

Brief Information of Covered Welding Rods for Mild Steel

The covered welding rods, which tensile strength of deposited metal is not higher than 500MPa, i.e. 50kgf/mm², suitable for welding mild steels or low strength low alloy steels are mild steel covered welding rods.

According to chemical composition, mechanical properties and requirement of the crack resistance of the base metal to choose welding rods, meanwhile the factors of configuration of welded structure, work condition, strained condition and performance of welding machines should be considered. It is better to do welding procedure qualification and welding experiment to choose welding rods. Normally, e.g. choosing low hydrogen welding rods to meet higher requirement of good plasticity, higher impact toughness and good crack resistance of weld metal; if in pursuit of higher welding efficiency it should be iron powder welding rods.

The current of welding rods in this handbook are for reference only. General speaking, if the weldment is preheated the current should be reduced 5%-15%; DC current could be about 10% lower than AC current and for welding positions of vertical or overhead, it should be 10%-15% lower than flat welding.

To avoid weld defects of blowhole, slag inclusion, crack or bad welding performance, the welding rods of low hydrogen one and iron powder one must be re-baked at temperature 350°C or more before welding. The principle of re-drying welding rods is how many welding rods would be used one time how many should be re-baked and it is not more than twice to re-dry the low hydrogen one so that to prevent coating flux to be embrittlement and proceed to come off. Regarding for the category of cellulose welding rods, please re-dry it according to direction in this book strictly and higher temperature will burn lose the cellulose in coat then welding performance will get worse.

To prevent to be harmed by welding smoke dust position of welder should be backwind or enhancing air exhaust.