

# AK E309-16

**Description:** AK-E309-16 is a Cr23Ni13 stainless steel electrode with rutile coating. AC and DC dual-use, can perform all-position welding. The welding process performance is excellent, and the deposited metal has good crack resistance and oxidation resistance.

**Application:** It is suitable for welding the same type of stainless steel, stainless steel lining, dissimilar steel (such as Cr19Ni10 and low carbon steel, etc.), as well as high chromium steel, high manganese steel, etc.

## Typical Chemical Composition(%):

|                      | C    | Si   | Mn       | S     | P     | Ni        | Mo   | Cr        | Cu   |
|----------------------|------|------|----------|-------|-------|-----------|------|-----------|------|
| <b>Requirement</b>   | 0.15 | 1.0  | 0.5- 2.5 | 0.03  | 0.04  | 12.0-14.0 | 0.75 | 22.0-25.0 | 0.75 |
| <b>Actual Result</b> | 0.06 | 0.69 | 1.08     | 0.010 | 0.025 | 12.40     | 0.10 | 24.0      | 0.08 |

## Typical Mechanical Properties:

|                      | Tensile strength (MPa) | Yield Stress ( MPa) | Elongation (%) | Impact Values (J) |
|----------------------|------------------------|---------------------|----------------|-------------------|
| <b>Requirement</b>   | ≥ 550                  |                     | ≥25            |                   |
| <b>Actual Result</b> | 605                    |                     | 33             |                   |

## Recommended welding parameters:

| Diameter/mm               |              | 2.5   | 3.2    | 4.0     |
|---------------------------|--------------|-------|--------|---------|
| <b>Welding current /A</b> | <b>F/H</b>   | 60-80 | 80-120 | 100-150 |
|                           | <b>V/ OH</b> | 40-70 | 60-100 | 80-130  |