

Classifications

EN ISO 18274	AWS A5.14
S Ni 6686 (NiCr21Mo16W4)	ERNiCrMo-14

Characteristics and typical fields of application

High corrosion resistance in reducing and oxidizing environments.

Well suited for joining and surfacing on matching and similar wrought and cast alloys. For welding the clad side of plates of matching and similar alloys e.g. flue gas desulphurization scrubber.

Base materials

2.4602 – NiCr21Mo14W / Alloy 22 – UNS N06022
 2.4605 – NiCr23Mo16Al / Alloy 59 – UNS N06059
 2.4606 – NiCr21Mo16W / Alloy 686 – UNS N06686
 2.4819 – NiMo16Cr15W / Alloy C-276 – UNS N10276
 16Mo3, ASTM A 312 Gr. T11/T12
 S 355J2G3, ASTM A 517

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

	C	Si	Mn	Cr	Ni	Mo	W	Al	Fe
wt-%	0.01	0.08	< 0.5	22.8	Bal.	16	3.8	0.3	< 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	450	760	30	50

Operating data

Polarity:	Shielding gas:	Marks:	ø (mm)	L mm
DC (–)	(EN ISO 14175) I1, R 1 ArH - 2	✦ Ni 6686 / ER NiCrMo-14	1.6	1000
			2.0	1000
			2.4	1000

Welding instruction

Materials	Preheating	Postweld heat treatment
Matching / similar materials	None	None. If necessary solution annealing at min. 1180 °C (2156 °F) / water