



NIPPON KAIJI KYOKAI

Approval No. NKY-2523
Certificate No. TA251071E

*Certificate**OF*
TYPE APPROVAL


Article: Welding Consumables for High Tensile Steels for Hull
Brand: TM-70C
Applicant: Tien Tai Electrode (Kunshan) Co., Ltd.
Kunshan City, Jiangsu Province, China
Manufacturer: Tien Tai Electrode (Kunshan) Co., Ltd.
Kunshan City, Jiangsu Province, China
Grade: KAW53MG(C)H5
KSW53G(C)H5
Welding Process: Automatic Welding (MAG Welding)
Semi-Automatic Welding (MAG Welding)
Welding Positions and Max. Diameter of Wire: See Table 1 and 2
Current: DCEP
Shielding Gas: CO₂
Remarks: For annual inspection, mechanical properties are to comply with the requirements specified in Table 3.

Table 1 Welding Positions and Max. Diameter of Wire of KAW53MG(C)H5

Butt Weld		Fillet Weld	
Flat:	1.6mm	Flat:	1.6mm
Horizontal:	Not Applicable	Horizontal Vertical:	Not Applicable
Overhead:	Not Applicable	Horizontal:	Not Applicable
Vertical Upward:	Not Applicable	Horizontal Overhead:	Not Applicable
Vertical Downward:	Not Applicable	Overhead:	Not Applicable
		Vertical Upward:	Not Applicable
		Vertical Downward:	Not Applicable

THIS IS TO CERTIFY that the above mentioned welding consumable has been approved by the NIPPON KAIJI KYOKAI in accordance with the requirements of the Society's Rules.

This Certificate will remain in force until 13 January 2026.
Issued at Tokyo on 20 June 2025.



M. IRISAWA

General Manager

Material and Equipment Department

Note : (1) The validity of this certificate may be renewed by endorsement on the attached sheet upon completion of the annual inspections.
(2) This certificate was rewritten because of addition of grade of welding consumable.

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Table 2 Welding Positions and Max. Diameter of Wire of KSW53G(C)H5


Butt Weld		Fillet Weld	
Flat:	1.6mm	Flat:	1.6mm
Horizontal:	1.6mm	Horizontal Vertical:	1.6mm
Overhead:	Not Applicable	Horizontal:	1.6mm
Vertical Upward:	Not Applicable	Horizontal Overhead:	Not Applicable
Vertical Downward:	Not Applicable	Overhead:	Not Applicable
		Vertical Upward:	Not Applicable
		Vertical Downward:	Not Applicable

Table 3 Mechanical Properties

Butt Weld Test ¹⁾						
Welding Process	Tensile test	Longitudinal tensile test			Impact Test	
	Tensile strength (N/mm ²)	Tensile strength (N/mm ²)	Yield point (N/mm ²)	Elongation (%)	Testing temperature (°C)	Minimum mean absorbed energy (J)
Automatic Welding (MAG Welding)	490 min.	490~660	375 min.	22 min.	-20	34
Semi-Automatic Welding (MAG Welding)	490 min.	490~660	375 min.	22 min.	-20	47

Note:

- 1) For annual inspection, the test is to conducted in accordance with requirements for KSW53G(C)H5 specified in Chapter 6, Part M of NK Rules.

<p>The validity of this certificate has been renewed</p> <p>until <u>13 January 2017</u></p> <p>Date: <u>20 Nov. 2015</u></p>  <p>_____ Surveyor</p>	<p>The validity of this certificate has been renewed</p> <p>until _____</p> <p>Date: _____</p> <p>_____ Surveyor</p>
<p>The validity of this certificate has been renewed</p> <p>until _____</p> <p>Date: _____</p> <p>_____ Surveyor</p>	<p>The validity of this certificate has been renewed</p> <p>until _____</p> <p>Date: _____</p> <p>_____ Surveyor</p>
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