

Approval No. NKY-3468 Certificate No. TA19844E TYPE APPROVAL

Article

: Welding Consumables for Stainless Steels

Brand

TFW-309L

Applicant

Tien Tai Electrode (Kunshan) Co., Ltd.

Kunshan, Jiangsu, China

Manufacturer

: Tien Tai Electrode (Kunshan) Co., Ltd.

Kunshan, Jiangsu, China

Grade

: KW309LG(C)

Welding Process

: MAG Welding

Welding Positions and Max. Diameter of Wire

: See Table 1

Current

: DCEP

Shielding Gas

 $: CO_2$

Malling Desitions and May Diameter of Wire

Table 1 welding Positions		s and max. Diameter or	VIIC
Butt Weld		Fillet Weld	
Flat:	1.2mm	Flat:	1.2mm
		Horizontal Vertical:	1.2mm
Horizontal:	1.2mm	Horizontal:	1.2mm
Overhead:	1.2mm	Overhead:	1.2mm
0,0223000		Horizontal Overhead:	1.2mm
Vertical Upward:	1.2mm	Vertical Upward:	1.2mm
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 29 April 2020.

Issued at Tokyo on 30 April 2019.

H. Kobayashi

General Manager

Material and Equipment Department



Approval No. NKY-3469 Certificate No. TA19845E

TYPE APPROVAL

Article

*Welding Consumables for Stainless Steels

Brand

: TFW-316L

Applicant

: Tien Tai Electrode (Kunshan) Co., Ltd.

Kunshan, Jiangsu, China

Manufacturer

: Tien Tai Electrode (Kunshan) Co., Ltd.

Kunshan, Jiangsu, China

Grade

: KW316LG(C)

Welding Process

: MAG Welding

Welding Positions and Max. Diameter of Wire

: See Table 1

Current

: DCEP

Shielding Gas

 $: CO_2$

Table 1 Welding Positions and May Diameter of Wire

Table 1 Welding Positions and Max. Diameter of whe		VIIE	
Butt Weld		Fillet Weld	
Flat:	1.2mm	Flat:	1.2mm
		Horizontal Vertical:	1.2mm
Horizontal:	1.2mm	Horizontal:	1.2mm
Overhead:	1.2mm	Overhead:	1.2mm
		Horizontal Overhead:	1.2mm
Vertical Upward:	1.2mm	Vertical Upward:	1.2mm
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 29 April 2020.

Issued at Tokyo on 30 April 2019.

H. Kobayashi

General Manager

Material and Equipment Department



Certificate

Certificate No. NKY-2730

OF

TYPE APPROVAL FOR WELDING CONSUMABLE

Brand

: TGS-316L

Manufacturer: Tien Tai Electrode (Kunshan) Co., Ltd.

Kunshan, Jiangsu, China

Kind

TIG Welding Consumable

For Stainless Steel

Approval Condition;

Grade

: KY316L(I)

Current

: DCEN

Position

: Flat, Horizontal, Vertical Upward,

and Overhead

Max. Dia. of Filler Metal: F ; 3.2mm,

H ; 3.2mm,

VU; 3.2mm,

OH; 3.2mm

Shield Gas

: Ar

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 the 30th day of October, 2008. Issued at Tokyo on the 31st day of October, 2007.

T. Tokishige

General Manager

Material and Equipment Department

The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 30th arober, wog Date: No March Surveyor	until 30th october 200 Date: 14 war. 2010 Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 30 Extoher, 2011	until 30th October, 2012.
Date: January 2011 Surveyor	Date: 30 Dec Day
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 30th October 2013.	until 30th October 2014.
Date: Surveyor Class Survey or Clast Survey or Class Survey or Class Survey or Class Surve	Date: 19 Miles
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 30th October 2015. Date: Novidor Surveyors	until 30th October Date: Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 30 th October 2017 Date: 06 Dec 2016	until 30 th October 2018. Date: 31
Surveyor	Surveyor

The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 30th October 2019.	until
Date: 2 Jan 2019 Surveyor	Date:Surveyor
The validity of this certificate has been renewed until	The validity of this certificate has been renewed until
Date:	Date:
Surveyor	Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until	until
Date:	Date:
Surveyor	Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until	until:
Date:	Date:
Surveyor	Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until:	until
Date:	Date:
Surveyor	Surveyor



Certificate

Certificate No. NKY-2747

OF

TYPE APPROVAL FOR WELDING CONSUMABLE

Brand

TIG-50

[Wire]

Manufacturer: Tien Tai Electrode (Kunshan) Co., Ltd.

