

GB/T 13814 ENi6133

AWS A5.11 ENiCrFe-2

ENISO 14172- ENi6133

# ENiCrFe-2

**Description:** Low hydrogen type of manual electrode, with nominal composition 70%Ni-15%Cr-8%Fe-2%Mn-2%Nb+Ta-1.5%Mo, is Ni-Cr-Fe alloy manual electrode; Base material can be forged or casted (weldable grade). Can adjust a wide temperature range from low temperature to 980°C with the high alloy content; but at temperature higher than 820°C, there will be deterioration of oxidation resistance and strength level; Stable arc, beautiful weld bead appearance, few spatter, easy slag removal, excellent blowhole resistance. and stable deposited metal mechanical properties, also has excellent low temperature impact toughness and high temperature oxidation resistance.

**Application:** Suitable for the welding of Ni-Cr-Fe series alloy, such as Incoloy 800, 800H alloy, Inconel 600, 601 alloy, ASTM B613 and etc; Can also be used for welding 9% Ni steel and dissimilar metal between various alloy or alloy with creep resistance.

## Typical Chemical Composition(%):

|               | C     | Si   | Mn        | S     | P     | Fe    | Ni   | Cr        | Mo      |
|---------------|-------|------|-----------|-------|-------|-------|------|-----------|---------|
| Requirement   | 0.10  | 0.75 | 1.00-3.50 | 0.015 | 0.03  | 12.00 | ≥62  | 13.0-17.0 | 0.5-2.5 |
| Actual Result | 0.036 | 0.48 | 3.19      | 0.003 | 0.009 | 7.04  | 70.8 | 14.60     | 1.63    |

## Typical Mechanical Properties:

|               | Tensile Strength (MPa) | Yield Stress (MPa) | Elongation (%) | Impact Values (J) |
|---------------|------------------------|--------------------|----------------|-------------------|
| Requirement   | ≥ 550                  | ≥ 360              | 30             |                   |
| Actual Result | 660                    | 430                | 44             |                   |