

## OK 14MnNi

Austenitic manganese steel electrode with nickel for surfacing and building up manganese steel components exposed to severe impact and moderate abrasion. The weld metal is less prone to embrittlement and cracking compared to plain austenitic manganese steel weld metal. It workhardens under compressive stresses. Applications include: crusher plates and rolls, cones and mantels of rotary crushers, rail points. The interpass temperature should be kept as low as possible.

### Specifications

|                        |                    |
|------------------------|--------------------|
| <b>Classifications</b> | EN 14700 : E Z Fe9 |
| <b>Approvals</b>       | DB : 82.039.08     |

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

|                        |                     |
|------------------------|---------------------|
| <b>Welding Current</b> | AC, DC+             |
| <b>Alloy Type</b>      | Austenitic Mn steel |
| <b>Coating Type</b>    | Zircon Basic        |

### Typical Tensile Properties

| Condition  | Yield Strength | Tensile Strength | Elongation |
|------------|----------------|------------------|------------|
| <b>ISO</b> |                |                  |            |
| As Welded  | 440 MPa        | 690 MPa          | 30 %       |

### Typical Charpy V-Notch Properties

| Condition  | Testing Temperature | Impact Value |
|------------|---------------------|--------------|
| <b>ISO</b> |                     |              |
| As Welded  | 20 °C               | 100 J        |
| As Welded  | -80 °C              | 45 J         |
| As Welded  | -20 °C              | 80 J         |
| As Welded  | -120 °C             | 25 J         |

### Typical Weld Metal Analysis %

| C    | Mn   | Si  | Ni  |
|------|------|-----|-----|
| 0.67 | 13.2 | 0.2 | 3.0 |

### Deposition Data

| Diameter       | Current   | Voltage | Efficiency (%) | Fusion time per electrode at 90% I max | Deposition Rate |
|----------------|-----------|---------|----------------|----------------------------------------|-----------------|
| 3.2 x 450.0 mm | 100-160 A | 30 V    | 54 %           | 90 sec                                 | 1.5 kg/h        |
| 4.0 x 450.0 mm | 130-210 A | 30 V    | 54 %           | 105 sec                                | 2.0 kg/h        |
| 5.0 x 450.0 mm | 170-300 A | 31 V    | 56 %           | 114 sec                                | 2.9 kg/h        |