

# THJ506

**Basic-potassium Type Electrode** 

AWS A5.1 E7016 ISO 2560-B-E4916 A GB/T 5117 E5016

### Applications:

It is suitable for the welding of carbon steel and low alloy steel structure, such as Gr.50, and so on.

#### **Characteristics:**

THJ506 is basic potassium type electrode with low hydrogen. Both AC & DC can be used and can be weld for all-position. It have excellent welding performance as good arc stiffness, little spatter, easy slag removal etc., and perfect mechanical properties of deposited metal.

#### Attention:

- 1. The electrode must be re-dry by 350 ℃-380 ℃ for 1 hour before welding.
- 2. The rust, oil, water and other impurities of the weld area must be removed before welding.

#### **Chemical Composition of All Weld Metal:**

(Wt. %)

| Items              | С     | Mn        | Si    | S      | Р      | Ni    | Cr    | Мо    | V     |
|--------------------|-------|-----------|-------|--------|--------|-------|-------|-------|-------|
| Require-<br>ments  | ≤0.10 | 0.85-1.40 | ≤0.65 | ≤0.030 | ≤0.035 | ≤0.30 | ≤0.20 | ≤0.30 | ≤0.08 |
| Typical<br>Results | 0.07  | 1.10      | 0.35  | 0.012  | 0.018  | 0.030 | 0.035 | 0.005 | 0.004 |

# Mechanical Properties of All Weld Metal:

| Items           | Rm/MPa  | Rel/Rp <sub>0.2</sub> /MPa | A/% | KV <sub>2</sub> (-30°C) /J |
|-----------------|---------|----------------------------|-----|----------------------------|
| Requirements    | 490-660 | ≥400                       | ≥22 | ≥80                        |
| Typical Results | 590     | 510                        | 30  | 160                        |

### X-ray Radiographic Inspection:

Level I

# Typical Operating Procedures: (AC or DC<sup>+</sup>)

| Diameter (mm) | 2.0   | 2.5   | 3.2    | 4.0     | 5.0     | 5.8     |
|---------------|-------|-------|--------|---------|---------|---------|
| Length (mm)   | 300   | 300   | 350    | 400     | 400     | 400     |
| Current (A)   | 40-70 | 60-90 | 80-130 | 140-190 | 180-230 | 240-280 |

### **Classification of Society Certification:**

| Ship Inspection Agency | ABS    | BV       | CCS   | DNV   |
|------------------------|--------|----------|-------|-------|
| Recognition Level      | 3YH10  | 3YHH     | 3YH10 | 3YH10 |
| Ship Inspection Agency | LR     | NK       | KR    |       |
| Recognition Level      | 3YmH15 | KMW53H10 | 3YH10 |       |

## Welding Positions:

