

## AI-0261

### Specifications

**AWS/ASME** A5.4 : E410-15, 16

**DIN** 8556 E.13.MPR.2-130

### Description and Applications

**AI-0261** is a 12% straight chromium electrode used for the welding of type 410 stainless steel in the fabrication of equipment that demands corrosion resistance, good strength and ductility. Type 410 is an air hardening material and therefore requires pre heat and post heat treatments to achieve adequate ductility in the welds.

**AI-0261** electrodes provide good corrosion and oxidation resistance up to 800oC. It may also be used for welding types 403, 405, 414 & 420 stainless steels.

An air hardening Martensitic deposit is to match steels of the 410 and DIN 1.4006 and 1.4024 type. These materials are used in Petro-refineries and chemical plants where high resistance to corrosion and oxidation is required. Resistance to scaling up to 800oC is a feature. This electrode can be used as a surfacing alloy for furnaces and steel plants. Rebuilding of 13Cr rolls is another major application.

### Typical Weldmetal Analysis

| C    | Cr    | Fe  |
|------|-------|-----|
| 0.11 | 12.20 | Bal |

### Mechanical Properties of Weldmetal

|                   | As Welded |
|-------------------|-----------|
| Yield Strength    | 270 MPa   |
| Tensile Strength  | 480 MPa   |
| Elongation 5xD    | 34%       |
| Reduction of Area | 51%       |
| Hardness          | 215HV     |

### Welding Parameters

| Diameter (mm) | Current type | Amps    |
|---------------|--------------|---------|
| 2.5           | DC /AC       | 50-80   |
| 3.2           | DC /AC       | 80-120  |
| 4.0           | DC /AC       | 110-160 |

### Welding Positions

(1G, 1F) Downhand/flat position, (2F) Horizontal position, (2G) Horizontal vertical position, (4G) Overhead position, (3G, 3F, 5G up) Vertical Position Up.

### Disclaimer

All figures in this datasheet should be considered indicative only. No guarantee is made as to their accuracy.

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