HYUNDAI WELDING

Rev. 00

S-7010.A1

COVERED ARC WELDING ELECTRODE
FOR WELDING BUILDINGS AND PIPES

HYUNDAI WELDING CO., LTD.

S-7010.A1

❖ Specification

AWS A5.5	E7010-A1
EN ISO 2560-A	E42 0 Mo C 1 5

❖ Applications

S-7010.A1 can be used for welding of 05.%Mo steel pipe, high pressure boilers, drums, thin steel plate for buildings and oil pipes.

❖ Characteristics on Usage

S-7010.A1 is a high cellulose type electrode which contains 0.5%Mo in its coating. X-ray performance and mechanical properties are extremely good.

❖ Note on Usage

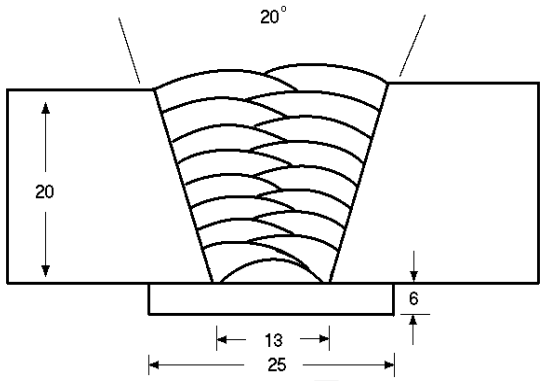
1. Preheat at 100~200℃(212~392°F)
   and postheat at 620~680℃(1148~1256°F)

2. Dry the electrodes at 70~100(158~212°F) for 30~60 minutes before use.

Mechanical Properties & Chemical Compositions of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



[Joint Preparation & Layer Details]

Diameter, mm(in) : 4.0 X 400(5/32 X 16)

Amp./ Volt. : 160 / 23~24

Interpass Temp. ℃(°F) : 130 ~145(266~293)

Polarity : DC+

❖ Mechanical Property of All Weld Metal

Consumable	Tensile Test Results			CVN Impact Test J (ft·lbs)	PWHT	
	YS MPa (ksi)	TS MPa (ksi)	EL (%)	–	Temp. ℃(°F)	Time
S-7010.A1	490(71)	580(84)	30.2	–	620(1148)	1hr
AWS A5.5	≥ 400(58)	≥ 490(71)	≥ 22	Not specified	620(1148)	1hr

❖ Chemical Composition of All Weld Metal(wt%)

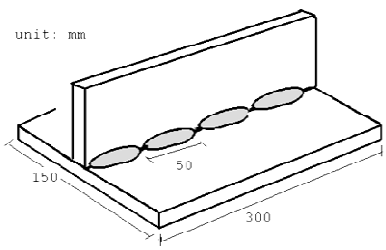
Consumable	Chemical Composition					
	C	Si	Mn	P	S	Mo
S-7010.A1	0.09	0.20	0.58	0.011	0.011	0.52
AWS A5.5	≤0.12	≤0.40	≤0.60	≤0.03	≤0.03	0.40~0.65

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

❖ Results of Crater Crack Test

Test plate	Plate thickness mm(in)	Fillet design (mm)	Welding conditions		
			Amp.(A)	Volt.(V)	Result
ASTM A36	9(0.35)		140	22~23	No crater crack

Size Available and recommended Current & Approval

❖Sizes Available and Reconnended Current

Diameter, mm(in)		2.6 (3/32)	3.2 (1/8)	4.0 (5/32)	5.0 (3/16)
Length, mm(in)		350(14)	350(14)	350(14)	350(14)
Recommended current range (AC or DC+ Amp.)	Flat position	55 ~90	90 ~130	130 ~180	180 ~240
	Vertical & Overhead position	50 ~80	805 ~120	110 ~170	150 ~200