

ST-72

GAS TUNGSTEN ARC WELDING (SOLID WIRE)
CONSUMABLES FOR WELDING OF MILD
& 490MPa CLASS HIGH TENSILE STEEL



❖ Specification

AWS A5.18

ER70S-2

JIS Z3316

W 49 AP 3U 2

EN 1668

W2 Ti

❖ Applications

Butt and fillet welding of carbon steel for pressure vessels, tubes, ships.

❖ Characteristics on Usage

ST-72 is wire for TIG welding with pure Ar gas.
All position welding and steel sheet welding can be performed quite easily.
Most suitable for one- side welding of tubes.
It is used in DC straight polarity.

❖ Note on Usage

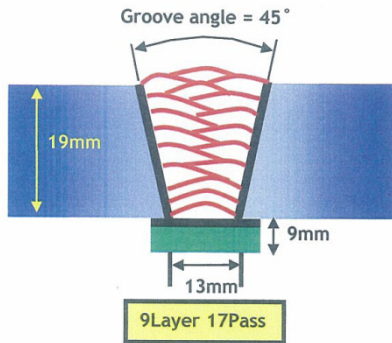
1. Use welding grade Ar 100% gas.
2. Flow quantity of shielding gas should be 15~ 20ℓ/min, generally.
3. Use the wind- screen against wind.



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



[Joint Preparation & Layer Details]

Diameter (mm)	: 2.4mm (GTAW)
Shielding Gas	: 100% Ar
Flow Rate (ℓ / min.)	: 15~ 20
Amp.	: 220~ 250
Stick-Out (mm)	: 20
Pre-Heat (°C)	: 150 ± 15
Interpass Temp. (°C)	: 150 ± 15
Polarity	: DC(-)

❖ Mechanical Properties of all weld metal

Consumable	Tensile Test			CVN Impact Test (Joule)
	YS (MPa)	TS (MPa)	EL (%)	
ST-72	550	610	31.0	200
AWS A5.18 ER70S-2	≥ 400	≥ 480	≥ 22	≥ 27J at -30 °C

❖ Chemical Analysis of all weld metal (wt%)

Consumable	C	Si	Mn	P	S	Cu
ST-72	0.04	0.62	1.13	0.020	0.005	0.07
ASME A NO.1	≤ 0.15	≤ 1.00	≤ 1.60	-	-	-
AWS A5.18 ER70S-2	Not Specified					

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