

## OK Autrod 13.28

A copper coated, Ni-alloyed (2,4% Ni), solid wire for GMAW of low-alloyed and low temperature steels in applications such as vessels, pipes and in the offshore industry with a minimum yield strength less than 470 Mpa. The wire provides a good impact toughness down to -60C.

Specifications	
<b>Classifications</b>	EN ISO 14341-A : G 46 6 M21 2Ni2 EN ISO 14341-A : G 2Ni2 SFA/AWS A5.28 : ER80S-Ni2
<b>Approvals</b>	CE : EN 13479 DNV-GL : V YMS (M21) NAKS/HAKC : 0.8-1.2 mm NAKS/HAKC : 1.0 mm NAKS/HAKC : 1.2 mm VdTÜV : 06852

<b>Alloy Type</b>	Low alloyed (2.5 % Ni)
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Typical Tensile Properties			
Condition	Yield Strength	Tensile Strength	Elongation
<b>EN Ar/20CO2 (M21)</b>			
As Welded	540 MPa	630 MPa	28 %
<b>AWS Ar/1-5O2 (M13)</b>			
Stress Relieved 1 hour(s) 620 °C	540 MPa	630 MPa	29 %

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
<b>EN Ar/20CO2 (M21)</b>		
As Welded	0 °C	130 J
As Welded	-60 °C	60 J
As Welded	-40 °C	100 J
<b>AWS Ar/1-5O2 (M13)</b>		
Stress Relieved 1 hour(s) 620 °C	0 °C	162 J
Stress Relieved 1 hour(s) 620 °C	-62 °C	131 J
Stress Relieved 1 hour(s) 620 °C	-29 °C	168 J

Typical Wire Composition %			
C	Mn	Si	Ni
0.08	1.04	0.53	2.36

Typical Weld Metal Analysis %									
C	Mn	Si	S	P	Ni	Cr	Mo	V	Al
0.1	1	0.4	0.01	0.01	2.4	0.05	0.1	0.001	0.01

Typical Weld Metal Analysis %	
Cu	Ti+Zr
0.15	0.05



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Deposition Data				
Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
0.8 mm	40-170 A	16-22 V	2.0-10.8 m/min	0.4-2.6 kg/h
1.0 mm	80-280 A	18-28 V	2.7-14.7 m/min	1.0-5.4 kg/h
1.2 mm	120-350 A	20-33 V	2.7-12.4 m/min	1.5-6.6 kg/h