

Classifications

EN ISO 18274	AWS A5.14	W. No.
S Ni 6082 (NiCr20Mn3Nb)	ERNiCr-3	2.4806

Characteristics and typical fields of application

GTAW rod for welding of nickel-base alloys, high-temperature and creep resisting steels, heat resisting and cryogenic materials, low-alloyed problem steels and dissimilar joints. Ferritic-austenitic joints for service temperatures above +300 °C or for applications where a post weld heat treatment is required.

Suitable in pressure vessel fabrication from -196 °C to +550 °C, otherwise resistant to scaling up to +1200 °C (S-free atmosphere). Not susceptible to embrittlement, C-diffusion at elevated temperatures largely inhibited. Resistant to thermal shocks, corrosion resistant, fully austenitic, low coefficient of thermal expansion. between the coefficient values of C-steel and austenitic CrNi (Mo)-steel.

Both the TIG- rod and the weld deposit satisfy highest quality requirements.

Base materials

2.4816 Ni Cr 15 Fe, 2.4817 LC-NiCr 15 Fe, Alloy 600, Alloy 600 L

Nickel and nickel alloys, low-temperature steels up to 5% Ni-steels, unalloyed and alloyed, high temperature, creep resisting, high-alloy Cr- and CrNiMo-steels particularly for joint welding of dissimilar steels, and nickel to steel combinations; also recommended for Alloy 800

Typical analysis of the TIG rods (wt.-%)

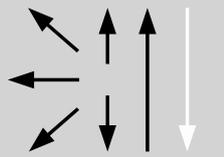
	C	Si	Mn	Cr	Ni	Ti	Nb	Fe
wt.-%	0.02	0.1	3.1	20.5	Bal.	+	2.6	≤ 1.0

Mechanical properties of all-weld metal

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	-196 °C
u	440 (≥ 400)	680 (≥ 620)	42 (≥ 35)	190	100 (≥ 32)

u untreated, as welded – shielding gas Argon

Operating data

	Polarity: DC (-)	Shielding gases: 100 % Argon Ar + He mixture gases	Rod marking: front: ✦ 2.4806 back: ERNiCr-3	∅ (mm)
				1.6
				2.0
				2.4

Approvals

TÜV-D (04328.), Statoil, NAKS, SEPROZ, CE
NiCr 70 Nb-IG A: TÜV-D (09403.), CE