



## NIPPON KAIJI KYOKAI

*Certificate*

OF

## TYPE APPROVAL

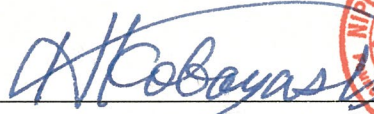
Approval No. NKY-2124  
Certificate No. TA20250E


Article: Welding Consumables for High Tensile Steels for Hull  
Brand: COREWELD 111RB  
Applicant: ESAB SeAH Corp.  
Changwon, Kyung Nam, Korea  
Manufacturer: ESAB SeAH Corp.  
Changwon, Kyung Nam, Korea  
Grade: KSW52G(C)H10  
KSW52Y40G(C)H10  
Welding Process: Semi-Automatic Welding (MAG Welding)  
Welding Positions and Max. Diameter of Wire: See Table 1  
Current: DCEP  
Shielding Gas: CO<sub>2</sub>  
Remarks: For annual inspection, mechanical properties are to comply  
with the requirements specified in Table 2.

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 16 December 2020.

Issued at Tokyo on 3 March 2020.

  
H. Kobayashi  
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 consumables.

Certificate No. TA20250E



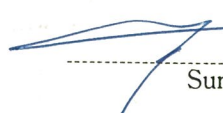
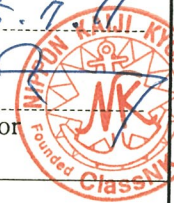
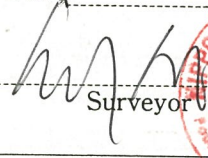



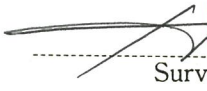

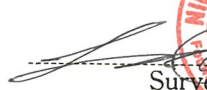

Table 1 Welding Positions and Max. Diameter of Wire for Both Grades

Butt Weld		Fillet Weld	
Flat:	1.6mm	Flat:	1.6mm
Horizontal:	1.6mm	Horizontal Vertical:	1.6mm
Overhead:	1.6mm	Horizontal:	1.6mm
		Overhead:	1.6mm
Vertical Upward:	1.6mm	Horizontal Overhead:	1.6mm
Vertical Downward:	1.6mm	Vertical Upward:	1.6mm
		Vertical Downward:	1.6mm

Table 2 Mechanical Properties

Deposited Metal Test				
Tensile Test			Impact Test	
Tensile strength (N/mm <sup>2</sup> )	Yield point (N/mm <sup>2</sup> )	Elongation (%)	Testing temperature (°C)	Minimum mean absorbed energy (J)
510~660	400 min.	22 min.	0	47

Certificate No. TA20250E

<p>The validity of this certificate has been renewed until <u>2021.12.16</u>.</p> <p>Date: <u>2020.08.14</u></p> <p> Surveyor </p>	<p>The validity of this certificate has been renewed until <u>2026.12.16</u>.</p> <p>Date: <u>2025.7.11</u></p> <p> Surveyor </p>
<p>The validity of this certificate has been renewed until <u>2022.12.16</u>.</p> <p>Date: <u>2021.07.05</u></p> <p> Surveyor </p>	<p>The validity of this certificate has been renewed until _____.</p> <p>Date: _____</p> <p>_____ Surveyor</p>
<p>The validity of this certificate has been renewed until <u>2023.12.16</u>.</p> <p>Date: <u>2022.08.24</u></p> <p> Surveyor </p>	<p>The validity of this certificate has been renewed until _____.</p> <p>Date: _____</p> <p>_____ Surveyor</p>
<p>The validity of this certificate has been renewed until <u>2024.12.16</u>.</p> <p>Date: <u>2023.07.28</u></p> <p> Surveyor </p>	<p>The validity of this certificate has been renewed until _____.</p> <p>Date: _____</p> <p>_____ Surveyor</p>
<p>The validity of this certificate has been renewed until <u>2025.12.16</u>.</p> <p>Date: <u>2024.07.18</u></p> <p> Surveyor </p>	<p>The validity of this certificate has been renewed until _____.</p> <p>Date: _____</p> <p>_____ Surveyor</p>



