



Ni-Cr-Co-Mo Welding Electrode

INCONEL® Welding Electrode 117

14

INCONEL® Welding Electrode 117

INCONEL Welding Electrode 117 is used for shielded-metal-arc welding of INCONEL alloy 617. The weld metal has high strength, good metallurgical stability and excellent resistance to corrosion and high-temperature oxidation. INCONEL Welding Electrode 117 also gives good results in welding many dissimilar materials, especially for high-temperature applications. Examples are INCONEL alloys 600 and 601, INCOLOY alloys 800HT and 803, and cast alloys such as HK-40, HP and HP-45 Modified.

The electrodes provide excellent operability for groove and fillet welding in the downhand position and the smaller diameter electrodes are also suitable for all position welding. Power supply: direct current, electrode positive.

Specifications

AWS A5.11 ENiCrCoMo-1 (UNS W86117)
ASME II, Part C, SFA-5.11, ENiCrCoMo-1 (UNS W86117)
ASME IX, F-No.43
*DIN 1736 EL-NiCr21Co12Mo (2.4628)
*(EN) ISO 14172 - ENi6617 (NiCr22Co12Mo)
*Supply to these specifications available upon request
For manufacture to ASME III (NCA3800, NB2400), and other specifications please refer your inquiry to the Technical Department prior to order placement.

Approvals

VdTUV 926/012178
Other approvals may be applicable. Please confirm details of current scope of approvals with the Technical Department prior to order placement.

Limiting Chemical Composition

| | | | |
|----------|-----------|--------------|------------|
| Ni | Remainder | Nb+Ta | 1.0 max. |
| Cr | 21.0-26.0 | S | 0.015 max. |
| Co..... | 9.0-15.0 | Si | 0.75 max. |
| Mo | 8.0-10.0 | Cu | 0.50 max. |
| C | 0.05-0.15 | P..... | 0.03 max. |
| Fe | 5.0 max. | Others | 0.50 max. |
| Mn | 0.30-2.5 | | |

Minimum Mechanical Properties

| | |
|-----------------------|--------|
| Tensile Strength, psi | 90,000 |
| MPa | 620 |
| Elongation, (4d) % | 25 |

Available Product Forms - Supplied in 10lbs (4.54kg) hermetically sealed containers

| Diameter | mm in | 2.4 3/32 | 3.2 1/8 | 4.0 5/32 | 4.8 3/16 |
|---------------|----------|-------------|------------|-------------|-------------|
| Length | mm in | 229 12 | 356 14 | 356 14 | 356 14 |
| Current (DC+) | A | 40-60 | 75-100 | 90-130 | 125-150 |