

S-4303.T

IRON POWDER LIME-TITANIA TYPE ELECTRODE
FOR HIGHLY EFFICIENT WELDING OF MILD STEEL



❖ Specification

AWS	-
JIS Z3211	E4303
EN ISO 2560-A	E38 0 RA 1 2

❖ Applications

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

❖ Characteristics on Usage

S-4303.T is an iron powder lime-titania type electrode which provides highly efficient welding by high deposition rate and good re-striking property. It is suitable for tack welding and intermittent welding.

Metal quality is also good, especially, impact values of weld metal are better than those of ilmenite type electrodes.

Its usability is good in all positions.

❖ Note on Usage

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

Excessive moisture absorption lowers usability and may result in some porosity.

2. Pay attention not to exceed the range of proper currents.

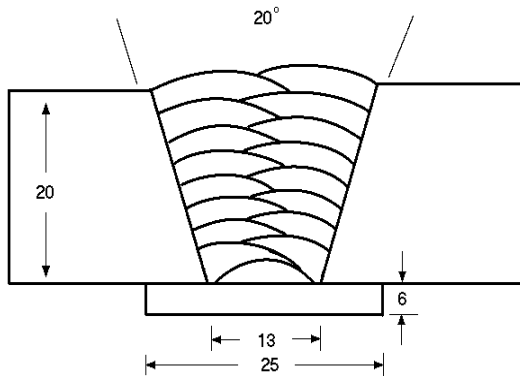
Welding in excessive current not only lowers X-ray performance but also causes increase of spatter, under cut and insufficient covering.



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.T	436 (63)	489 (71)	28.9	98
JIS Spec.	≥ 330 (48)	≥ 430 (62)	≥ 20	≥ 27 (20)

❖ Chemical Composition of All Weld Metal(wt%)

Consumable	Chemical Composition (%)				
	C	Si	Mn	P	S
S-4303.T	0.06	0.16	0.48	0.019	0.014
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 Test****❖ 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(in)	Amp. (A)	Welding speed (mm/min)	Position
S-4303.T (4.0 x 400 mm) (5/32 x 16 in)	SM-41	300 X 100 X12 (12 X 3.9 X 0.5)	AC 170	280	Flat

❖ Results of Deposition Efficiency Test

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

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.



Size Available and recommended Current

❖ 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	90 ~130	140 ~180	180 ~240	250 ~310
	Vertical & Overhead position	50 ~90	80 ~130	110 ~170	150 ~210	-

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.