

OK Autrod 13.37

A copper coated, low-alloyed, chromium-molybdenum (9% Cr, 1% Mo), solid wire for GMAW of high temperature steels and steels for hot hydrogen service, especially in oil refineries. The electrode is a plain ER505 type.

Specifications

Classifications

EN ISO 21952-A : G CrMo9
EN ISO 21952-B : G 55A 9C1M
SFA/AWS A5.28 : ER80S-B8

Alloy Type

Alloyed steel (9 % Cr, 1 % Mo)

Shielding Gas

M12, M13, M21 (EN ISO 14175)

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
EN 80Ar/20CO₂ (M21)			
Stress Relieved 2 hour(s) 760 °C	536 MPa	620 MPa	23 %
AWS Ar/1-5%O₂ (M13)			
Stress Relieved 2 hour(s) 745 °C	523 MPa	680 MPa	22 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
EN 80Ar/20CO₂ (M21)		
Stress Relieved	20 °C	91 J
Stress Relieved	-20 °C	50 J
AWS Ar/1-5%O₂ (M13)		
Stress Relieved	20 °C	115 J
Stress Relieved	-20 °C	50 J

Typical Wire Composition %

C	Mn	Si	Ni	Cr	Mo
0.06	0.52	0.45	0.23	8.66	1.00

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
0.1	0.5	0.4	0.005	0.01	0.1	8.6	0.9	0.15

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
0.9 mm	70-250 A	18-26 V	3.0-12.0 m/min	0.9-3.5 kg/h
1.2 mm	120-350 A	20-33 V	2.7-12.4 m/min	1.5-6.6 kg/h
1.6 mm	225-480 A	26-38 V	3.5-12.2 m/min	3.3-0.0 kg/h