

S-4303.V

COVERED ARC WELDING ELECTRODE
FOR PURPOSE WELDING OF MILD STEEL



❖ Specification

AWS	-
JIS Z3211	E4303
EN ISO 2560-A	E38 2 RA 1 2

❖ Applications

Welding of ship hulls, vehicles, machinery, building and bridges.

❖ Characteristics on Usage

S-4303.V is an lime-titania type electrode whose usability is excellent in all position welding, It deposits smooth and flat weld metal of fine ripple mark with easy manipulation of the electrode, particularly in V-up and overhead position. Mechanical properties of weld metal are excellent next to that of low hydrogen type electrodes.

❖ Note on Usage

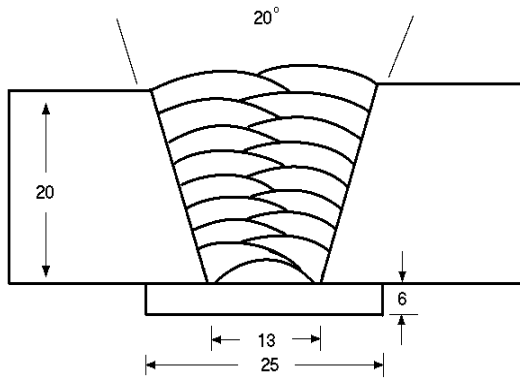
1. Dry the electrodes at 70~100°C (158~212°F) for 30~60 minutes before use.
2. As arc-restricting properties are not so good.
it is suitable for intermittent welding



Mechanical Properties & Chemical Compositions of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



Diameter, mm(in)	: 4.0 X 400(5/32 X 16)
Amp./ Volt.	: 170 / 23~24
Interpass Temp. °C(°F)	: 80~130 (176~266)
Polarity	: AC

[Joint Preparation & Layer Details]

❖ Mechanical Property of All Weld Metal

consumable	Tensile test			CVN Impact Value J (ft.lbs)
	YS MPa (ksi)	TS MPa (ksi)	EL (%)	0°C (32°F)
S-4303.V	422 (61)	454 (66)	30.8	124 (92)
JIS Spec.	≥ 330 (48)	≥ 430 (62)	≥ 20	≥ 27(20) at 0°C(32°F)

❖ Chemical Composition of All Weld Metal(wt%)

Consumable	Chemical Composition (%)				
	C	Si	Mn	P	S
S-4303.V	0.06	0.15	0.47	0.021	0.012
JIS Spec.	≤ 0.20	≤ 1.00	≤ 1.20	-	-

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

❖ Weldability

Division Item	Flat position	Vertical position
Arc stability	Excellent	Excellent
Melting rate	Excellent	Excellent
Deposition rate	Excellent	Excellent
Resistance of spatter occurrence	Good	Good
Slag formation & Removability	Excellent	Excellent
Bead appearance	Excellent	Excellent
Restriking property	Excellent	Excellent
The others	Good	Good

❖ Test Conditions of Deposition Efficiency

Consumable	Base Metal		Welding conditions		
	Specification	Dimension (mm)	Amp. (A)	Welding speed (mm/min)	Position
S-4303.V (4.0 x 400 mm) (5/32 x 16 in)	SS-400	300 X 100 X12 (12 X 3.9 X 0.5)	AC 170	200	Flat

❖ Results of Deposition Efficiency Test

Consumable	Deposition efficiency (%)	
	For electrode	For core wire
S-4303.V (4.0 x 400 mm) (5/32 x 16 in)	70 ~ 75	110 ~ 115

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Size Available and recommended Current & Approval

❖ Sizes Available and recommended Currents

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 position	60 ~100	100 ~140	140 ~190	200 ~260	250 ~330
	Vertical & Overhead position	50 ~90	80 ~130	110 ~170	140 ~210	-

❖ Authorized Approval Details

Classification		Dia. mm(in)	Welding position	Grade					
JIS	AWS			KR	ABS	LR	BV	DNV GL	NK
E4303	-	2.6(3/32) ~ 5.0(3/16)	All	RMW3	3	3	3	3	KMW3
		6.0(15/64)	F, H-Fil.						

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