

Basic Coated Unalloyed Stick Electrode

# Classification

| olassification |           |                |               |                |  |
|----------------|-----------|----------------|---------------|----------------|--|
| AWS A5.1       | AWS A5.1M | EN ISO 2560-A  | EN ISO 2560-B | IS 814         |  |
| E7018-1 H4R    | E4918-1R  | E 42 5B 4 2 H5 | E 49 18 A H5  | EB 56 26 H3 JX |  |

## Characteristics and field of use

- Basic covered electrode with very good welding characteristics including out of position work
- Good impact properties down to -45°C
- CTOD tested at -10 °C and shows good resistance crack propagation.
- Diffusible Hydrogen level < 4ml /100 gm. weld metal</li>
- Crack-free weld metal when welding high carbon steels
- Suitable for Sour Service application (HIC & SSCC tested according to NACE )
- "Dry System" (vacuum packing)

### **Base Materials**

235JRG2-S355J2, E295, E335, C35, Boiler Steels P235GH,P265 GH, P295GH,P355GH; fine graine structural steels upto S420N; shipbuilding steels A,B,D,E; offshore steels;pipe steels P265, P295,L290NB-L415NB, L290MB- L415MB, API 5L Gr. X42-X46; cast steels GS-38,GS-45,GS-52; ageing resistant steels ASt35 - ASt52; pressure vessel steels SA516 Gr. 60,65,70, SA 106 Gr. B

## Typical Composition of all weld metal (wt. - %)

| С     | Si   | Mn   | S     | Р     | Cr    | Мо    | Ni    |
|-------|------|------|-------|-------|-------|-------|-------|
| 0.070 | 0.50 | 1.30 | 0.010 | 0.015 | 0.008 | 0.007 | 0.006 |

### Mechanical Properties of all weld

| Heat treatment (PWHT),<br>°C/Hr | Yield<br>strength<br>R <sub>e</sub> N/mm <sup>2</sup> | Tensile<br>strength<br>R <sub>m</sub> N/mm <sup>2</sup> | Elongation<br>(L <sub>0</sub> =4d <sub>0</sub> ) | Impact Test Values<br>@ -45°C |  |
|---------------------------------|---|---|--|-------------------------------|--|
|                                 | MPa   | MPa   | %  | J                             |  |
| As Welded                       | 470   | 580   | 30   | 90                            |  |

#### **Operating data**

| Position                         | Polarity | Re-drying con   | Ø(mm         | ו) L                         | Amps                         |  |  |
|----------------------------------|----------|---|--------------|------------------------------|------------------------------|--|--|
| Ì.                               | DCEP     | Applicable only fo<br>exposed to the e<br>prior to welding red<br>350°C for<br>recommended. | environment, | 2.50<br>3.15<br>4.00<br>5.00 | 350<br>350/450<br>450<br>450 | 70 -110<br>100-140<br>130-180<br>180-230 |  |
| Size & Packaging<br>(Dry system) |          | Size  | Kg./Pac      | Kg./Pack                     |                              | Kg./Box                                  |  |
|                                  |          | 2.50x350  | 2.0          | 18.0                         |                              | 8.0                                      |  |
|                                  |          | 3.15x350/450  | 2.0          |                              |                              | 8.0                                      |  |
|                                  |          | 4.00x450  | 2.0          | 18.0                         |                              | 8.0                                      |  |
|                                  |          | 5.00x450  | 2.0          | 1                            |                              | 8.0                                      |  |
|                                  |          |   |              |                              |                              |  |  |