

ST-72

GAS TUNGSTEN WELDING CONSUMABLES
FOR WELDING OF Mild & 490Mpa CLASS
HIGH TENSILE STEEL

2022.05



❖ Specification

AWS A5.18

ER70S-2

JIS Z 3316

YGT50

EN ISO 636 A W

2Ti

❖ Applications

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

❖ Characteristics on Usage

ST-72 is a 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

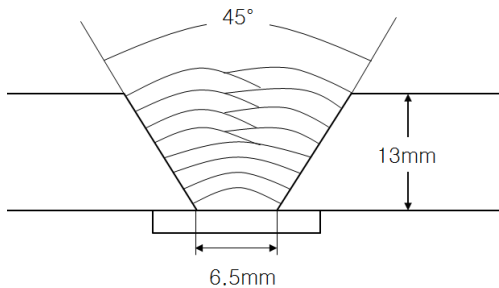
1. Use welding grade Ar100% gas.
2. Flow quantity of shielding gas should be 15~20ℓ/min, generally.
3. Use the wind-screen against wind.



Mechanical Properties of All Weld Metal & Chemical Composition of Wire

❖ Welding Conditions

Method by AWS Spec.



Diameter(mm)	: 2.4mm (3/32in)
Shielding Gas	: 100%Ar
Flow Rate(ℓ /min.)	: 15 ~ 20
Amp./ Volt.	: 220~250A / 13~16V
Pre-Heat(℃)	: 150±15
Interpass Temp.(℃)	: 150±15
Polarity	: DC(-)

[Joint Preparation & Layer Details]

❖ Mechanical Properties of the weld metal

Brand Name	Tensile Test Results			Charpy V-Notch Impact Value Joule (ft . lbs)	
	YS MPa(ksi)	TS MPa(ksi)	EL(%)	-30℃ (-22°F)	-50℃ (-58°F)
ST-72	560 (81.2)	640 (92.8)	30.6	155 (115)	62 (46)
AWS A5.18 ER70S-2	≥ 400	≥ 480	≥ 22	27J@-30℃	

❖ Chemical Composition of Wire (Wt%)

Brand Name	C	Si	Mn	P	S
ST-72	0.05	0.52	1.15	0.014	0.004
AWS A5.18 ER70S-2	≤0.07	0.40~0.70	0.90~1.40	≤0.025	≤0.035

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