

CROMOTHERME-9(SPL)

CODIFICATION : AWS : SFA 5.5 E9018-G

CHARACTERISTICS AND APPLICATIONS :

A low hydrogen electrode deposits 9Cr-1Mo and enriched with Niobium, Vanadium, Nitrogen and tungsten. Tungsten additions provides adequate creep rupture strength at higher steam pressures and temperatures. The controlled addition of alloying elements improves the toughness and weldability. It is designed to weld advanced materials, which are being used to improve thermal efficiency in power plant, refineries etc. Ideal for welding steels of similar composition to achieve adequate creep rupture strength. Some typical materials where this electrode can be used are P92, Rotor Steel, E911 steels, GX12CrMoWVNbW11 etc.

TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL:

| | | | | | | | | | | | | | | |
|---------|--------|------|------|-------|-------|------|------|------|------|------|------|------|------|------|
| Element | : C | Mn | Si | P | S | Cr | Ni | Mo | V | Nb | N | Al | Cu | W |
| Percent | : 0.09 | 0.80 | 0.25 | 0.012 | 0.007 | 9.00 | 0.60 | 0.90 | 0.21 | 0.06 | 0.05 | 0.02 | 0.07 | 0.90 |

TYPICAL MECHANICAL PROPERTIES OF ALL WELD METAL:

(PWHT 760⁰ For 2 HRS)

| | | |
|-------|-------|------------|
| UTS | YS | Elongation |
| (MPa) | (MPa) | (L= 4d)% |
| 800 | 620 | 19 |

CURRENT AND PACKING DATA: DC(+)

| | | | | | |
|----------------------|---|---------|---------|----------|---------|
| Size (mm) | : | 5x450 | 4x350 | 3.15x350 | 2.5x350 |
| Dia x Length | | | | | |
| Current Range (Amps) | : | 180-240 | 140-180 | 100-130 | 70-100 |
| Qty.(Pcs./Carton) | : | 25 | 40 | 55 | 80 |

PRECAUTIONS:

1. Use short arc and stringer bead.
2. Ensure the electrodes are perfectly dry.
3. If necessary reheat at 300°C for one hour, cool in the same oven to 100°C and transfer them to portable oven maintained at 70°C for direct use.
4. Normally all the materials welded using this electrode require preheat and PWHT.