



NIPPON KAIJI KYOKAI

Certificate

OF

TYPE APPROVAL

Approval No. NKY-3323
Certificate No. TA181021E

Article: Welding Consumables
Brand: CSF-71LF
Applicant: Chosun Welding Co., Ltd., Onsan Plant
Ulju, Ulsan, Korea
Manufacturer: Chosun Welding Co., Ltd., Onsan Plant
Ulju, Ulsan, Korea
Grade: KSW53G(C)H5
KSW53G(C)H10
KSW53G(M2)H10
KSW53Y40G(C)H10
Welding Process: Semi-Automatic Welding (MAG Welding)
Welding Positions and Max. Diameter of Wire: See Table 1
Current: DCEP
Shielding Gas: CO₂
Ar + CO₂
Applicable Parent Material: High Tensile Steels for Hull
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 10 November 2018.

Issued at Tokyo on 27 July 2018.

H. Kobayashi
General Manager

Material and Equipment Department



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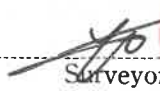
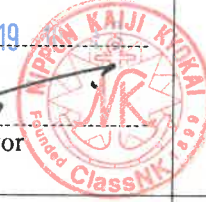

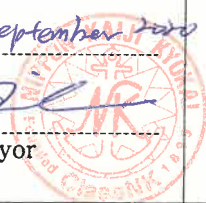


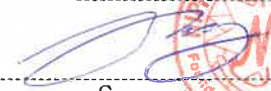

Table 1 Welding Positions and Max. Diameter of Wire for All Grades

Butt Weld		Fillet Weld	
Flat:	1.6mm	Flat:	1.6mm
Horizontal:	1.6mm	Horizontal Vertical:	1.6mm
Overhead:	1.6mm	Horizontal:	1.6mm
Vertical Upward:	1.6mm	Horizontal Overhead:	1.6mm
Vertical Downward:	1.6mm	Overhead:	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 ²)	Yield point (N/mm ²)	Elongation (%)	Testing temperature (°C)	Minimum mean absorbed energy (J)
510~660	400 min.	22 min.	-20	47

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

<p>The validity of this certificate has been renewed until <u>10. November. 2020</u> .</p> <p>Date: <u>2019</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>10 November 2021</u> .</p> <p>Date: <u>29 September 2020</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>2021. 11. 10</u> .</p> <p>Date: <u>2021 .09. 15</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>10 November 2023</u> .</p> <p>Date: <u>2022 09 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 _____ .</p> <p>Date: _____</p> <p>_____ Surveyor</p>	<p>The validity of this certificate has been renewed until _____ .</p> <p>Date: _____</p> <p>_____ Surveyor</p>