OK Autrod NiCrMo-3

Bare corrosion and heat-resisting Ni-Cr-Mo rod for welding of high alloyed heat-resisting and corrosion resisting materials, 9%Ni-steels and similar steels with high notch toughness at low temperatures. The filler metal is also used for welding of dissimilar joints containing non- and low alloyed steel. The weld metal has good mechanical properties at high and low temperatures. Good resistance to pitting corrosion and stress corrosion cracking. The alloy is extensively required for weld cladding of valve components and pipe inner diameters in oil and gas applications.

Specifications	
Classifications	SFA/AWS A5.14 : ERNiCrMo-3 EN ISO 18274 : S Ni 6625
Approvals	DNV-GL : 1.2 mm VdTÜV : 12413

Approvals are based on factory location. Please contact ESAB for more information.

Alloy Type	Alloyed nickel (Ni + 22 % Cr + 9 % Mo - 3.5 % Nb)
Shielding Gas	I1, I3, M12 (EN ISO 14175)

Tensile_Properties			
Testing Condition	**Yield Strength**	**Tensile Strength**	**Elongation**
As Welded	500 MPa	780 MPa	45 %
As welded+	380 MPa	580 MPa	48 %
Stress Relieved 15 hour(s) 550 °C	490 MPa	796 MPa	40 %
SHT 0.5 hour(s) 1175 °C	375 MPa	765 MPa	46 %
SHT+ 0.5 hour(s) 1175 °C	270 MPa	590 MPa	46 %

Charpy Testing		
Testing Condition	**Testing Temp**	**Impact Value**
As Welded	20 °C	130 J
Stress Relieved 15 hour(s) 550 °C	20 °C	140 J
SHT 0.5 hour(s) 1175 °C	20 °C	185 J
As Welded	-105 °C	120 J
SHT 0.5 hour(s) 1175 °C	-105 °C	170 J
As Welded	-196 °C	110 J
Stress Relieved 15 hour(s) 550 °C	-196 °C	120 J
SHT 0.5 hour(s) 1175 °C	-196 °C	150 J

Typical Weld Metal Analysis %									
C	**Mn**	**Si**	**S**	**P**	**Ni**	**Cr**	**Mo**	**Al**	**Cu**
0.011	0.05	0.05	0.001	0.004	65	21.8	8.7	0.09	0.01

Typical Weld Metal Analysis %		
Ti	**Fe**	**Nb+Ta**
0.19	0.37	3.56

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Typical Wire Composition %							
C	**Mn**	**Si**	**Ni**	**Cr**	**Mo**	**Fe**	**Nb+Ta**
0.02	0.04	0.06	Bal	22.7	8.6	0.3	3.5

Deposition Data				
Diameter	**Amps**	**Volts**	**Wire Feed Speed**	**Deposition Rate**
0.9 mm	80-190 A	20-27 V	5.0-16.0 m/min	2.0-4.2 kg/h
1.0 mm	100-200 A	21-27 V	6.0-13.0 m/min	2.5-5.5 kg/h
1.14 mm	130-240 A	22-28 V	6.0-12.0 m/min	3.0-5.7 kg/h
1.2 mm	160-280 A	24-30 V	6.0-10.0 m/min	3.6-6.0 kg/h
1.6 mm	200-350 A	25-32 V	4.0-8.0 m/min	4.3-8.6 kg/h