GM 2209

CLASSIFICATION : AWS/SFA 5.9:ER 2209, BS 2901: Pt2 22.8.3S92

CHARACTERISTICS :

Solid duplex stainless wire for welding 2205 type duplex stainless steels.

APPLICATIONS :

Standard duplex stainless steels UNS S31803 (wrought) J92205 (cast), ASTM F51, DIN 1.4462, BS 1501 318S13.

Proprietary alloys such as Hy-Resist 22/5 (Avesta Sheffield), SAF 2205 (Sandvik), AF22 (Mannesmann), Uranus 45N (Creusot).

The wire is designed for TIG welding standard duplex stainless steels meeting the requirements of UNS S31803. It over-matches the parent material by 2-3% with respect to Ni to give the correct micro-structural balance of austenite & ferrite in the as-welded condition. Used for pipe-work & general fabrication in the off-shore oil & gas & chemical process industries.

COMPOSITION OF THE WIRE (RANGE) %:

C	Mn	Si	S	P	Cr	Ni	Mo	Cu	N
0.03 max	1.0-2.0	0.25-0.65	0.020 max	0.030 max	22.5-23.5	8.0-9.0	3.0-3.5	0.5 max	0.15-0.20

MECHANICAL PROPERTIES OF THE WELD METAL (RANGE) :

Ultimate Tensile Strength MPa	0.2 % Proof Stress MPa	Elongation(%)(L=4D)	Charpy V-notch impact strength (joules)	
710-900	540-660	28-35	Temp -30C	Joules >140

Duplex weld metal microstructure with austenite + 30-50% ferrite. Pitting resistance equivalent PRE = %Cr + 3.3 % Mo + 16% Ni is > 35

Hardness : .....23((<28) HRc

SHIELDING GAS: (88%Argon+10%He+2%N) : **As recommended**

Black purge: (88%Argon+10%He+2%N) : **As recommended**

Shielding Gas: (88%Argon+10%He+2%N)

PACKING DATA :

SIZE (mm)	Weight of the spool, Kg
0.8	12.5
1.0	12.5
1.2	12.5
1.60	12.5