Atom Arc 7018

Atom Arc 7018 is an all-position low hydrogen moisture resistant electrode with a deep, penetrating arc. This premium quality electrode meets a multitude of codes and welding specifications. Atom Arc 7018 was developed to weld carbon and low-alloy steels, including a variety of hardenable steels.

Specifications	
Classifications	ASME SFA 5.1 : E7018 H4R AWS A5.1 : E7018 H4R
Approvals	ABS : 3Y(H5) ABS : E7018 (H4R) CWB : E4918-H4 DNV-GL : 3 YH10 LR : 3Y H10 MIL : MIL-7018M
Industry	Automotive Railcars Bridge Construction Industrial and General Fabrication Civil Construction Ship/Barge Building Mobile Equipment

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

Welding Current	AC, DC+
Diffusible Hydrogen	< 4.0 ml/100g
Alloy Type	Carbon Manganese

Typical Tensile Properties			
Condition	**Yield Strength**	**Tensile Strength**	**Elongation**
As Welded	469 MPa (68 ksi)	563 MPa (82 ksi)	32 %
Stress Relieved 8 hour(s) 621 °C (1150 °F)	395 MPa (57 ksi)	485 MPa (70 ksi)	33 %

Typical Charpy V-Notch Properties		
Condition	**Testing Temperature**	**Impact Value**
As Welded	-30 °C (-22 °F)	198 J (147 ft-lb)
Stress Relieved	-29 °C (-20 °F)	260 J (192 ft-lb)

Typical Weld Metal Analysis %				
C	**Mn**	**Si**	**S**	**P**
0.045	1.10	0.40	0.014	0.015

Deposition Data					
Diameter	**Current**	**Voltage**	**Deposition Efficiency (%)**	**Burn-off Time /Electrode**	**Deposition Rate @ 90% I max**
2.4 x 356.0 mm (3/32 x 14.0 in.)	70-110 A	23.2 V	69.01 %	60 sec	0.92 kg/h (2.0 lbs/h)
3.2 x 356.0 mm (1/8 x 14.0 in.)	90-160 A	23.9 V	72.23 %	70 sec	1.36 kg/h (3.0 lbs/h)
4.0 x 356.0 mm (5/32 x 14.0 in.)	130-220 A	24.3 V	72.06 %	75 sec	1.89 kg/h (4.2 lbs/h)

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Diameter	**Current**	**Voltage**	**Deposition Efficiency (%)**	**Burn-off Time /Electrode**	**Deposition Rate @ 90% I max**
4.0 x 450.0 mm (5/32 x 17.7 in.)	130-220 A		73.5 %		1.7 kg/h (3.7 lbs/h)
4.8 x 356.0 mm (3/16 x 14.0 in.)	200-300 A	24.3 V	71.04 %	74 sec	2.53 kg/h (5.6 lbs/h)
5.6 x 457.0 mm (7/32 x 18.0 in.)	250-350 A	24.9 V	75.80 %	100 sec	3.28 kg/h (7.2 lbs/h)
6.4 x 457.0 mm (1/4 x 18.0 in.)	300-400 A	25.5 V	77.06 %	103 sec	4.22 kg/h (9.3 lbs/h)