



## CROMOTHERME-9 (MOD)

**CODIFICATION :** AWS : SFA 5.5 E9018-B91 (Formerly Known as E9018-B9)

### CHARACTERISTICS AND APPLICATIONS :

A low hydrogen, iron powder electrode depositing 9Cr - 1Mo weld metal modified with Aluminium, Niobium, Vanadium and Nitrogen, designed to provide improved creep strength, toughness, fatigue life, oxidation and corrosion resistance at elevated temperatures. It is designed to weld the materials in power plant and refineries. Following are some of the steels that can be welded with this electrode. I) Plate: A 387 Gr. 91 (II) Pipes: A 335 - P91 (III) Tubes: A 213 - T91

### TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL :

|           |      |      |      |       |       |      |      |      |      |      |      |      |      |
|-----------|------|------|------|-------|-------|------|------|------|------|------|------|------|------|
| Element : | C    | Mn   | Si   | P     | S     | Cr   | Ni   | Mo   | V    | Nb   | N    | Cu   | Al   |
| Percent : | 0.10 | 0.65 | 0.25 | 0.007 | 0.008 | 9.00 | 0.25 | 1.00 | 0.20 | 0.06 | 0.03 | 0.02 | 0.02 |

### TYPICAL MECHANICAL PROPERTIES OF ALL WELD METAL :

(PWHT : 760°C FOR 2 HRS)

|       |       |            |          |
|-------|-------|------------|----------|
| UTS   | YS    | Elongation | Hardness |
| (MPa) | (MPa) | (L = 4d) % |          |
| 685   | 575   | 19         | 220 HV   |

**DIFFUSIBLE HYDROGEN CONTENT:** 4 ml/100 gms of weld metal Max.

(When measured according to AWS-4.3-86 Specification)

### CURRENT AND PACKING DATA : DC(+)

|                    |   |         |         |          |         |
|--------------------|---|---------|---------|----------|---------|
| Size (mm)          | : | 5x450   | 4x350   | 3.15x350 | 2.5x350 |
| Dia x Length       |   |         |         |          |         |
| Current Range      | : | 160-220 | 130-160 | 90-120   | 60-90   |
| (Amps)             |   |         |         |          |         |
| Qty.(Pcs./Carton): |   | 30      | 50      | 75       | 100     |

### APPROVAL : CIB-MP

### PRECAUTIONS :

1. Use short arc and stringer bead.
2. Ensure the electrodes are perfectly dry.
3. Re-dry the electrodes at 300°C for one hour, as per standard recommended practice.