



Date: March 29, 2019

Tien Tai Electrode (Kunshan) Electrode Co. Ltd.
 NO.189 HUAYUAN RD.
 ZHANGPU TOWN
 KUNSHAN CITY, JIANGSU, 215321
 CHINA

Re: Document(s) of Certification for Arc Welding Electrodes

Following completion of the requirements of the standard, we take pleasure in enclosing Document of Certification for your electrode(s) as follows:

Product	Flux/Gas	Classification	POM
FabCO 308L-T1	100%CO ₂	E308LT1-1	Kunshan, China
FabCO 308L-T1	100%CO ₂	E308LT1-1	Kunshan, China
FabCO 309L-T1	Ar + 20%CO ₂ TO 100%CO ₂	E309LT1-1 E309LT1-4	Kunshan, China
FabCO 309L-T1	Ar + 20%CO ₂ TO 100%CO ₂	E309LT1-1 E309LT1-4	Kunshan, China
FabCO 316L-T1	Ar + 20%CO ₂ TO 100%CO ₂	E316LT1-1 E316LT1-4	Kunshan, China
FabCO 316L-T1	Ar + 20%CO ₂ TO 100%CO ₂	E316LT1-1 E316LT1-4	Kunshan, China
TEC-80Ni1	Ar + 20%CO ₂	E55C-Ni1-H4 (E80C-Ni1-H4)	Kunshan, China
TGS-309L	-	ER309L	Kunshan, China
TN-28	-	E5518-C1-H4	Kunshan, China
TSW--E31	TF-565 (made in Taiwan)	F55A3-ENi1-Ni1-H4(F8A2-ENi1-Ni1-H4)	Kunshan, China
TWE-711Ni	C1 (100%CO ₂)	E491T1-C1A4-CS1-H4 (E491T-9J-H4)	Kunshan, China
TWE-811Ni1	100%CO ₂	E551T1-Ni1C-JH4 (E81T1-Ni1C-JH4)	Kunshan, China



8260 Parkhill Drive, Milton, Ontario L9T 5V7
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Date: March 29, 2019

Tien Tai Electrode (Kunshan) Electrode Co. Ltd.
NO.189 HUAYUAN RD.
ZHANGPU TOWN
KUNSHAN CITY, JIANGSU, 215321
CHINA

Re: Document(s) of Certification for Arc Welding Electrodes

Following completion of the requirements of the standard, we take pleasure in enclosing Document of Certification for your electrode(s) as follows:

Please ensure that labels on these products conform to clause 8 of the CSA W48 Standard.

Thank you for your cooperation.

Yours very truly,

CANADIAN WELDING BUREAU

Registrar



8260 Parkhill Drive, Milton, Ontario L9T 5V7
Tel: 1.800.844.6790 info@cwbgrouop.org
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Date: April 02, 2019

HOBART BROTHERS COMPANY
NO.189 HUAYUAN RD.
ZHANGPU TOWN
KUNSHAN CITY, JIANGSU, 215321
CHINA

Re: Document(s) of Certification for Arc Welding Electrodes

Following completion of the requirements of the standard, we take pleasure in enclosing Document of Certification for your electrode(s) as follows:

Product	Flux/Gas	Classification	POM
FabCO 308L-T1	Ar + 20%CO ₂ TO 25%CO ₂	E308LT1-4	Kunshan, China
FabCO 308L-T1	Ar + 20%CO ₂ TO 25%CO ₂	E308LT1-4	Kunshan, China

Please ensure that labels on these products conform to clause 8 of the CSA W48 Standard.

Thank you for your cooperation.

Yours very truly,

CANADIAN WELDING BUREAU

Registrar



8260 Parkhill Drive, Milton, Ontario L9T 5V7
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Date: May 30, 2019

TIEN TAI ELECTRODE (KUNSHAN) CO.LTD.
NO.189 HUAYUAN RD.
ZHANGPU TOWN
KUNSHAN CITY, JIANGSU, 215321
CHINA

Re: Document(s) of Certification for Arc Welding Electrodes

Following completion of the requirements of the standard, we take pleasure in enclosing Document of Certification for your electrode(s) as follows:

Product	Flux/Gas	Classification	POM
TGS-316L	-	ER316L	Kunshan, China

Please ensure that labels on these products conform to clause 8 of the CSA W48 Standard.

Thank you for your cooperation.

Yours very truly,

CANADIAN WELDING BUREAU

Registrar



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Date: March 29, 2019

Effective Date: March 21, 2019

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has witnessed tests on the following :

Company Name: **TIEN TAI ELECTRODE (KUNSHAN) CO.LTD.**
Electrode Designation: **FABCO 308L-T1**
Point of Manufacture: **Kunshan, China**
Standard: **W48-18 (FCAW Stainless Steel)**
Classification: **E308LT1-1**
Gas or Flux: **100%CO₂**
Size (mm): **Min: 1.2 Max: 1.2**

Expiry date: **March 21, 2021**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIENTEFABCO308L

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification*, System 5.



