

ST-309

2021.11



❖ Specification

AWS A5.9	ER309
JIS	Z 3321 YS309
EN	ISO 14343-B SS 309

❖ Applications

ST-309 is designed for welding of 22% Cr-12% Ni steel and a dissimilar metals, clad side of 18% Cr-8% Ni steel.

❖ Characteristics on Usage

As the weld metal contains ferrite, its crack resistibility is good. Due to its high level of alloy, it has excellent resistance to heat.

❖ Note on Usage

Use 100% Ar

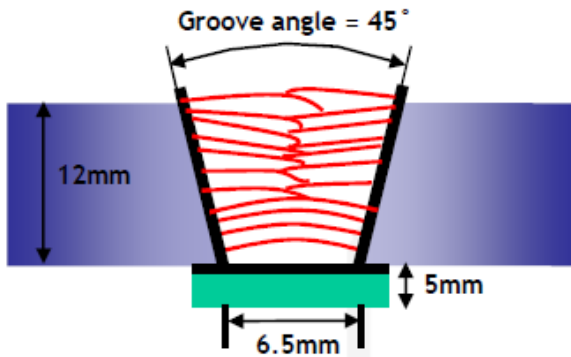
❖ Packing

Dia.	1.6mm (1/16in)	2.0mm (5/64in)	2.4mm (3/32in)	2.6mm (0.10in)	3.2mm (1/8in)
TIG	5kg (11lbs)				



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions



[Joint Preparation & Layer Details]

Diameter(mm)	: 2.4mm
Shielding Gas	: 100%Ar
Flow Rate(ℓ /min.)	: 20~25
Amp./ Volt.	: 160~240
Pre-Heat(℃)	: R.T.
Interpass Temp.(℃)	: 150 ± 15
Polarity	: DC(-)

❖ Mechanical Properties of All weld metal(wt%)

Consumable	Tensile Test		CVN Impact test Joule (ft·lbs)
	TS MPa (ksi)	EI (%)	-60℃ (-76°F)
ST-309	622 (90)	43.6	144 (107)

❖ Chemical Analysis of the wire(wt%)

Consumable	C	Si	Mn	Ni	Cr	Mo
ST-309	0.05	0.32	1.72	13.3	23.7	0.15
AWS A5.9 ER309	≤0.12	0.30 ~0.65	1.0 ~2.5	12.0 ~14.0	23.0 ~25.0	≤0.75

❖ Chemical Analysis of the weld metal(wt%)

Consumable	C	Si	Mn	Ni	Cr	Mo
ST-309	0.04	0.43	1.57	12.5	22.3	0.11

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