

## HEAT-RESISTANT LOW-ALLOY STEEL SMAW

### DESCRIPTION & APPLICATIONS :

- SR-78A1 is a 490N/mm<sup>2</sup> iron powder low hydrogen electrode.
- It can provide high welding efficiency because of additional iron powder. Suitable for alloy with 0.5% Mo under high temperature and pressure.
- Suitable for ATPA12, A335-P1 of Steel Pipes, STBA 12, A209-T1, A161-T1 of heat exchanger, A217-WCl casting steel and A182-F1, A366-F1 of forging steels.

### NOTE ON USAGE :

- Proper preheat at 100 ~ 200°C and PWHT at 620 ~ 680°C.
- Rebake the electrodes at 350 ~ 400°C for 60 minutes and keep at 100 ~ 150°C before use.
- Take the backstep method to prevent blowholes at the arc starting.

### WELDING POSITION :



### TYPICAL CHEMICAL COMPOSITION OF WELD METAL (wt%) :

| C     | Mn   | Si   | P     | S     | Mo   |
|-------|------|------|-------|-------|------|
| 0.070 | 0.62 | 0.66 | 0.016 | 0.009 | 0.55 |

### TYPICAL MECHANICAL PROPERTIES OF WELD METAL :

| YIELD POINT<br>N/mm <sup>2</sup> (Kg/mm <sup>2</sup> ) | TENSILE STRENGTH<br>N/mm <sup>2</sup> (Kg/mm <sup>2</sup> ) | ELONGATION RATE<br>% | HEAT<br>TREATMENT |
|--------------------------------------------------------|-------------------------------------------------------------|----------------------|-------------------|
| 535 (54.6)                                             | 610 (62.2)                                                  | 29                   | 620°Cx1hr         |

### SIZE AND RECOMMENDED CURRENT RANGE : AC or DC(+)

| Diameter (mm)    |        | 3.2    | 4.0     | 5.0     |
|------------------|--------|--------|---------|---------|
| Length (mm)      |        | 350    | 400     | 400     |
| Current<br>(Amp) | F      | 90-130 | 140-180 | 190-220 |
|                  | V & OH | 80-120 | 120-160 | -       |