GMM MIG 410NiMo

Classification:
Class: AWS : A5.9- ER410NiMo

Material Conforms to: AWS A5.9

Weld Process Used: MIG (GMAW)

Description:

Modified from 410 stainless steel to contain less chromium, more nickel and added molybdenum to eliminate ferrite in the microstructure and improve the mechanical properties of the weld deposit. 410NiMo is used for welding of similar martensitic and martensitic-ferritic steels in different applications such as for instance hydro turbines. Recommend using preheat and inter-pass temperature of not less than 300ºF. Post weld heat treatment should not exceed 1150ºF, higher temperature may result in hardening.

Chemical Composition of wire:

Standard Requirement								
C	**Mn**	**Si**	**Cr**	**Ni**	**Mo**	**Cu**	**S**	**P**
0.06 max	0.60 max	0.50 max	11.0-12.5	4.0-5.0	0.4-0.7	0.75 max	0.03 max	0.03 max
Average Typical composition								
0.020	0.42	0.36	11.95	4.08	0.45	0.13	0.010	0.022

Mechanical Properties:

Tensile Strength (Min)	Yield Strength (Min)	Elongation (Min)
800 MPa	620 MPa	18%

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.