

S-7018.A1

COVERED ARC WELDING ELECTRODE
FOR WELDING BUILDINGS AND PIPES

2020.12

HYUNDAI WELDING CO., LTD.



❖ Specification

AWS A5.5	E7018-A1
JIS Z 3223	E4918-1M3
ISO 3580-A	E Mo B 3 2

❖ Applications

S-7018.A1 can be used for welding of 05.%Mo heat resistant steel used for high temperature and high pressure boilers, chemical industries, oil refining industries and turbine casting. Other general low alloy steel and high tensile steel.

❖ Characteristics on Usage

S-7018.A1 is an iron powder low hydrogen type electrode. Its coating contains mush iron powder, which increasing working efficiency.

❖ Note on Usage

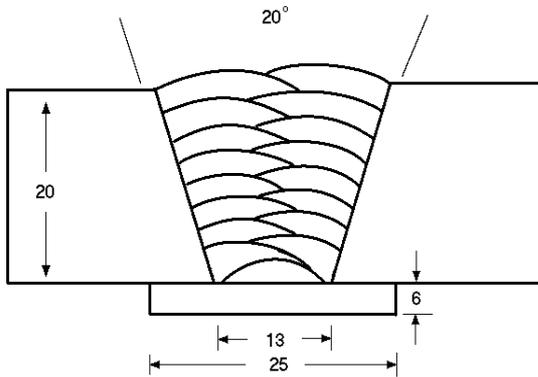
1. Preheat at 100~200°C (212~392°F) and postheat at 620~680°C (1148~1256°F)
2. Dry the electrodes at 350~400°C (662~752°F) for 60 minutes before use.
3. Keep the arc as short as possible.



Mechanical Properties & Chemical Compositions of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



Diameter, : 4.0 X 400mm(5/32 X 16in)
Amp./ Volt. : 160 / 23~24
Interpass Temp. : 130 ~145℃(266~293°F)
Polarity : DC+

[Joint Preparation & Layer Details]

❖ Mechanical Property of All Weld Metal

Consumable	Tensile Test Results			CVN Impact Test J (ft·lbs)	PWHT	
	YS MPa (lbs/in ²)	TS MPa (lbs/in ²)	EL (%)	-	Temp. ℃(°F)	Time
S-7018.A1	477 (69,300)	617 (89,600)	32.8	-	620(1148)	1hr
AWS A5.5	≥ 390 (≥57,000)	≥ 490 (≥71,000)	≥ 22	Not specified	620(1148)	1hr

❖ Chemical Composition of All Weld Metal(wt%)

Consumable	Chemical Composition					
	C	Si	Mn	P	S	Mo
S-7018.A1	0.07	0.77	0.88	0.018	0.010	0.52
AWS A5.5	≤0.12	≤0.80	≤0.90	≤0.03	≤0.03	0.40~0.65

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.



Weldability & Welding Efficiency Test

❖ Weldability

Item \ Division	Flat position	Vertical position
Arc stability	Good	Good
Melting rate	Excellent	Excellent
Deposition rate	Excellent	Excellent
Resistance of spatter occurrence	Excellent	Excellent
Bead appearance	Good	Good
The others	Good	Good

❖ Sizes Available and Recommended Current

Diameter, mm(in)		2.6 (3/32)	3.2 (1/8)	4.0 (5/32)	5.0 (3/16)	6.0 (15/64)
Length, mm(in)		350(14)	350(14)	400(16)	400(16)	450(18)
Recommended current range (AC or DC+ Amp.)	Flat (1G-PA)	55 ~90	90 ~130	130 ~190	190 ~240	250 ~300
	3G (PF) & 4G,5G (PE)	50 ~80	805 ~120	120 ~170	-	-

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