

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 with 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

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 like S355J, 16Mo3, 10CrMo9-10 and 9% Ni steels.

Typical analysis of solid wire (wt.-%)

	C	Si	Mn	Cr	Mo	Ni	Nb	Fe
wt-%	0.03	0.25	0.20	22.0	9.0	Bal.	3.6	< 0.5

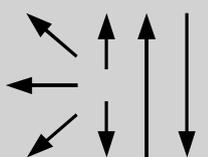
Structure: Austenite

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	30	60	40

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

Operating data

	Polarity: DC (+)	Shielding gas: (EN ISO 14175) I1, M12 (ArHeC-30/0.5)	ø mm 0.8 1.0 1.2 1.6	Spool: BS300 BS300 BS300 BS300
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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		None
Approvals		
TÜV (03462), DB (43.132.25), CE		