

OK 13Mn

OK 13Mn is an austenitic manganese steel electrode which work hardens under impact and compressive stresses. It is primarily used for surfacing and building up manganese steel components exposed to severe impact and moderate abrasion. Typical applications include crusher plates and rolls, cones and mantles of rotary crushers etc. The interpass temperature should be kept as low as possible.

Specifications

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|------------------------|------------------|
| Classifications | EN 14700 : E Fe9 |
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| Welding Current | AC, DC+ |
| Alloy Type | Austenitic Mn steel |
| Coating Type | Lime Basic |

Tensile Properties

| Testing Condition | Yield Strength | Tensile Strength | Elongation |
|-------------------|----------------|------------------|------------|
| ISO | | | |
| As Welded | 480 MPa | 780 MPa | 20 % |

Charpy Testing

| Testing Condition | Testing Temp | Impact Value |
|-------------------|--------------|--------------|
| ISO | | |
| As Welded | -40 °C | 35 J |
| As Welded | -60 °C | 25 J |
| As Welded | -20 °C | 45 J |
| As Welded | 20 °C | 70 J |

Typical Weld Metal Analysis %

| C | Mn | Si |
|------|------|-----|
| 1.08 | 12.2 | 0.7 |

Deposition Data

| Diameter | Amps | Volts | Efficiency (Per) | Fusion time per electrode at 90Per I max | Deposition rate at 90Per |
|----------------|-----------|-------|------------------|--|--------------------------|
| 3.2 x 450.0 mm | 95-135 A | 23 V | 60 % | 95 sec | 1.1 kg/h |
| 4.0 x 450.0 mm | 130-180 A | 23 V | 60 % | 109 sec | 1.4 kg/h |
| 5.0 x 450.0 mm | 170-230 A | 25 V | 60 % | 132 sec | 1.8 kg/h |