GMM MIG 312

Classification:

Class: AWS : A5.9- ER312

Material Conforms to: AWS A5.9

Weld Process Used: MIG (GMAW)

Description:

ER312 is used to weld cast alloys of similar composition and is used to weld dissimilar metals and weld overlays. This alloy has very high ferrite. When welding similar cast alloys, limit welding to two or three layers only. Two-phase weld deposit with substantial amounts of ferrite in an austenitic matrix makes it highly resistant to weld metal cracking or fissures. Weld deposits are ductile, with good root penetration.

Chemical Composition of wire:

Standard Requirement								
C	**Mn**	**Si**	**Cr**	**Ni**	**Mo**	**Cu**	**S**	**P**
0.15 max	1.0-2.5	0.30-0.65	28.0-32.0	08.0-10.5	0.75 max	0.75 max	0.03 max	0.03 max
Average Typical composition								
0.98	1.78	0.40	30.54	8.82	0.042	0.11	0.002	0.021

Mechanical Properties:

Tensile Strength (Min)	Yield Strength (Min)	Elongation (Min)
750 MPa	520 MPa	25%

Available sizes:

- 0.80 mm, 0.90 mm, 1.00 mm, 1.20 mm, 1.60 mm

Welding position:

- All position

Polarity:

- DCEP (DC+)

Recommended Welding Parameters:

GMAW "MIG Process"			Reversed Polarity			
	Wire Diameter	Wire Feed	Amps	Volts	Shielding Gas	Gas CFH
Short Arc Welding	0.80	13-26	40-120	16-20	98% Argon+2% O2	25
	0.90/1.00	13-26	60-140	16-22	98% Argon+2% O2	25
Spray Arc Welding	0.90/1.00	20-39	140-220	24-29	98% Argon+2% O2	38
	1.20	16-30	160-260	25-30	98% Argon+2% O2	38
	1.60	10-16	230-350	27-31	98% Argon+2% O2	38

Packing Details:

- 1 Kg/2lbs – SD100
- 5 Kg/10lbs – SD200
- 15Kg/25lbs/33lbs - SD300/BS300
- 100 Kg – Drum Pack
- 250 Kg – Drum Pack

Note: Other shielding Gases may be used for MIG welding. Shielding gases are chosen taking Quality, Cost, and Operability into consideration.