

# TIG rod

## General Description and Welding Notes

GTAW is a full position welding process, which can produce and keep high stable arc and produces high quality and good appearance weld metal without spatter occurred. This low heat input welding process is widely applied on thin work piece or high quality required heavy work piece and pipe joint root pass.

Welding notes :

### 1. Welding Electrode (Tungsten)

DC- is strongly recommended (Electrode negative can stand much higher welding current than positive).

### 2. Shielding Gas

Argon is a much commercialized type of gas. High purity Argon is recommended to prevent defects such as pits or blow holes.

Proper flow rate : 12~18L/min ( indoor area); 15~20 L/min. with proper shelter to prevent air trapping into the arc and weld pool (outdoor area).

Teflon hose or steel pipe is preferred for long distance supply (easy to trap moisture by rubber or nylon hose ).

### 3. Tungsten type

Recommend 1~2% Thorium element Tungsten electrode on DC current. Tip end to be proper ground irregularly to keep good arc concentration ability. (Tip end is easy burned from arc heat.).

### 4. Tungsten electrode stick out

Normal: 4-5mm with arc length 1-3mm

Special: 5-6mm with arc length 2-3mm (deep groove pass)

### 5. Base metal cleaning

Surface dirt, scale, grease and moisture to be completely removed before welding.

### 6. Wind Protection

Recommend proper protection from wind for outdoor welding.

### 7. Polarity illustration

DCEP ( DC+ ): Electrode positive or DC reverse polarity (DCRP).

DCEN ( DC- ): Electrode negative or DC straight polarity (DCSP).