



NIPPON KAIJI KYOKAI

Certificate

OF

TYPE APPROVAL

Approval No. NKY-2272
Certificate No. TA191142E

Article: Welding Consumables for High Tensile Steels for Hull
 Brand: Dual Shield 7100S
 Applicant: ESAB SeAH Corp.
 Changwon, Gyeongnam, Korea
 Manufacturer: ESAB SeAH Corp.
 Changwon, Gyeongnam, 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: CO₂
 Remarks: For annual inspection, mechanical properties are to comply with the requirements specified in Table 2.

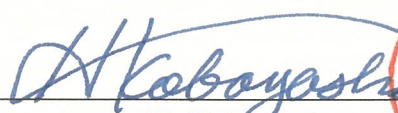
Table 1 Welding Positions and Max. Diameter of Wire for Both Grades


Butt Weld		Fillet Weld	
Flat:	1.4mm	Flat:	1.4mm
Horizontal:	1.4mm	Horizontal Vertical:	1.4mm
Overhead:	1.4mm	Horizontal:	1.4mm
Vertical Upward:	1.4mm	Horizontal Overhead:	1.4mm
Vertical Downward:	1.4mm	Overhead:	1.4mm
		Vertical Upward:	1.4mm
		Vertical Downward:	1.4mm

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 1 October 2020.

Issued at Tokyo on 30 August 2019.


 H. Kobayashi
 General Manager
 Material and Equipment Department





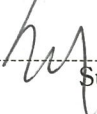



Note : The validity of this certificate may be renewed by endorsement on the attached sheet upon completion of the annual inspections.

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Table 2 Mechanical Properties

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

Note: This certificate was rewritten because of addition of grade of welding consumable.

<p>The validity of this certificate has been renewed until <u>2021 .10. 01</u> .</p> <p>Date: <u>2020 .08. 14</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>2022 .10. 01</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>2023.10.01</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 _____ .</p> <p>Date: _____</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 _____ .</p> <p>Date: _____</p> <p>_____ Surveyor</p>	<p>The validity of this certificate has been renewed until _____ .</p> <p>Date: _____</p> <p>_____ Surveyor</p>