

(Garuda)

Certificate No. 17T132/0623

Certificate of Laboratory Accreditation

by Virtue of National Standardization Act B.E. 2551 (2008)

Secretary-General, Thai Industrial Standards Institute

Issue this Certificate for

Thailand Smelting and Refining Company Limited

Laboratory address :

80 Moo 8, Sakdidej Road, Vichit, Muang, Phuket

This laboratory is accredited for testing

in accordance with the Thai Industrial Standard TIS 17025-2548 (2005) (ISO/IEC 17025:2005)

General Requirements for the Competence of Testing and Calibration Laboratories

Accreditation No. TESTING 0245

The scope of accreditation is as annexed hereto.

Issue date : 20th December B.E. 2560 (2017)

Valid date : 19th December B.E. 2563 (2020)

(Signature)

(Mr. Nattapol Rangsitpol)

Secretary-General

Thai Industrial Standards Institute

Translation approved



(Mr. Prasong Prayongpetch)

Director

Office of the National Standardization Council

Date : 26th March 2018

Date of Initial Issue 15th January B.E. 2552 (2009)

Ministry of Industry, Thai Industrial Standards Institute



Scope of Accreditation for Testing

Certificate No. 17T132/0623

Laboratory name : Thailand smelting and refining Company Limited

Address : 80 Moo 8, Sakdidej Road, Vichit, Muang, Phuket

Accreditation No. : TESTING 0245

Laboratory Status Permanent Site Temporary Mobile

Field of Tested	Specific Test	Test Method
Civil field 1. Tin metal	<ul style="list-style-type: none"> - Lead 0.011 3% by weight to 0.112% by weight - Arsenic 0.003% by weight to 0.043% by weight - Bismuth 0.001 6% by weight to 0.060% by weight - Copper 0.001 3% by weight to 0.060% by weight - Iron 0.000 8% by weight to 0.016 0% by weight - Nickel 0.000 4% by weight to 0.019 2% by weight - Silver 0.001 8% by weight to 0.020 9% by weight - Antimony 0.003 4% by weight to 0.061% by weight - Zinc 0.003 4% by weight to 0.014 6% by weight 	<ul style="list-style-type: none"> - In-house method WI-QC25-504-IC-1C-1 based on ASTM E 1251-11



Scope of Accreditation for Testing

Certificate No. 17T132/0623

Accreditation No. : TESTING 0245

Laboratory Status Permanent Site Temporary Mobile

Field of Tested	Specific Test	Test Method
Civil field 1. Tin metal (cont.)	<ul style="list-style-type: none"> - Cadmium 0.001 5% by weight to 0.010 4% by weight - Aluminum 0.001 0% by weight to 0.041 4% by weight 	In-house method WI-QC25-504-IC-1C-1 based on ASTM E 1251-11

Issue date : 20th December B.E. 2560 (2017)

(Signature)

(Mr. Nattapol Rangsitpol)

Secretary-General

Thai Industrial Standards Institute