Kunshan, Jiangsu, China

Kind

Semi-Automatic Welding Consumable

Purpose

For High Tensile Steel

Approval Condition;

Grade

: KSW53G(I)

OH; 3.2mm

Current

: DCEN

Position

Flat, Horizontal, Vertical Upward and Overhead

Max. Dia. of Wire

F ; 3.2mm, H ; 3.2mm.

VU; 3.2mm,

Shield Gas

: Ar

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 the 29th day of November, 2008. Issued at Tokyo on the 30th day of November, 2007.

T. Tokishige

General Manager Material and Equipment Department

The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 29th November, 2009.	until 29th November 2010.
Date: 20 Month 2009 Surveyor	Date: 14 Mar. 2010
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 39 November, 2011 .	until 29th November 2012.
Date: // Jenuary 201/ Surveyor	Date: 30 Dec Paris
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 29th November 2013.	until 29th November 2014.
Date: Surveyor lass	Date: 19 Nov. 103
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 29th November 2015. Date: 28 November Surveyor ass	until Sth November 1985. Date: Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 29 th November 17. Date 5 December 17. Surveyor	Date: 2 Date: 2018

The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 29th November 2019.	until
Date: 7 Jan. 2019	Date:
Surveyor	Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until	until
Date:	Date:
Surveyor	Surveyor ·
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until	until
Date:	Date:
Surveyor	Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until	until
Date:	Date:
Surveyor	Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until	until
Date:	Date:
Surveyor	Surveyor



Approval No. NKY-3471 Certificate No. TA19961E

Certificate

TYPE APPROVAL

Article

: Welding Consumables for High Tensile Steels for Hull

Brand

:TL-50

Applicant

: TienTai Electrode (Kunshan) Co., Ltd.

Kunshan, Jiangsu, China

Manufacturer

: TienTai Electrode (Kunshan) Co., Ltd.

Kunshan, Jiangsu, China

Grade

: KMW53H10

Welding Process

: Manual Welding

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- Walldar Welding

Welding Positions and Max. Diameter of Electrode

: See Table 1

Current

: AC and DCEP

Shielding Gas

: Not Applicable

Table 1 Welding Positions and Max. Diameter of Electrode

Butt W	eld eld	Fillet We	eld
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

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 16 June 2020.

Issued at Tokyo on 17 June 2019.

H. Kobayashi

General Manager

Material and Equipment Department



Certificate

Certificate No. NKY-2523

TYPE APPROVAL FOR WELDING CONSUMABLE

Brand

: TM-70C

Manufacturer: Tien Tai Electrode (Kunshan) Co., Ltd.

Kunshan City, Jiangsu Province, China

Kind

: Semi-Automatic Welding Consumable

Purpose

: For High Tensile Steel

Approval Condition;

Grade

: KSW53G(C)H10

Current

: DCEP

Position

: Flat and Horizontal

Max. Dia. of Wire

: F; 1.6mm ϕ , H; 1.6mm ϕ

Shield Gas

 $: CO_2$

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 the 13th day of January, 2005. Issued at Tokyo on the 14th day of January, 2004.

H. Kitada

General Manager of

Material and Equipment Department

The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 13th January 2006. Date: 14th Market Survey Class 11.	until 13th January 300. Date: 22 Survey Survey of Surve
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 13th January, 2008. Date: 25th April 2007 Surveyor assistance.	until 13th January. 2009. Date: 26 Mary Survey
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 13th January, >010 Date: >0 Month 3000	until 13th January 2011 Date: 14 May 2010 Zhou Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 13 Jonuary, 2012	until 13th January , 2013.
Date: // January, 2011 Surveyor	Date: 30 Dec July
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 3th January 2014. Date: 11 Surveyor Class	until 13 January 2015 Date: 29 April 2014 Surveyor
-id22,	



The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 13 January 2016 Date: 16 April 2015 Surveyor	until 13 January 2017 Date: 8 April Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 13 January 2018 Date: Surveyor	until 13 January 20189.
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 13 January 2020 .	until
Date: /5 April 2019	Date:Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until	until
Date:	Date:
Surveyor	Surveyor
The validity of this certificate has been renewed until	The validity of this certificate has been renewed until
Date:	Date:
Surveyor	Surveyor



Certificate No. NKY-2410

Certificate

OF

TYPE APPROVAL FOR WELDING CONSUMABLE

Brand

TWE-711

Manufacturer

Tien Tai Electrode (Kunshan) Co., Ltd.

