

Solid Wire for Direct Overlaying on Cast Irons (MAG Welding)

G N — 8 0 K S

■ Application

Overlaying and repair welding of cavities and cracks on cast irons.

■ Features

1. GN-80KS is Fe base MAG welding solid wire for direct overlaying on cast iron. Also Fe base deposited metal mixes with the cast iron base metal smoothly.
2. The deposited metal shows excellent tensile strength and notch toughness. These characteristics are suitable for joint welding and repairing crack or defects of the cast iron base metal from which strength is required. Also it is suitable for underlaying of hardfacing on cast iron.
3. The deposited metal shows almost same color tone as cast iron.

■ Welding Procedures

1. Use MAG welding machine with pulse system.
2. In general, preheating and post heating are not required but depending upon the type, shape or size of the base metal, preheating at 100~200°C causes good welding result.
3. 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.

■ Typical Chemical Component of Deposited Metal (%)

C	Si	Mn	P	S	Ni	Special Elements
0.07	0.35	1.20	≤0.015	≤0.010	2.1	0.50~1.50

■ Typical Mechanical Properties of the Deposited Metal as welded

Tensile Strength N/mm ² (Kgf/mm ²)	Elongation %	Impact Value (2V Notch, 0°C) J (Kgf·m)
800 (81.6)	20	85 (8.7)

■ Typical Hardness of the Deposited Metal as Welded

HV	HRB	HS
180~240	87~98	26~34

■ Appropriate Welding Conditions (DC Wire + with Pulse)

Diameter (mm)	Welding Current (A)	Welding Voltage (V)	Gas Flow (ℓ/min.)
1.2	70~110	20~30	Ar+20%CO ₂ 15~25

*Minimum Quantity: 20.0Kg

Equivalent to electrode for shielded metal arc welding: GN-80K

Equivalent to electrode for TIG welding: GN-80KT