCe32-27, 1.4959 X8NiCrAlTi32-21, 2.4663 NiCr23Co12Mo, 2.4851 NiCr23Fe
UNS N08810, N08151, N08800, N08811, N06617, N06601 Alloy 800, 800H, 800HT, 617, 617B, 601

Typical analysis

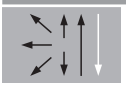
	C	Si	Mn	Cr	Ni	Mo	Co	Ti	Fe	Al
wt.-%	0.05	0.1	0.1	21.5	Bal.	9.0	11.0	0.3	0.5	1.3

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 work ISO-V KV J
	MPa	MPa	%	20°C
u	>450	>700	>30	>60

u untreated, as-welded – shielding gas Ar

Operating data



Rod marking	Ni 6617 / ER NiCrCoMo-1

Dimension mm	Current A	Voltage V
2.0 × 1000	100 – 130	14 – 16
2.4 × 1000	130 – 160	16 – 18

Suggested heat input is max. 1.0 kJ/mm and interpass temperature max. 100ºC.
Preheating and post-weld heat treatment generally not needed. In special cases, solution annealing can be performed at 1150ºC.
Creep rupture properties according to matching high temperature steels / alloys.
Shielding gas: Ar. Gas flow: 4 – 8 l/min.
Polarity: DC-

Approvals

TÜV (06845)