

# SMAW Electrode

## SMAW Welding Notes

1. Keep electrodes in dry condition to prevent blow hole, coating damage, spatter increasing, poor arc re-starting ability, poor current standing ability and detrimental to weld metal mechanical properties, etc.
2. Electrodes' baking condition shall follow the recommendation described in each product features of this catalogue. The baking temperature range is 70~100°C x 1 hr for mild steel electrodes and 300~350°C x1 hr for low hydrogen electrodes.
3. All base metal surface dirt, grease, rust etc., shall be full removed before welding in order to prevent diffusible hydrogen increasing and weld metal poor mechanical properties.
4. Proper grinding is necessary to remove surface scales and slag to smooth the coarsen trace on the base metal cutting edge.
5. Welding parameters such as current, voltage or heat input etc., shall follow the ranges described in Welding Procedure Specification but not over the manufacturer product recommended range.
6. Preheat inter pass temperature and PWHT can follow the reference in Materials General Review or related codes requirement.
7. Proper shelter and gas torch drying on base metal to remove moisture are necessary when welding in raining/windy environment.
8. Short arc technique is strongly recommended on welding low hydrogen electrodes. It can prevent nitrogen and oxygen from permeating into the arc which may cause blow holes. If weaving is necessary, the width shall be within 3 times of electrode diameter.
9. Most electrodes can be used for welding by AC and DC( $\pm$ ) polarity, but AC is most common.
10. The polarity illustration:  
DCEP ( DC+ ): Electrode positive or DC reverse polarity (DCRP).  
DCEN ( DC- ): Electrode negative or DC straight polarity (DCSP).