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Date: April 02, 2019

Effective Date: March 21, 2017

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has witnessed tests on the following :

Company Name: **TIEN TAI ELECTRODE (KUNSHAN) CO.LTD.**
Electrode Designation: **FABCO 308L-T1**
Point of Manufacture: **Kunshan, China**
Standard: **W48-18 (FCAW Stainless Steel)**
Classification: **E308LT1-4**
Gas or Flux: **Ar + 20%CO₂ TO 25%CO₂**
Size (mm): **Min: 1.2 Max: 1.2**

Expiry date: **March 21, 2019**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIENTEFABCO308L

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification*, System 5.



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Date: March 29, 2019

Effective Date: March 21, 2019

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has satisfied itself on the following :

Company Name: **HOBART BROTHERS COMPANY**
Electrode Designation: **FABCO 308L-T1**
Point of Manufacture: **Kunshan, China**
Standard: **W48-18 (FCAW Stainless Steel)**
Classification: **E308LT1-1**
Gas or Flux: **100%CO₂**
Size (mm): **Min: 1.2 Max: 1.2**

Expiry date: **March 21, 2021**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIENTEFABCO308LT1

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification*, System 5.



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Date: April 02, 2019

Effective Date: March 21, 2017

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has satisfied itself on the following :

Company Name: **HOBART BROTHERS COMPANY**
Electrode Designation: **FABCO 308L-T1**
Point of Manufacture: **Kunshan, China**
Standard: **W48-18 (FCAW Stainless Steel)**
Classification: **E308LT1-4**
Gas or Flux: **Ar + 20%CO₂ TO 25%CO₂**
Size (mm): **Min: 1.2 Max: 1.2**

Expiry date: **March 21, 2019**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIENTEFABCO308LT1

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification*, System 5.



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Date: March 29, 2019

Effective Date: March 21, 2019

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has witnessed tests on the following :

Company Name: **TIEN TAI ELECTRODE (KUNSHAN) CO.LTD.**
Electrode Designation: **FABCO 309L-T1**
Point of Manufacture: **Kunshan, China**
Standard: **W48-18 (FCAW Stainless Steel)**
Classification: **E309LT1-1**
E309LT1-4
Gas or Flux: **Ar + 20%CO₂ TO 100%CO₂**
Size (mm): **Min: 1.2 Max: 1.2**

Expiry date: **March 21, 2021**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIENTEFABCO309L

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification, System 5.*



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Date: March 29, 2019

Effective Date: March 21, 2019

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has satisfied itself on the following :

Company Name: **HOBART BROTHERS COMPANY**
Electrode Designation: **FABCO 309L-T1**
Point of Manufacture: **Kunshan, China**
Standard: **W48-18 (FCAW Stainless Steel)**
Classification: **E309LT1-1**
E309LT1-4
Gas or Flux: **Ar + 20%CO₂ TO 100%CO₂**
Size (mm): **Min: 1.2 Max: 1.2**

Expiry date: **March 21, 2021**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIENTEFABCO309LT1

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification*, System 5.



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Date: March 29, 2019

Effective Date: March 21, 2019

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has witnessed tests on the following :

Company Name: **TIEN TAI ELECTRODE (KUNSHAN) CO.LTD.**
Electrode Designation: **FABCO 316L-T1**
Point of Manufacture: **Kunshan, China**
Standard: **W48-18 (FCAW Stainless Steel)**
Classification: **E316LT1-1**
E316LT1-4
Gas or Flux: **Ar + 20%CO₂ TO 100%CO₂**
Size (mm): **Min: 1.2 Max: 1.2**

Expiry date: **March 21, 2021**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIENTEFABCO316L

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification*, System 5.



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Date: March 29, 2019

Effective Date: March 21, 2019

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has satisfied itself on the following :

Company Name: **HOBART BROTHERS COMPANY**
Electrode Designation: **FABCO 316L-T1**
Point of Manufacture: **Kunshan, China**
Standard: **W48-18 (FCAW Stainless Steel)**
Classification: **E316LT1-1**
E316LT1-4
Gas or Flux: **Ar + 20%CO₂ TO 100%CO₂**
Size (mm): **Min: 1.2 Max: 1.2**

Expiry date: **March 21, 2021**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIENTEFABCO316LT1

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification*, System 5.



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Date: March 29, 2019

Effective Date: May 20, 2019

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has witnessed tests on the following :

Company Name: **TIEN TAI ELECTRODE (KUNSHAN) ELECTRODE CO. LTD.**
Electrode Designation: **TEC-80Ni1**
Point of Manufacture: **Kunshan, China**
Standard: **A5.28/A5.28M:2005**
Classification: **E55C-Ni1-H4 (E80C-Ni1-H4)**
Gas or Flux: **Ar + 20%CO₂**
Size (mm): **Min: 1.2 Max: 1.6**

Others Details:

In addition, the diffusible hydrogen tests was conducted in accordance with the latest ISO 3690 or AWS A4.3 and within the limits sets by the standard above.

