# **ROYALFIL OA 435**

#### **Applications**

Royalfil GS -12H4R is designed for all position single and multipass welding of low and medium carbon steels. Suitable for joining steels conforming to ASTM SA-36 /SA-36M and A,B,C,D grades of SA-283 / SA-283M & SA-414 / SA414M.(P.No.1) e.g. Fabrication in chemical plant machinery structures & Steel frames in ship building, heavy bridges & towers.

# **Characteristics on Usage**

Royalfil GS-12H4R is low hydrogen all position Rutile flux cored wire designed for optimum performance when using CO2 shield. The smooth metal transfer facilitates easy deposition of vertical-up stringer beads. The slag coverage is complete and designed for easy removal. Weld metal is consistently free of inclusions and porosity for X-ray soundness. This wire is formulated to produce fewer fumes, minimal spatter.

# **Welding Positions**



Recommended Stick Out 30-40 mm

## **Chemical Composition Of Weld Metal**

| C%    | Mn%  | Si%  | Cr%   | Ni%  | Mo%  |  |
|-------|------|------|-------|------|------|--|
| 0.080 | 1.00 | 0.60 | 13.50 | 4.00 | 0.50 |  |

## **Mechanical Properties Of Weld Metal**

| HARDNESS<br>ON III rd<br>LAYER | Y.S.<br>(N/mm²) | ELONGATION<br>(L = 4d)% | IMPACT ( CVN )<br>AT - 30° C ( J ) |
|--------------------------------|-----------------|-------------------------|------------------------------------|
| 42 – 48 HRC                    | 390-470         | 22-26 Min               | 27-60 Min                          |

# **Packing and Welding Current**

| SIZE ( mm )  | Flat &<br>Horizontal<br>(A) | Flat &<br>Horizontal<br>(V) |
|--------------|-----------------------------|-----------------------------|
| 12.40 / 2.80 | 250-400                     | 26-32                       |

#### **Packing**

Drum packing in 100Kgs / 250 Kgs.

