

ST-50G

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



❖ Specification

AWS A5.18

ER70S-G

JIS Z3316

YGT50

EN ISO 636-A

W3Si1

❖ Applications

Butt and fillet welding of carbon steel for pressure vessels, tubes, ships, penstock and aluminum-killed steel for low temperature service.

❖ Characteristics on Usage

ST-50G 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

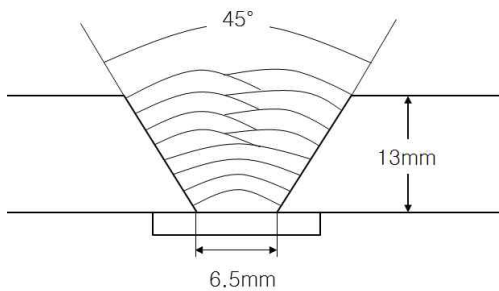
1. Use welding grade Ar100% gas.
2. Flow quantity of shielding gas should be 15~20ℓ/min, generally.
3. Use the wind-screen against wind.



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



Diameter(mm)	: 2.4mm (3/32in)
Shielding Gas	: 100%Ar
Flow Rate(ℓ /min.)	: 15 ~ 20
Amp./ Volt.	: 230A / 15V
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 J (ft . lbs)
	Y.S. MPa(ksi)	T.S. MPa(ksi)	EL.(%)	-20℃ (-4°F)
ST-50G	470 (68.2)	561 (81.4)	28.7	100 (74)
AWS A5.18 ER70S-G	≥ 400	≥ 480	≥ 22	As agreed between supplier And purchaser

❖ Chemical Composition of Wire (Wt%)

Brand Name	C	Si	Mn	P	S
ST-50G	0.075	0.86	1.47	0.011	0.018
AWS A5.18 ER70S-G	Not Specified				

This information is provided solely for the purpose of confirming product conformance with applicable standards. The serviceability of a product or structure utilizing this type of information is and must be the sole responsibility of the builder/user. Many variables beyond the control of HYUNDAI WELDING CO., LTD. affect the results obtained in applying this type of information. These variables include, but are not limited to, welding procedure, shielding gas, plate chemistry and temperature, weldment design, fabrication methods and service requirements.