



## D&H 1232 (NS)

**CODIFICATION:** AWS : SFA 5.11 ENiCrMo-12

### CHARACTERISTICS AND APPLICATIONS:

Non-synthetic basic coated electrode depositing Ni-Cr-Mo-Nb weld metal. Highly crack resistant weld also possesses good corrosion resistance characteristics. It has scaling temperature up to 1100°C in air. It is ideally suited for welding Cr-Ni-Mo austenitic stainless steels to themselves, to duplex stainless steels, to Ni-Cr-Mo alloys, and to steel or for just overlays. Typical specifications for the Cr-Ni-Mo stainless steel base metal are A240, A167, A182, A249, A276, A312, A358, A373, and A479, most particularly the grade UNS S31254/254 SMO / 6% Mo SS type. In a chloride containing environment, the fully austenitic weld-metal exhibits high resistance to Pitting, Crevice Corrosion & Stress Corrosion Cracking. It is ideal for Sulphuric and Phosphoric acid media that has been contaminated by chlorides. It can also be used for welding of 625 and 825 grade Ni-based alloys.

### TYPICAL CHEMICAL COMPOSITION OF ALL WELD METAL:

| Elements | C     | Mn   | Si   | P     | S     | Ni   | Cr   | Nb+Ta | Mo  | Fe  |
|----------|-------|------|------|-------|-------|------|------|-------|-----|-----|
| Percent  | 0.025 | 1.00 | 0.40 | 0.015 | 0.010 | 62.0 | 21.5 | 2.4   | 9.5 | 3.0 |

### TYPICAL MECHANICAL PROPERTIES OF ALL WELD METAL:

| UTS<br>(MPa) | Elongation<br>(L = 4d)% | CVN Impact Strength<br>at Minus 196°C (Joules) | Lateral Expansion<br>at Minus 196°C (mm) |
|--------------|-------------------------|------------------------------------------------|------------------------------------------|
| 700          | 38                      | 75J                                            | 0.70                                     |

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

|                         |   |         |         |          |         |
|-------------------------|---|---------|---------|----------|---------|
| Size (mm)               | : | 5x350   | 4x350   | 3.15x350 | 2.5x350 |
| Dia x Length            | : |         |         |          |         |
| Current Range<br>(Amps) | : | 150-180 | 120-150 | 80-110   | 60-70   |
| Weight/Carton<br>(kgs)  | : | 2.5     | 2.5     | 2.5      | 2.5     |

### PRECAUTIONS:

- 1 Re-dry the electrode 300-325°C for one hour before use
- 2 Maintain a short arc, stringer bead and minimize the heat input with an IPT of 100°C maximum is of vital importance.
- 3 For dissimilar metal welding, control the dilution by:
  - a. Operating at lower currents
  - b. Using stringer beads and faster welding speeds.