

Atom Arc 4340

Atom Arc 4340 is an all-position, iron powder, low hydrogen electrode developed for the welding of heat-treatable, high strength steels such as SAE 4130, 4330, 4340 and steel castings with similar hardening properties. Weld metal responds to heat treatment similar to 4340 base metal and is intended for use only in postweld heat treated applications.

Specifications

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|------------------------|-----------------------|
| Classifications | No AWS Classification |
|------------------------|-----------------------|

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|----------------------------|--|
| Welding Current | AC, DC+ |
| Diffusible Hydrogen | < 4.0 ml/100g |
| Alloy Type | Low alloyed (0.8% Cr - 1.8% Ni - 0.25% Mo) |

Typical Tensile Properties

| Condition | Yield Strength | Tensile Strength | Elongation |
|-----------|----------------------|----------------------|------------|
| As Welded | 951 MPa (138 ksi) | 1040 MPa (151 ksi) | 15 % |
| As Welded | 1179 MPa (171 ksi) | 1303 MPa (189 ksi) | 12 % |

Typical Weld Metal Analysis %

| C | Mn | Si | S | P | Ni | Cr | Mo |
|------|------|------|-------|-------|------|------|------|
| 0.35 | 0.85 | 0.50 | 0.014 | 0.011 | 1.80 | 0.80 | 0.25 |

Deposition Data

| Diameter | Current | Voltage | Deposition Efficiency (%) | Burn-off Time /Electrode | Deposition Rate @ 90% I max |
|---------------------------------------|-----------|---------|---------------------------|--------------------------|-----------------------------|
| 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) |