

## OK 48.08

Basic universal electrode with very good welding characteristics, especially designed for welding of carbon steels, carbon manganese steels and fine grained carbon manganese steels with elevated yield strength. Typical field of application is offshore construction. The weld metal alloyed with approximately 0.9% Ni fulfills the requirements on impact toughness at -50°C. The coating is of low moisture absorption type and gives diffusible hydrogen < 4ml per 100 grams of weld metal. OK 48.08 is HIC test compliant as per NACE TM0284 & SSC test compliant as per NACE TM0177.

### Specifications

|                        |                                                                                                                                             |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classifications</b> | SFA/AWS A5.5 : E7018-G H4R<br>EN ISO 2560-A : E 46 5 1Ni B 32 H5                                                                            |
| <b>Approvals</b>       | ABS : 3Y H5<br>CE : EN 13479<br>DB : 10.039.31<br>DNV-GL : 4 Y40H5<br>LR : 4Y40 H5<br>NAKS/HAKC : 2.5-5.0 mm<br>RS : 4Y H5<br>VdTÜV : 05778 |

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

|                            |                        |
|----------------------------|------------------------|
| <b>Welding Current</b>     | AC, DC+(-)             |
| <b>Diffusible Hydrogen</b> | < 4.0 ml/100g          |
| <b>Alloy Type</b>          | Low alloyed (0.9 % Ni) |
| <b>Coating Type</b>        | Basic covering         |

### Typical Tensile Properties

| Condition                | Yield Strength | Tensile Strength | Elongation |
|--------------------------|----------------|------------------|------------|
| <b>AWS</b>               |                |                  |            |
| As welded (3G, V-UP)     | 530 MPa        | 610 MPa          |            |
| <b>ISO</b>               |                |                  |            |
| As Welded                | 540 MPa        | 630 MPa          | 26 %       |
| PWHT<br>1 hour(s) 620 °C | 480 MPa        | 550 MPa          | 26 %       |

### Typical Charpy V-Notch Properties

| Condition            | Testing Temperature | Impact Value |
|----------------------|---------------------|--------------|
| <b>AWS</b>           |                     |              |
| As welded (3G, V-UP) | -50 °C              | 55 J         |
| As welded (3G, V-UP) | -60 °C              | 50 J         |
| <b>ISO</b>           |                     |              |
| As Welded            | -50 °C              | 85 J         |
| As Welded            | -60 °C              | 65 J         |
| PWHT                 | -46 °C              | 105 J        |

### Typical Weld Metal Analysis %

| C    | Mn  | Si   | Ni   | Cr   | Mo    |
|------|-----|------|------|------|-------|
| 0.06 | 1.2 | 0.35 | 0.95 | 0.02 | 0.001 |

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| Deposition Data |           |         |                |                                        |                 |
|-----------------|-----------|---------|----------------|----------------------------------------|-----------------|
| Diameter        | Current   | Voltage | Efficiency (%) | Fusion time per electrode at 90% I max | Deposition Rate |
| 2.5 x 350.0 mm  | 65-110 A  | 20 V    | 60 %           | 57 sec                                 | 0.9 kg/h        |
| 3.2 x 350.0 mm  | 85-150 A  | 22 V    | 63 %           | 63 sec                                 | 1.3 kg/h        |
| 3.2 x 450.0 mm  | 85-150 A  | 22 V    | 63 %           | 64 sec                                 | 1.3 kg/h        |
| 4.0 x 450.0 mm  | 115-190 A | 25 V    | 66 %           | 95 sec                                 | 1.8 kg/h        |
| 5.0 x 450.0 mm  | 155-280 A | 28 V    | 66 %           | 93 sec                                 | 2.7 kg/h        |