



## ER2209

### Shanti Metal Supply Corporation ER2209

AWS A5.9 ER2209

AWS Chemical Composition Requirements	
Element	Composition (%)
C (Carbon)	0.03 max
Si (Silicon)	0.90 max
Cr (Chromium)	21.5 – 23.5
P (Phosphorus)	0.03 max
Ni (Nickel)	7.5 – 9.5
S (Sulfur)	0.03 max
Mo (Molybdenum)	2.5 – 3.5
Cu (Copper)	0.75 max
Mn (Manganese)	0.50 – 2.0
N (Nitrogen)	0.08 – 0.20

Deposited Chemical Composition % (Typical)	
Element	Composition (%)
C (Carbon)	0.016
Mo (Molybdenum)	2.91
P (Phosphorus)	0.014
Cr (Chromium)	22.4
Mn (Manganese)	1.4
S (Sulfur)	0.017
Ni (Nickel)	8.5
Si (Silicon)	0.45
N (Nitrogen)	0.18

### Deposited All Weld Metal Properties

The following data are typical for MIG welding with Argon + 2% Oxygen and TIG welding with Argon as the shielding gas. Submerged arc welding (SAW) data may vary depending on the type of flux used.

Deposited All Weld Metal Properties % (R.T.)	
Property	Value
Yield Strength	80,500 psi
Tensile Strength	105,000 psi
Elongation	26%





**Recommended Welding Parameters (GMAW “Mig Process”)**

Process	Wire Diameter (in)	Wire Feed (IPM)	Amps	Volts	Shielding Gas	Gas Flow (CFH)
Short Arc Welding	0.03	13-26	40-120	16-20	Argon + 2% O <sub>2</sub>	25
Short Arc Welding	0.035	13-26	60-140	16-22	Argon + 2% O <sub>2</sub>	25

**Application**

ER2209 is designed for welding duplex stainless steels, offering high tensile strength and excellent resistance to stress and corrosion cracking. It also has a low ferrite content.

**Recommended Welding Parameters (GTAW “Tig Process”)**

Wire Diameter (in)	Amps (DCRP)	Voltage	Shielding Gas
0.035	60-90	Dec-15	Argon 100%
0.045	80-110	13-16	Argon 100%
Jan-16	90-130	14-16	Argon 100%
Mar-32	120-175	15-20	Argon 100%

**Submerged Arc Welding**

Wire Diameter (in)	Amps	Volts
Mar-32	250-450	28-32
01-Aug	300-500	29-34
May-32	400-600	30-35
Mar-16	500-700	30-35

