

# E-10

JIS Z 3211 D4301  
AWS A5.1 E6019  
EN499 E 35 2 RA 12

## Characteristics and Applications:

E-10 is an ilmenite type electrode and can be used in all-position welding. It has excellent mechanical properties and X-Ray performance, stable arc, and good weldability. The weld bead is good with deep penetration and hardly causes slag inclusion. The weld metal can meet the elongation request of 22% min. Its features make the product being applied to important structural objects such as ship body, boiler, vehicle frame, oil tank, steel frame and suitable for structural steels, steel strip, thin steel plate, fabrication steels whose thickness is on or below 25 mm.

## Notes on Usage:

1. Be sure to clean up the contaminations on the base metal to reduce welding defect.
2. It is highly recommended to dry the electrodes at 80-100°C for 30-60 minutes before use.
3. Apply proper currents to prevent X-Ray and mechanical properties from being worse.
4. When weld with weave method, the moving range should not exceed 3 times the wire dia.

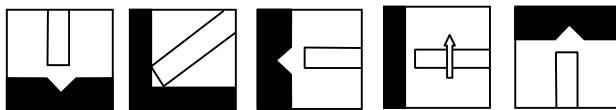
## Typical chemical composition of weld metal (wt%)

| C     | Mn   | Si   | P    | S    |
|-------|------|------|------|------|
| 0.080 | 0.38 | 0.08 | 0.03 | 0.01 |

## Typical mechanical properties of weld metal

| YS (MPa) | TS (MPa) | EL % | CVN -20°C J |
|----------|----------|------|-------------|
| 392      | 460      | 28   | 56          |

## Welding position



## Sizes and recommended current range (AC or DC <math>\langle \pm \rangle</math>)

| Diameter (mm) |      | 2.6    | 3.2    | 4.0     | 5.0     |
|---------------|------|--------|--------|---------|---------|
| Length (mm)   |      | 350    | 350    | 450     | 450     |
| Amps          | F    | 50-100 | 80-140 | 130-180 | 170-240 |
|               | V&OH | 40-70  | 60-120 | 110-160 | 140-200 |

\* The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Tien Tai Electrode Co., Ltd. expressly disclaims any liability incurred from any reliance thereon. Typical data is obtained when welded and tested in accordance with AWS specification. Other tests and procedures may produce different results. No data is to be construed as recommendation for any welding condition or technique not controlled by Tien Tai Electrode Co., Ltd.