

## Covered Electrode for Direct Hardfacing on Cast Irons

# M H - 1 0 0 C

- Standard —
- Covering Low Hydrogen Type
- Tip Color End Face : Orange  
Side Face : Blue

### ■ Application

Direct overlaying on die face on various kinds of cast iron mold and the bead

### ■ Features

1. MH-100C is the covered electrode which makes direct hardfacing on the cast iron mold possible. The hardness of the weld metal of MH-100C is lower than MH-100S and MH-100M.
2. The first layer of the weld metal is austenitized by absorbing carbon from base metal and shows good ductility and notch toughness. The weld metal is formed by mixture of austenite and martensite in the second layer. Also, the weld metal contain 12% Cr in second or more layer. As a result, the upper layer has excellent corrosion resistance and abrasion resistance.
3. The main structure of the weld metal is martensite. The thermal expansion of martensite is small. This characteristic helps the weld metal preventing peeling by welding stress during thick welding.
4. MH-100C is suitable for overlaying at the place which abrades vigorously and is subjected to intense contact pressure, such as a die face of draw mold and bead part.

### ■ Welding Procedures

1. Preheating is not required but welding at proper preheating and interpass temperature, 100~150°C, is very efficient to prevent crack. Over preheating and too high interpass temperature rises the risk of crack because of increasing of penetration to the base metal.
2. Keep bead length between 80~120mm and do peening just after each bead is finished.
3. Keep arc length as short as possible, weld by stringer bead and apply appropriate electric current. These prevent over dilution to the base metal.
4. Apply back step welding or start welding from outside of target area to avoid blowhole at starting part.
5. The electrode should be re-dried for 30~60 minutes at over 300°C before use.

### ■ Typical Chemical Component of the Deposited Metal (%)

C	Si	Mn	Cr	Special Elements
0.04	0.15	0.25	12.3	4.0~6.0

### ■ Typical Hardness of the Deposited Metal as welded

HV	HRC	HS
330~380	33~39	46~52

### ■ Appropriate Welding Current (AC or DCEP)

Diameter (mm)	3.2	4.0	5.0
Length (mm)	350	400	400
Current (A)	70~110	100~150	140~180
Min. Quantity (Kg)	5.0	5.0	5.0

Equivalent to wire for MAG welding: MH-100CS  
 Equivalent to electrode for TIG welding: MH-100CT