Expiry date: **May 20, 2021**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIENTETEC80Ni1

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification*, System 5.



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Date: March 29, 2019

Effective Date: March 07, 2019

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has witnessed tests on the following :

Company Name: **TIEN TAI ELECTRODE (KUNSHAN) CO.LTD.**
Electrode Designation: **TGS-309L**
Point of Manufacture: **Kunshan, China**
Standard: **W48-18 (GMAW/GTAW Stainless Steel)**
Classification: **ER309L**
Gas or Flux: **-**
Size (mm): **Min: 1.2 Max: 3.2**

Expiry date: **March 7, 2021**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIENTETGS309L

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification, System 5.*



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Date: March 29, 2019

Effective Date: March 08, 2019

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has witnessed tests on the following :

Company Name: **TIEN TAI ELECTRODE (KUNSHAN) CO.LTD.**
Electrode Designation: **TN-28**
Point of Manufacture: **Kunshan, China**
Standard: **W48-18 (SMAW Low-Alloy Steel)**
Classification: **E5518-C1-H4**
Gas or Flux: **-**
Size (mm): **Min: 3.2 Max: 4.0**

Others Details:

In addition, the diffusible hydrogen tests was conducted in accordance with the latest ISO 3690 or AWS A4.3 and within the limits sets by the standard above.

The impact properties was witnessed to testing at -60 degree C and the values met the requirements specified in the standard above.

Expiry date: **March 8, 2021**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIENTETN28

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification*, System 5.



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Date: March 29, 2019

Effective Date: May 20, 2019

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has witnessed tests on the following :

Company Name: **TIEN TAI ELECTRODE (KUNSHAN) ELECTRODE CO. LTD.**
Electrode Designation: **TSW--E31**
Point of Manufacture: **Kunshan, China**
Standard: **A5.23/A5.23M:2011**
Classification: **F55A3-ENi1-Ni1-H4(F8A2-ENi1-Ni1-H4)**
Gas or Flux: **TF-565 (made in Taiwan)**
Size (mm): **Min: 2.4 Max: 5.0**

The impact properties was witnessed to testing at -30 degree C and the values met the requirements specified in the standard above.

Expiry date: **May 20, 2021**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIEN TEENI1TF565

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification*, System 5.



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Fax: 905.542.1318 www.cwbgroup.org



Date: March 29, 2019

Effective Date: May 20, 2019

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has witnessed tests on the following :

Company Name: **TIEN TAI ELECTRODE (KUNSHAN) CO.LTD.**
Electrode Designation: **TWE-711NI**
Point of Manufacture: **Kunshan, China**
Standard: **CSA W48-18 (FCAW/MCAW Carbon Steel)**
Classification: **E491T1-C1A4-CS1-H4 (E491T-9J-H4)**
Gas or Flux: **C1 (100%CO₂)**
Size (mm): **Min: 1.2 Max: 1.2**

Others Details:

In addition, the diffusible hydrogen tests was conducted in accordance with the latest ISO 3690 or AWS A4.3 and within the limits sets by the standard above.

Expiry date: **May 20, 2021**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIENTETWE711Ni1

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification*, System 5.



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Date: March 29, 2019

Effective Date: May 20, 2019

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has witnessed tests on the following :

Company Name: **TIEN TAI ELECTRODE (KUNSHAN) ELECTRODE CO. LTD.**
Electrode Designation: **TWE-811NI1**
Point of Manufacture: **Kunshan, China**
Standard: **A5.29/A5.29M:2010**
Classification: **E551T1-Ni1C-JH4 (E81T1-Ni1C-JH4)**
Gas or Flux: **100%CO₂**
Size (mm): **Min: 1.2 Max: 1.6**

Others Details:

In addition, the diffusible hydrogen tests was conducted in accordance with the latest ISO 3690 or AWS A4.3 and within the limits sets by the standard above.

Expiry date: **May 20, 2021**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIENTETEC811NI1

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification, System 5.*



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Date: May 30, 2019

Effective Date: May 16, 2019

CERTIFICATION OF WELDING CONSUMABLE

This is to advise you the Canadian Welding Bureau has witnessed tests on the following :

Company Name: **TIEN TAI ELECTRODE (KUNSHAN) CO.LTD.**
Electrode Designation: **TGS-316L**
Point of Manufacture: **Kunshan, China**
Standard: **W48-18 (GMAW/GTAW Stainless Steel)**
Classification: **ER316L**
Gas or Flux: **-**
Size (mm): **Min: 1.2 Max: 3.2**

Expiry date: **May 16, 2021**

This certification, may be extended by meeting the check test requirements of the applicable standard and CWB rules.

CANADIAN WELDING BUREAU

Registrar

TIENTETGS316L

The product certification system operated by the Canadian Welding Bureau most closely resembles that described by ISO/IEC Guide 67, *Conformity assessment — Fundamentals of product certification*, System 5.



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