

OK Autrod 312

A continuous solid corrosion resisting chromium-nickel wire for welding of stainless steels of the 29% Cr, 9% Ni types. OK Autrod 312 has a good oxidation resistance at high temperatures due to its high content of Cr. The alloy is widely used for joining dissimilar steels especially if one of the component is fully austenitic and steels that are difficult to weld, i.e. machine components, tools, austenitic manganese steels.

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| Classifications Wire Electrode | SFA/AWS A5.9 : ER312 EN ISO 14343-A : G 29 9 |
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|----------------------|--|
| Alloy Type | Ferritic-austenitic (29 % Cr - 9 % Ni) |
| Shielding Gas | M12, M13 (EN ISO 14175) |

Typical Charpy V-Notch Properties

| Condition | Testing Temperature | Impact Value |
|-----------|---------------------|-----------------|
| As Welded | 20 °C (68 °F) | 50 J (37 ft-lb) |

Typical Weld Metal Analysis %

| C | Mn | Si | S | P | Ni | Cr |
|-----|-----|-----|-------|-------|----|----|
| 0.1 | 1.7 | 0.5 | 0.010 | 0.020 | 9 | 29 |

Typical Wire Composition %

| C | Mn | Si | Ni | Cr | Mo | Cu |
|------|-----|-----|-----|------|------|------|
| 0.10 | 1.6 | 0.4 | 8.8 | 30.7 | 0.20 | 0.14 |

Deposition Data

| Diameter | Current | Voltage | Wire Feed Speed | Deposition Rate |
|-----------------------|-----------|---------|-------------------------------------|--------------------------------|
| 0.8 mm (0.030 in.) | 50-140 A | 16-22 V | 3.4-11.0 m/min (134-433 in./min) | 0.8-2.7 kg/h (1.8-6.0 lb/h) |
| 1.0 mm (0.040 in.) | 80-190 A | 16-24 V | 2.9-8.4 m/min (114-331 in./min) | 1.1-3.1 kg/h (2.4-6.8 lb/h) |
| 1.2 mm (0.047 in.) | 180-280 A | 20-28 V | 4.9-8.5 m/min (193-335 in./min) | 2.6-4.5 kg/h (5.7-9.9 lb/h) |