



MAC NICRO E213

■ **Description & Applications:**

A versatile electrode with superior welding characteristics for joining and overlaying a whole range of nickel chrome alloys where cryogenic and high temperature conditions are involved; with the emphasis on the high temperature side. Exhibits excellent strength at temperatures up to 1100°C.

Specifically for the welding of Inconel 601 and 625, Incoloy 800, 801 and 825. Can also be used for welding low alloy ferritic steels such as 3% and 9% nickel steels (for cryogenic applications) super austenitics, and for transitional welds between any of the aforementioned alloys. Can be used in almost any combination where alloys are chosen for their ability to withstand very severe mechanical stress, oxidation corrosion, and extreme operating temperatures.

■ **Related Specification:**

AWS ENiCrMo3

■ **Typical All Weld Metal Chemical Analysis %:**

| C | Mn | Fe | P | S | Si | Ni | Cr | Nb | Mo |
|------|-----|------|-------|-------|------|----|----|------|------|
| 0.05 | 0.7 | 4.00 | 0.009 | 0.005 | 0.61 | 63 | 21 | 3.60 | 9.00 |

■ **Typical All Weld Metal Mechanical Properties:**

As Welded

| | |
|---------------------------|-----------------------|
| Ultimate Tensile Strength | 810 N/mm ² |
| 0.2% Proof Stress | 520 N/mm ² |
| Elongation on 4d | 41% |
| Reduction of Area | 40% |
| Impact Energy - 196°C | 100 J |

■ **Current:**

AC/DC (+)

■ **Sizes Available and Recommended Amperages:**

| | | | |
|--------|--------|---------|---------|
| 2.50mm | 3.25mm | 4.00mm | 5.00mm |
| 50-70 | 90-110 | 120-140 | 150-210 |

■ **Storage:**

If allowed to become damp the electrodes should be re-dried for one hour at 150°C before use.