

## TIG RODS FOR HEAT-RESISTANT LOW-ALLOY STEEL

### DESCRIPTION & APPLICATIONS :

- STG-80B2 is a solid tungsten rod for 1.25%Cr-0.5%Mo heat-resistant low alloy steel with high tensile strength and excellent creep resistance.
- Suitable for pipelines of high temperature high pressure, steel of boiler exchanger, A387 Gr.11 and Gr.12.

### NOTE ON USAGE :

- Use Ar as shield gas, purity should be above 99.997%, and control the flow properly. The gas flow should be 7~12 l/min when the current is 100~200Amp; 12~15 l/min when the current is 200~300Amp.
- The proper Wire-stick-out should be 5mm, and arc should be 1~3mm.
- There should be proper win shielded facility in case of porosities.

### WELDING POSITION :



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

| C    | Mn   | Si   | P     | S     | Cr   | Mo   |
|------|------|------|-------|-------|------|------|
| 0.08 | 0.59 | 0.53 | 0.018 | 0.009 | 1.29 | 0.53 |

### TYPICAL MECHANICAL PROPERTIES OF WELD METAL: (Ar)

| YIELD POINT<br>N/mm <sup>2</sup> (Kgf/mm <sup>2</sup> ) | TENSILE STRENGTH<br>N/mm <sup>2</sup> (Kgf/mm <sup>2</sup> ) | ELONGATION RATE<br>% | HEAT<br>TREATMENT |
|---|--|----------------------|-------------------|
| 490(50.0)   | 580(59.2)  | 26                   | 690°Cx1hr         |

### SIZE AND RECOMMENDED CURRENT RANGE : DC(-)

| Diameter (mm) | 1.2   | 1.6    | 2.0    | 2.4     | 3.2     | 4.0     |
|---------------|-------|--------|--------|---------|---------|---------|
| Current (Amp) | 70-90 | 80-100 | 90-120 | 100-160 | 160-220 | 180-250 |