

Gas Shielded Type Flux Cored Wire (FCAW)

Welding Notes

GOODWELD produces two types of High Tensile Strength Steels using FCAW wire. One is GMX which is flux cored type and the other is MXC which is composite type with metal cored. Both types can use either CO₂ or CO₂ + Ar as shielding gas. The characteristics are described as follows:

GMX type :

It is a slag type FCAW wire. Almost flux is converted into slag through welding operation, high performance characteristics ability such as arc stable and low welding spatter, easy slag removal and good bead appearance no matter CO₂ or CO₂ + Ar is used as shielding gas. It is suitable for full positions welding.

MXC type :

It is a non slag composite type metal cored wire with high deposition efficiency; it has similar high performance characteristics ability such as arc stable and low welding spatter as GMX type wire especially when mixing gas is used. Like solid wire, a slight amount of slag is produced after welding but it is more easy to remove. The application is similar to solid wire, suitable for all thickness steels and good for fl at and horizontal positions.

Deposition Rate

For comparing similar mechanical level welding materials, flux cored wire not only has the deposition rate 1~5 times higher than traditional coated electrodes and 10~20% higher than solid wires, with lower spatters. It is widely preferred by welders.

The following welding notes are references for flux cored wire welding :

1. Flux cored wire is more soft than solid wire; proper adjustment of wire feed roller pressure is necessary and important for preventing wire deformation or damage to cause unstable feeding.
2. Backhand welding technique is recommended for heavy work root pass to get good penetration. Forehand welding technique is recommended for thin work or when appearance is important.
3. Vertical downward position is not recommended for heavy work root pass.
4. Welding parameters listed in WPS shall be followed but the range shall be limited to the product recommended range so as to prevent hot cracking.
5. The selection of proper wire size should be in accordance with work size.
6. The polarity illustration :
DCEP (DC+) : Electrode positive or DC reverse polarity.
DCEN (DC-) : Electrode negative or DC straight polarity.