# NIPPON KAIJI KYOKAI

Approval No. NKY-3688  
Certificate No. TA241482E

## *Certificate* *OF* *TYPE APPROVAL*

Article: Welding Consumables for High tensile Steels for Hull  
Brand: Coreweld 111 RB (×2)  
Applicant: ESAB SeAH Corp.  
56, Jeongdong-ro, 62beon-gil, Seongsan-gu, Changwon-si,  
Gyeongnam, Korea  
Manufacturer: ESAB SeAH Corp.  
56, Jeongdong-ro, 62beon-gil, Seongsan-gu, Changwon-si,  
Gyeongnam, Korea  
Grade: KAW52G(C)H10  
KAW52Y40G(C)H10  
Welding Process: Automatic Welding (MAG Welding)  
Welding Positions and Max. Diameter of Wire: See Table 1  
Current: DCEP  
Shielding Gas: CO<sub>2</sub>  
Remarks: For annual inspection, mechanical properties are to comply with the  
requirements specified in Table 2.

Table 1 Welding Positions and Max. Diameter of Wire for Both grade

Butt Weld		Fillet Weld	
Flat:	1.6mm	Flat:	1.6mm
		Horizontal Vertical:	1.6mm
Horizontal:	Not Applicable	Horizontal:	Not Applicable
Overhead:	Not Applicable	Horizontal Overhead:	Not Applicable
		Overhead:	Not Applicable
Vertical Upward:	Not Applicable	Vertical Upward:	Not Applicable
Vertical Downward:	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 11 December 2025.  
Issued at Tokyo on 12 December 2024.

  
M. Irisawa  
General Manager  
Material and Equipment Department




Note : The validity of this certificate may be renewed by endorsement on the attached sheet upon completion of the annual inspections.

Certificate No. TA241482E

Table 2 Mechanical Properties

Deposited Metal Test				
Tensile Test			Impact Test	
Tensile strength (N/mm <sup>2</sup> )	Yield point (N/mm <sup>2</sup> )	Elongation (%)	Testing temperature (°C)	Minimum mean absorbed energy (J)
510~660	400 min.	22 min.	0	39

Certificate No. TA241482E

<p>The validity of this certificate has been renewed</p> <p>until <u>2026.12.11</u>.</p> <p>Date: <u>2025.11.11</u></p>  <p>Surveyor</p>	<p>The validity of this certificate has been renewed</p> <p>until _____.</p> <p>Date: _____</p> <p>_____</p> <p>Surveyor</p>
<p>The validity of this certificate has been renewed</p> <p>until _____.</p> <p>Date: _____</p> <p>_____</p> <p>Surveyor</p>	<p>The validity of this certificate has been renewed</p> <p>until _____.</p> <p>Date: _____</p> <p>_____</p> <p>Surveyor</p>
<p>The validity of this certificate has been renewed</p> <p>until _____.</p> <p>Date: _____</p> <p>_____</p> <p>Surveyor</p>	<p>The validity of this certificate has been renewed</p> <p>until _____.</p> <p>Date: _____</p> <p>_____</p> <p>Surveyor</p>
<p>The validity of this certificate has been renewed</p> <p>until _____.</p> <p>Date: _____</p> <p>_____</p> <p>Surveyor</p>	<p>The validity of this certificate has been renewed</p> <p>until _____.</p> <p>Date: _____</p> <p>_____</p> <p>Surveyor</p>
<p>The validity of this certificate has been renewed</p> <p>until _____.</p> <p>Date: _____</p> <p>_____</p> <p>Surveyor</p>	<p>The validity of this certificate has been renewed</p> <p>until _____.</p> <p>Date: _____</p> <p>_____</p> <p>Surveyor</p>