

## Applications

- ① Used for welding of 22%Cr-5%Ni-2%Mo-0.15%N STS steel.
- ② Used for welding of offshore oil/gas, chemical and petrochemical process industries, e.g. pipework systems, flowlines, risers, manifolds etc.

## Characteristics on Usage

- ① Duplex stainless steel pipes, plates, fittings and forgings have an approximate 50:50 microstructure of austenite with a ferrite matrix.
- ② Preheat not generally required. Interpass temperature 100 ~ 150°C max, heat input in the range 1.0 ~ 1.5KJ/min - depending on material thickness.
- ③ Good general corrosion resistance in a range of environments.
- ④ High resistance to chloride induced stress corrosion cracking (CSCC).

### Typical Chemical Composition of Wire (%)

C	Si	Mn	Cr	Ni	Mo
0.01	0.41	1.70	23.4	8.9	3.2

### Typical Mechanical Properties of All-Weld Metal

TS MPa(lbs/in <sup>2</sup> )	EL (%)	Temp. °C (°F)	CVN-Impact Value J (ft · lbs)	PREN
784 (113,700)	30	-20 (-4)	83 (61)	35

### Ferrite Contents of All-Weld Metal (Shielding gas : 100%Ar)

	WRC-1992	Shaeffler Diagram(%)
As welded	40.8	46.4

### Typical Welding Conditions (DC+)

Size mm(in)	A	V	Speed (cm/min.)	Gas Flow (ℓ /min.)	Remarks
1.2 (.045)	250	26	30	25	Shielding gas
1.6 (1/16)	300	29	35	25	100%Ar or Ar+2%O <sub>2</sub>