



## **Exaton Ni60**

Exaton Ni60 is a nickel-chromium-molybdenum covered electrode for welding of Ni/Cr/Mo nickel alloys, highalloy stainless steels and 5-9%Ni steels in cryogenic applications. It can used in many variants of dissimilar joining of nickel alloys, stainless steels and low alloyed steels. Exaton Ni60 can also be used for overlay welding on low alloyed steels. The electrode combines good welding properties in all positions with very low impurity levels, high impact strength and excellent corrosion resistance to pitting in chloride containing media and stress corrosion cracking. Typical applications for Exaton Ni60 include components in the chemical and petrochemical industries often in connection with sea-water cooling where pitting corrosion and stress corrosion cracking are a risk, pressure vessels, heat exchangers etc. It is also used in sour gas service where it is approved by ISO 15156/NACE MR0175. Common base materials welded are ASTM UNS: S31254, N06625, N08825 and N08020.

| Specifications  |   |
|-----------------|---|
| Classifications | SFA/AWS A5.11 : ENiCrMo-3<br>EN ISO 14172 : E Ni 6625 (NiCr22Mo9Nb) |
| Approvals       | VdTÜV : 04796   |

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

| Welding Current | DC+             |
|-----------------|-----------------|
| Alloy Type      | Ni-based CrMoNb |
| Coating Type    | Basic           |

| Typical Tensile Properties |                             |         |            |  |  |  |
|----------------------------|-----------------------------|---------|------------|--|--|--|
| Condition                  | ondition Yield Strength Ten |         | Elongation |  |  |  |
| ISO                        |                             |         |            |  |  |  |
| As Welded                  | 520 MPa                     | 820 MPa | 38 %       |  |  |  |

| Typical Charpy V-Notch Properties |                                       |      |  |  |  |
|-----------------------------------|---------------------------------------|------|--|--|--|
| Condition                         | tion Testing Temperature Impact Value |      |  |  |  |
| ISO                               |                                       |      |  |  |  |
| As Welded                         | -196 °C                               | 65 J |  |  |  |
| As Welded                         | 20 °C                                 | 70 J |  |  |  |

| Typical Weld Metal Analysis % |      |     |        |         |    |    |    |      |     |
|-------------------------------|------|-----|--------|---------|----|----|----|------|-----|
| С                             | Mn   | Si  | S      | Ρ       | Ni | Cr | Мо | Cu   | Nb  |
| 0.03                          | 0.23 | 0.4 | <=0.01 | <=0.015 | 63 | 22 | 9  | 0.01 | 3.4 |

| Typical Weld Metal Analysis % |     |       |  |  |  |
|-------------------------------|-----|-------|--|--|--|
| Others tot                    | Fe  | Nb+Ta |  |  |  |
| <=0.50                        | <=2 | 3.4   |  |  |  |

| Deposition Data |           |         |                              |  |                                |  |
|-----------------|-----------|---------|------------------------------|--|--------------------------------|--|
| Diameter        | Current   | Voltage | Deposition Efficiency<br>(%) | Fusion time per<br>electrode at 90% I<br>max | Deposition Rate @<br>90% I max |  |
| 2.5 x 300.0 mm  | 55-75 A   | 23 V    | 55 %                         | 40 sec                                       | 0.9 kg/h                       |  |
| 3.2 x 350.0 mm  | 65-100 A  | 25 V    | 56 %                         | 52 sec                                       | 1.4 kg/h                       |  |
| 4.0 x 350.0 mm  | 80-140 A  | 27 V    | 58 %                         | 57 sec                                       | 1.9 kg/h                       |  |
| 5.0 x 350.0 mm  | 120-170 A | 24 V    | 58 %                         | 72 sec                                       | 2.1 kg/h                       |  |