NIPPON KAIJI KYOKAI

Approval No. NKY-3388
Certificate No. TA181375E

Certificate
OF
TYPE APPROVAL

Article	: Welding Consumables
Brand	: TNM-9
Applicant	: Tien Tai Electrode Co., Ltd.
	: Tainan, Taiwan
Manufacturer	: Tien Tai Electrode Co., Ltd.
	: Tainan, Taiwan
Grade	: KMWL92H5
	KMWL92H5-YP430M
Welding Process	: Manual Welding
Welding Positions and Max. Diameter of Electrode	: See Table 1
Current	: AC and DCEP
Shielding Gas	: Not Applicable
Applicable Parent Material	: Steels for Low Temperature Service
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 4 January 2019.
Issued at Tokyo on 28 November 2018.

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 1 Welding Positions and Max. Diameter of Electrode

Butt Weld		Fillet Weld	
Flat:	4.0mm	Flat:	4.0mm
		Horizontal Vertical:	4.0mm
Horizontal:	4.0mm	Horizontal:	4.0mm
Overhead:	4.0mm	Horizontal Overhead:	4.0mm
		Overhead:	4.0mm
Vertical Upward:	4.0mm	Vertical Upward:	4.0mm
Vertical Downward:	Not Applicable	Vertical Downward:	Not Applicable

Table 2 Mechanical Properties

Deposited Metal Test				
Tensile Test			Impact Test	
0.2 % Proof stress (N/mm^2)	Tensile strength (N/mm^2)	Elongation (%)	Testing temperature (℃)	Minimum mean absorbed energy (J)
430 min.	660 min.	25 min.	−196	27

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The validity of this certificate has been renewed until 4th January 2020. Date: 3 December 2018 Surveyor	The validity of this certificate has been renewed until . Date: Surveyor
The validity of this certificate has been renewed until 4th January 2021. Date: 12 December 2019 Surveyor	The validity of this certificate has been renewed until . Date: Surveyor
The validity of this certificate has been renewed until 4th January 2022. Date: 9 December 2020 Surveyor	The validity of this certificate has been renewed until . Date: Surveyor
The validity of this certificate has been renewed until 4th January 2023. Date: 8 December 2021 Surveyor	The validity of this certificate has been renewed until . Date: Surveyor
The validity of this certificate has been renewed until . Date: Surveyor	The validity of this certificate has been renewed until . Date: Surveyor