

Classifications

EN ISO 18274	AWS A5.14	Mat. No.
S Ni 6625 (NiCr22Mo9Nb)	ERNiCrMo-3	2.4831

Characteristics and typical fields of application

High resistance to corrosive environment. Resistant to stress corrosion cracking. Resistant to scaling up to 1000 °C (1832 °F). Temperature limit: 500°C (932 °F) max. in sulphureous atmospheres. High temperature resistant up to 900 °C (1652 °F). Good toughness at subzero temperatures as low as -196 °C (-321 °F). For joining and surfacing work with matching / similar corrosion-resistant materials as well as on matching and similar heat resistant, high temperature resistant steels and alloys. For joining and surfacing work on cryogenic austenitic CrNi(N) steels / cast steel grades and on cryogenic Ni-steels suitable for quenching and tempering.

Base materials

TÜV-certified parent metal

1.4547	- Alloy 254SMO	- UNS S31254	- X1CrNiMoCuN20-18-7
1.4876	- Alloy 800	- UNS N08800	- X10NiCrAlTi32-20
1.4958	- Alloy 800 H	- UNS N08810	- X5NiCrAlTi31-20
2.4816	- Alloy 600	- UNS N06600	- NiCr15Fe
2.4856	- Alloy 625	- UNS N06625	- NiCr22Mo9Nb
2.4858	- Alloy 825	- UNS N08825	- NiCr21Mo

and combinations of aforementioned materials with ferritic steels up to S355J, 16Mo3, 10CrMo9-10 and 9% Ni steels.

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

	C	Si	Mn	Cr	Mo	Ni	Nb	Fe
wt-%	0.03	0.1	0.1	22.0	9.0	Bal.	3.6	≤ 0.5

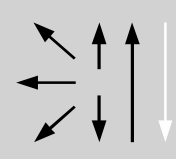
Structure: Austenite

Mechanical properties of all-weld metal

Heat-treatment	Yield strength	Yield strength	Tensile strength	Elongation	Impact work	
	R _{p0.2}	R _{p1.0}	R _m	A (L ₀ =5d ₀)	ISO-V CVN J	
	MPa	MPa	MPa	%	+20 °C	-196 °C
aw	460	500	740	35	120	100

Creep rupture properties: According to matching / similar creep resistant materials.

Operating data

	Polarity:	Shielding gas:	Marks:	ø mm	L mm
	DC (-)	(EN ISO 14175) I1	✦ Ni 6625 / ERNiCrMo-3	1.6	1000
				2.0	1000
				2.4	1000
				3.2	1000

Welding instruction		
Materials	Preheating	Postweld heat treatment
Matching / similar metals	None	None. If necessary, solution annealing at 1150 °C (2102 °F)
Cryogenic CrNi(N) steels / cast steel grades	None	None
Cryogenic Ni steels (X8Ni9) suitable for quenching and tempering	According to parent metal	None
Approvals		
TÜV (03464), DB (43.132.33), DNV, CE		