



NIPPON KAIJI KYOKAI

Certificate

OF

TYPE APPROVAL


Approval No. NKY-3513
Certificate No. TA201038E

Article: Welding Consumables for Stainless Steels
 Brand: UC-2209 / CA-201S
 [Wire / Flux]
 Applicant: Chosun Welding Co., Ltd., Onsan Plant
 Uiju, Ulsan, Korea
 Manufacturer: Chosun Welding Co., Ltd., Onsan Plant
 Uiju, Ulsan, Korea
 Grade: Manufacturer's Specification
 Welding Process: Submerged Arc Welding
 Technique: Multi-Run
 Welding Positions and Max. Diameter of Wire: See Table 1
 Current: DCEP
 Shielding Gas: Not Applicable
 Applicable Parent Material: Stainless Steels
 Specific Grade: "KSUS329J3L", "S31803 and S32205 specified in ASTM A240" and Equivalent Duplex Stainless Steels
 Remarks: 1) Chemical composition and mechanical properties are to comply with the requirements specified in Table 2 and Table 3.
 2) Test requirements for annual inspection are to comply with Table 4.

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 22 July 2021.
 Issued at Tokyo on 23 July 2020.




 Y. Takao
 General Manager
 Material and Equipment Department

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

Certificate No. TA201038E

Table 1 Welding Positions and Max. Diameter of Wire

Butt Weld		Fillet Weld	
Flat:	4.0mm	Flat:	4.0mm
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

Table 2 Chemical Composition of Deposited Metal (%)

C	Si	Mn	P	S	Cr	Ni	Mo	Cu	N
0.040	1.00	0.50	0.03	0.02	21.5	7.5	2.50	0.30	0.10
max.	max.	~ 2.00	max.	max.	~ 23.5	~ 10.5	~ 3.50	max.	~ 0.20

Table 3 Mechanical Properties





Deposited Metal Test					Butt Weld Test
Tensile Test			Impact Test		Tensile test
Tensile strength (N/mm ²)	Yield point (N/mm ²)	Elongation (%)	Testing temperature (°C)	Minimum mean absorbed energy (J)	Tensile strength (N/mm ²)
690 min.	450 min.	20 min.	-40	34	620 min.

Table 4 Test Requirements for Annual Inspection

Kind of test	Test assembly ^{1), 2), 3), 4)}			Kind and number of test specimens to be taken from test assembly
	Number	Plate thickness (mm)	Welding position	Tensile test specimen ^{5), 6)} : 1
Deposited metal test	1	19~25	Flat	

Notes:

- 1) The approved specific grade of applicable parent material is to be applied. Other parent material with appropriate buttering may be applied subject to the approval of the Society.
- 2) Shape and dimension of test assembly are to be in accordance with Fig. M6.16, Chapter 6, Part M of the NK Rules.
- 3) Test assembly is to be welded in accordance with 6.7.5, Chapter 6, Part M of the NK Rules.
- 4) The diameter of the wire is to be within the range specified by Chosun Welding Co., Ltd., Onsan Plant but not exceeding the maximum diameter approved.
- 5) Kind of test specimen is to be 1C specified in Table M3.1, Chapter 3, Part M of the NK Rules.
- 6) Mechanical properties are to comply with the requirements specified in Table 3.

<p>The validity of this certificate has been renewed until <u>2022. 07. 22</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>22 July 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>
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