Kunshan-city, Jiangsu Province, China

Kind

Semi-Automatic Welding Consumable

Purpose

For High Tensile Steel

Approval Condition;

Grade

: KSW53G(C)H10

Current

: DCEP

Position

: Flat, Horizontal, Vertical Upward,

Vertical Downward and Overhead

Max. Dia. of Wire

: F; 1.6mm ϕ , H; 1.6mm ϕ , VU; 1.4mm ϕ

VD; 1.4mm ϕ , OH; 1.4mm ϕ

Shield Gas

 $: CO_2$

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 the 22nd day of February, 2002. Issued at Tokyo on the 23rd day of February, 2001.

(H. Kitada)

General Manager of Material and Equipment Department

The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 21st February, 2003.	until 20th February 2004.
Date: 19 ⁺¹ April, 2002 V. J. Dong Surveyor	Date: 7 Parch 2003
The validity of this certificate has been renewed	The validity of this certificate has been renewed
Date: 22nd Ward 1004 H. Ward Survey	until 22 rd Forward, 200 h. Date: 14
GSSNK	
The validity of this certificate has been renewed	The validity of this certificate has been renewed
Date: Date: Surveyor	until 22 nd February, 2008. Date: 25 th April 2008 Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
Date: Date: Surveyor	until 22 M Fe bruory 20/0 Date: 20th Monch 2009 Surveyor 285N
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 22 00 Fobruary 2011. Date: 14 way 2015. Surveyor 9580	until 22 February, 20/2 Date: // January, 20/)

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The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 22th February 2013.	until 22nd February 2014.
Date: Do Dec. Doll Surveyor	Date: Joseph Surveyor Classic
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 22 February 2015 Date: 29 April 2014 Surveyor	until 22 February 2016. Date: 16 April, 2015 Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 22 February 2017 Date: 8 April 2016 Surveyor	until 22 February 2018 Date: Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
Date 16 May 2018 Date 16 May 2018	until 22 February 2020. Date: 15 April 2019
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until	until
Date:	Date:
Surveyor	Surveyor

CONTRACTOR STORY



Certificate

Certificate No.

NKY-2441

OF

TYPE APPROVAL FOR WELDING CONSUMABLE

Brand

TWE-711Ni

Manufacturer

Tien Tai Electrode (Kunshan) Co., Ltd.

Kunshan-city, Jiangsu Province, China

Kind

Semi-Automatic Welding Consumable

Purpose

For High Tensile Steel

Approval Condition;

Grade

: KSW54G(C)H10

Current

: DCEP

Position

: Flat, Horizontal, Vertical Upward and Overhead

Max. Dia. of Wire

: F; 1.6mm ϕ , H; 1.6mm ϕ , VU; 1.4mm ϕ , OH; 1.4mm ϕ

Shield Gas

: CO₂

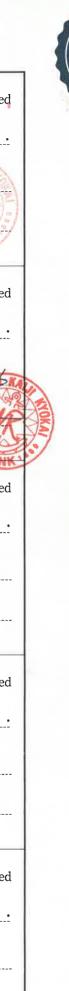
THIS IS TO CERTIFY that the above mentioned welding consumable has been approved by the NIPPON KAIJI KYOKAI in accordance with the requirements of the Society's Rules.

This Certificate will remain in force until the 24th day of March, 2003. Issued at Tokyo on the 25th day of March, 2002.

(H. Kitada)

General Manager of Material and Equipment Department

The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 23 rd March 2004 .	until 22nd March 2005.
Date: 2 Conclusion 3	Date: 237 Harth 2004
The validity of this certificate has been renewed until 14th work, 2006. Date: 14th Surveyor	The validity of this certificate has been renewed until 24th March. 200. Date: Surveyor
The validity of this certificate has been renewed until 24th March , 2008. Date: 25th Amil 207	The validity of this certificate has been renewed until 24th March 2009 Date: 25th Surveyor
The validity of this certificate has been renewed until 24 th March, 20/0 Date: 20 th March Surveyor	The validity of this certificate has been renewed until 24th Mar. 701
The validity of this certificate has been renewed until 24 Mand, 2012 Date: Date: Surveyor	The validity of this certificate has been renewed until 24th March. 2013. Date: 30 Dec. 30 Surveyor Class



	YU
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 24th Maych 2014 .	until 24 March 2015 .
Date: Surveyor Class	Date: 29 April 2014 Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 24 March 2016. Date: 16 April 2015 Surveyor	until 24 March 2017 . Date: & April Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 24 Maych 2018 Date Surveyor	until 24 Narch 2019 Date 16 May 2018 Surveyor
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until 24 March 2020 . Date: S And 2019	until Date:
The validity of this certificate has been renewed	The validity of this certificate has been renewed
until	until
Date:	Date:
Surveyor	Surveyor