

Covered Electrode on Cast Irons

G N - 1 0 0

- **Standard** JIS E C Ni-CI
 AWS ENi-CI
- **Covering** Graphite type
- **Tip Color** Red

- **Application**
 Joint welding and repair welding of cavities and cracks in a wide variety of cast irons. Especially suitable for cold welding for the area which requires strength or machining. GN-100 is suitable for dissimilar metals welding between mild steel and cast iron.
- **Features**
 1. GN-100 is graphite type coating flux and pure nickel core wire covered electrode. GN-100 achieves stable welding at low current.
 2. Hardening of the weld zone is limited hence machining of the weld zone is easy. Also GN-100 is suitable for welding at the area where is subjected to water pressure
 3. GN-100 has good workability. Also , it causes very few welding defects, such as blowhole and crack hence it shows excellent X-ray soundness and mechanical properties.
 4. The deposited metal has excellent crack resistance property because expansion and contraction of the deposited metal is limited
 5. The color tone of the deposited metal is white.
- **Welding Procedures**
 1. In general, preheating is not required but in case the base metal has a high risk of crack, preheating the base metal at 100~200°C is suggested.
 2. To prevent crack at the welded junction between the base metal and the weld metal, shallow penetration in first layer using low electric current is recommended.
 3. Just after welding, peening is required until the ripple pattern of the bead is removed.
 4. The electrode should be re-dried for 30~60 minutes at 100~150°C before use.

■ **Typical Chemical Component of Deposited Metal (%)**

C	Si	Mn	P	S	Fe	Ni
0.55	0.31	0.34	0.005	0.003	1.34	Remain

■ **Typical Mechanical Properties and Hardness of the Deposited Metal as welded**

Tensile Strength N/mm ² (Kgf/mm ²)	Hardness		
	HV	HRB	HS
324 (33.1)	140~170	75~85	21~25

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

Diameter (mm)	2.6	3.2	4.0	5.0
Length (mm)	300	350	350	350
Current (A)	50~80	70~100	90~150	120~180
Min. Quantity (Kg)	3.0	5.0	5.0	5.0

Equivalent to wire for MAG welding: GN-100S
 Equivalent to electrode for TIG welding: GN-100T