

## Atom Arc 7018 Acclaim

Atom Arc 7018 Acclaim offers softer arc and excellent mechanical properties compared to the original Atom Arc 7018. Results include greater puddle control for ease of use in out-of-position welding applications and superior arc initiation desired by many newer welders. Both novice and seasoned welders can appreciate its excellent weld performance, wide operating range and easy clean up. Greater puddle control resulting in easier out-of-position welds, superior arc initiation and ease of use with wider operating range and minimal clean-up

| Specifications  |                                                                                                                                                      |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Classifications | ASME SFA 5.1 : E7018-1 H4R / E7018 H4R<br>AWS A5.1 : E7018-1 H4R / E7018 H4R                                                                         |
| Approvals       | ABS : 4Y(H5)<br>ABS : E7018-1 (H4R)<br>CWB : E4918-1-H4<br>DNV-GL : 4 YH5<br>LR : 4Y H5                                                              |
| Industry        | Civil Construction<br>Mobile Equipment<br>Ship/Barge Building<br>Bridge Construction<br>Railcars<br>Automotive<br>Industrial and General Fabrication |

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                            | 467 MPa ( 68 ksi ) | 551 MPa ( 80 ksi ) | 36 %       |
| PWHT<br>2 hour(s) 600 °C ( 1112 °F ) | 567 MPa ( 82 ksi ) | 456 MPa ( 66 ksi ) | 67 %       |

| Typical Charpy V-Notch Properties |                     |                    |
|-----------------------------------|---------------------|--------------------|
| Condition                         | Testing Temperature | Impact Value       |
| As Welded                         | -46 °C ( -51 °F )   | 123 J ( 91 ft-lb ) |
| PWHT                              | -40 °C ( -40 °F )   | 45 J ( 33 ft-lb )  |
| PWHT                              | -60 °C ( -76 °F )   | 56 J ( 41 ft-lb )  |
| PWHT                              | -50 °C ( -58 °F )   | 56 J ( 41 ft-lb )  |
| PWHT                              | -60 °C ( -76 °F )   | 56 J ( 41 ft-lb )  |

| Typical Weld Metal Analysis % |      |      |       |      |
|-------------------------------|------|------|-------|------|
| C                             | Mn   | Si   | S     | P    |
| 0.05                          | 1.20 | 0.45 | 0.008 | 0.01 |

| Deposition Data                       |          |         |                           |                          |                             |
|---------------------------------------|----------|---------|---------------------------|--------------------------|-----------------------------|
| Diameter                              | Current  | Voltage | Deposition Efficiency (%) | Burn-off Time /Electrode | Deposition Rate @ 90% I max |
| 2.4 x 356.0 mm<br>( 3/32 x 14.0 in. ) | 70-110 A | 23.2 V  | 69.01 %                   | 60 sec                   | 0.92 kg/h<br>( 2.0 lbs/h )  |

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|---------------------------------------|-----------|---------|---------------------------|--------------------------|-----------------------------|
| Diameter                              | Current   | Voltage | Deposition Efficiency (%) | Burn-off Time /Electrode | Deposition Rate @ 90% I max |
| 3.2 x 356.0 mm<br>( 1/8 x 14.0 in. )  | 90-160 A  | 23.9 V  | 72.23 %                   | 70 sec                   | 1.36 kg/h<br>( 3.0 lbs/h )  |
| 4.0 x 356.0 mm<br>( 5/32 x 14.0 in. ) | 130-220 A | 24.3 V  | 72.06 %                   | 75 sec                   | 1.89 kg/h<br>( 4.2 lbs/h )  |
| 4.8 x 356.0 mm<br>( 3/16 x 14.0 in. ) | 200-300 A | 24.3 V  | 71.04 %                   | 74 sec                   | 2.53 kg/h<br>( 5.6 lbs/h )  |