

OK Autrod 13.29

A copper coated, low-alloyed, chromium-nickel-molybdenum (0,3% Cr, 1,4% Ni, 0,25% Mo), solid wire for GMAW of high tensile strength steels requiring tougher weld metal for critical applications. Also suitable when fairly high impact strength at lower temperatures is required. OK Autrod 13.29 delivered in the unique Esab Octagonal Marathon Pac is excellent in mechanised welding applications.

Specifications

Classifications

EN ISO 16834-A : G 69 4 M20 Mn3Ni1CrMo
 EN ISO 16834-A : G 69 4 M21 Mn3Ni1CrMo
 EN ISO 16834-A : G Mn3Ni1CrMo
 SFA/AWS A5.28 : ER100S-G

Approvals

CE : EN 13479
 DB : 42.039.18
 UKCA : EN 13479
 VdTÜV : 04436

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

Alloy Type

Low alloyed (1.4 % Ni, 0.3 % Cr, 0.3 % Mo)

Shielding Gas

M20, M21 (EN ISO 14175)

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
AWS M21			
As Welded	715 MPa	805 MPa	17 %
EN M21			
Stress Relieved 15 hour(s) 620 °C	690 MPa	750 MPa	20 %
As Welded	730 MPa	800 MPa	19 %
EN M20			
As Welded	725 MPa	780 MPa	19 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
AWS M21		
As Welded	-30 °C	80 J
As Welded	-40 °C	60 J
EN M21		
As Welded	-40 °C	60 J
Stress Relieved	-30 °C	60 J
Stress Relieved	-20 °C	60 J
As Welded	20 °C	100 J
Stress Relieved	20 °C	130 J
EN M20		
As Welded	-40 °C	85 J

Typical Wire Composition %

C	Mn	Si	Ni	Cr	Mo
0.089	1.54	0.53	1.23	0.26	0.24

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	V	Cu
0.06	1.6	0.6	0.01	0.01	1.4	0.3	0.25	0.07	0.3

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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
1.6 mm	225-480 A	26-38 V	3.1-8.1 m/min	3.3-0.0 kg/h