NIPPON KAIJI KYOKAI

Approval No. NKY-3300
Certificate No. TA16497E

Certificate

OF

TYPE APPROVAL FOR WELDING CONSUMABLE

Brand:	TSW-12KH / TF-210 [Wire / Flux]
Applicant:	Tien Tai Electrode Co., Ltd. Tainan, Taiwan
Manufacturer:	Tien Tai Electrode Co., Ltd. Tainan, Taiwan
Grade:	KAWL3MH5
Welding Process:	Submerged Arc Welding
Welding Positions and Max. Diameter of Wire:	See Table 1 below
Current:	AC and DCEP
Shielding Gas:	Not Applicable
Applicable Parent Material:	Steels for Low Temperature Service

Table 1 Welding Positions and Max. Diameter of Wire

Butt Weld		Fillet Weld	
Flat:	4.8mm	Flat:	Not Applicable
		Horizontal Vertical:	Not Applicable
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 25 April 2017.
Issued at Tokyo on 26 April 2016.

T. Imamura
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. TA16497E

The validity of this certificate has been renewed until 25th April 2018 . Date: 14 June 2017 Surveyor	The validity of this certificate has been renewed until 25 th April 2023 . Date: 7 June 2022 Surveyor
The validity of this certificate has been renewed until 25th April 2019 . Date: 4 June 2018 Surveyor	The validity of this certificate has been renewed until . Date: Surveyor
The validity of this certificate has been renewed until 25th April 2020 . Date: 24 July 2019 Surveyor	The validity of this certificate has been renewed until . Date: Surveyor
The validity of this certificate has been renewed until 25th April 2021 . Date: 9 July 2020 Surveyor	The validity of this certificate has been renewed until . Date: Surveyor
The validity of this certificate has been renewed until 25th April 2022 . Date: 10 June 2021 Surveyor	The validity of this certificate has been renewed until . Date: Surveyor