

# TIGFIL 90S-B3

**GTAW LOW ALLOY STEEL (High Temperature)** 

## AWS A/SFA 5.28 **ER90S-B3**

#### **CLASSIFICATION:**

**EN ISO 21952-B** W 62 I1 2C1M

IS 6419

SLA-4-I-561

#### **KEY FEATURES:**

- Copper coated low alloy steel solid filler wire & rod
- Uniform copper coating
- Deposit notch free welds with excellent mechanical properties
- Typical 2.25 Cr-1 Mo weld deposit
- Superior strength and toughness after PWHT
- Radiographic quality weld

**APPROVALS: IBR/CE** 

#### **TYPICAL APPLICATIONS:**

- Welding of 2.25Cr-0.5Mo and 2.25Cr-1Mo type creep resistant steels
- Joining ASTM A 335 Gr.P22, A 387 Gr.22 materials
- Refineries, Petrochemicals and fertilizers plant
- Joining of P5A materials
- Cr-Mo and Cr-Mo-V bearing steels for hightemperature applications
- Suitable for 12CrMo9-10, 10CrSiMoV7 German steels

### TYPICAL CHEMICAL COMPOSITION OF BARE SOLID WIRE, Wt %:

| С    | Mn  | Si  | Cr   | Мо   |
|------|-----|-----|------|------|
| 0.09 | 0.6 | 0.5 | 2.45 | 0.95 |

| MECHANICAL PROPE | HANICAL PROPERTIES OF ALL WELD METAL: |          |                        |     |
|------------------|---------------------------------------|----------|------------------------|-----|
|                  | Condition                             | UTS, MPa | YS at 0.2% offset, MPa | EL% |
| Typical          | PWHT: 690°C for 1 hr                  | 680      | 600                    | 20  |

| CREEP TEST DATA: |                 |             |               |                        |
|------------------|-----------------|-------------|---------------|------------------------|
| Condition        | Temperature, °C | Stress, Mpa | Duration, Hrs | Strain% after 1000 Hrs |
| PWHT: 690°C      | 550             | 140         | 1000          | 0.92                   |
| for 1 Hr         | 600             | 80          | 1000          | 1.28                   |

| PARAMETERS - PACKING DATA:                          |                               |   |               |
|---|-------------------------------|---|---------------|
| Ø x L, mm<br>1.6 x 1000<br>2.0 x 1000<br>2.4 x 1000 | Net Wt., Kg<br>20<br>20<br>20 | STORAGE / HANDLING : Keep dry and follow handling instructions mentioned on the box | All Positions |

| Shielding Gas | Gas Flow Rate, LPM |
|---------------|--------------------|
| Ar            | 10-15              |

Available in Standard carton packing of 20 kg box, containing 4 plastic tubes of 5 kg each.

ADOR WELDING LIMITED www.adorwelding.com