GMM TIG 410NiMo

Classification:

Class: AWS : A5.9- ER410NiMo

Material Conforms to: AWS A5.9

Weld Process Used: TIG (GTAW)

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:

- **Diameter**- 1.20 mm, 1.60 mm, 2.00 mm, 2.40 mm, 3.20 mm, 4.00 mm
- **Length**- 1000 mm & 36” Inch

Welding position:

- All position

Polarity:

- DCEN (DC-)

Recommended Welding Parameters:

GTAW "TIG Process"			
Wire Diameter	**Amps DC**	**Volts**	**Shielding Gas**
1.20	80-110	13-16	Argon 100%
1.60	90-130	14-16	Argon 100%
2.40	120-175	15-20	Argon 100%
3.20	140-200	17-22	Argon 100%
4.00	160-230	18-25	Argon 100%

Packing Details:

- 1 Kg/2lbs – Tube
- 5 Kg/10lbs – Tube
- 20Kg/40lbs - Box (4 Tubes)

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