HYUNDAI WELDING

Rev. 01

ST-50G

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

HYUNDAI WELDING CO., LTD.

ST-50G

❖ 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.

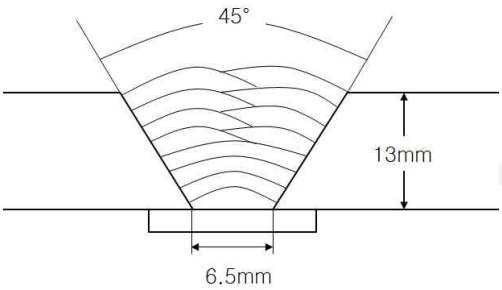
❖ Note on Usage

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.



[Joint Preparation & Layer Details]

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(-)

❖ Mechanical Properties of the weld metal

Brand Name	Tensile Test Results			Charpy V-Notch Impact Value J (ft . lbs)
ST-50G	Y.S. MPa(ksi)	T.S. MPa(ksi)	EL.(%)	-20℃ (-4°F)
	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				