## Applications

S-9018.M can be used for welding of high tensile weather proof steel used in pressure vessels, bridges, rolling stocks, machines.

## **Characteristics on Usage**

S-9018.M is an iron powder low hydrogen type electrode which provides good workability in all positions.

The weld metal has a good crack resistibility because of less hydrogen contents. X-ray performance and usability are good.

## Notes on Usage

① Dry the electrodes at 350~400°C(662~752°F) for 60 minutes before use.

- ② Adopt back step method or strike the arc on a small plate prepared for this particular purpose because arc striking on base metal is in danger of initiating cracking.
- ③ Preheat at 80~100°C(172~212°F). The temperature to be applied varies in accordance with plate thickness and kind of steel.

Current AC or DC +

Welding Position

1G

(PA)



| Typical Chemical Composition of All-Weld Metal (%) |      |      |       |       |      |      |
|--|------|------|-------|-------|------|------|
| С  | Si   | Mn   | Р     | S     | Ni   | Мо   |
| 0.05   | 0.46 | 1.21 | 0.017 | 0.011 | 1.47 | 0.22 |

## Typical Mechanical Properties of All-Weld Metal

| YS           | TS           | EL   | Temp.     | CVN-Impact Value |
|--------------|--------------|------|-----------|------------------|
| MPa(lbs/in²) | MPa(lbs/in²) | (%)  | °C (°F)   | J (ft · Ibs)     |
| 585 (85,000) | 646 (93,800) | 27.6 | -50 (-58) | 89 (66)          |

| Approval | I Packing |   |  |
|----------|-----------|---|--|
| ABS      |           | 5 kg (11 lbs)<br>5 kg (11 lbs)×4 : 20kg(44 lbs) |  |

| Sizes Available and Recommended Currents (Amp.) |            |           |            |            |             |  |  |
|---|------------|-----------|------------|------------|-------------|--|--|
| Size mm (in)                                    | 2.6 (3/32) | 3.2 (1/8) | 4.0 (5/32) | 5.0 (3/16) | 6.0 (15/64) |  |  |
| Length mm(in)                                   | 350 (14)   | 350 (14)  | 400 (16)   | 400 (16)   | 450 (18)    |  |  |
| F   | 70~100     | 90~140    | 130~190    | 180~240    | 250~300     |  |  |
| V-up, OH  | 60~80      | 80~120    | 120~170    | 150~200    | -           |  |  |