

**STANDARDS**
MALAYSIA

Certificate of Accreditation

No: SAMM 646

Valid until: 8 May 2020

This is to certify that

ALEX STEWART LABORATORY (MALAYSIA) SDN. BHD.
BAYAN LEPAS, PULAU PINANG
MALAYSIA
(FIELD OF TESTING: CHEMICAL)

has been granted accreditation in respect of the scope of accreditation described in the schedule, subject to the terms and conditions governing the *Skim Akreditasi Makmal Malaysia (SAMM)*, the Laboratory Accreditation Scheme of Malaysia.

"This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communiqué dated January 2009)".



(DATUK FADILAH BAHARIN)
Director General
Department of Standards Malaysia

Date of issue: 8 May 2017

Schedule

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MS ISO/IEC 17025

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LABORATORY LOCATION: ALEX STEWART LABORATORY (MALAYSIA) SDN. BHD.
(PERMANENT LABORATORY) 17-G-12, 17-1-12, 17-2-12, BAYAN POINT
MEDAN KAMPONG RELAU
11900 BAYAN LEPAS
PULAU PINANG
MALAYSIA

This laboratory accredited under *Skim Akreditasi Makmal Malaysia* (SAMM) meets the requirements of MS ISO/IEC 17025:2005 'General requirements for competence of testing and calibration laboratories'. This Malaysian Standards is identical with ISO/IEC 17025:2005 published by the International Organization for Standardization (ISO).

FIELD OF TESTING: CHEMICAL

SCOPE OF ACCREDITATION:

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Coal and Coke	Preparing Coal and Coke Samples for Analysis	In-house Method STP-001 based on ASTM D 2013/ D 2013 M-12
	Total Moisture	ASTM D 3302/ D 3302 M-12
	Ash	ASTM D 3174-12
	Inherent Moisture	ASTM D 3173-11
	Volatile Matter	ASTM D 3175-11
	Fixed Carbon	ASTM D 3172-13
	Sulfur	ASTM D 4239 – 13 Method B
	Gross Colorific Value	ASTM D 5865-13
	Net Colorific Value	ASTM D 5865-13
	Carbon, Hydrogen and Nitrogen	ASTM D 5373-13 Method A
	Hardgrove Grindability Index	ASTM D 409/ D 409M-12
	Calculating Coal and Coke Analysis from as determined to different bases	ASTM D 3180-12

The valid scope of accreditation is in www.ism.gov.my/cab-directories.

Schedule

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LABORATORY LOCATION: SITIAWAN LABORATORY
(PERMANENT LABORATORY) ALEX STEWART LABORATORY (MALAYSIA) SDN. BHD.
27, TAMAN RAJA MUDA MUSA
32000 SITIAWAN, PERAK
MALAYSIA

FIELD OF TESTING: CHEMICAL

SCOPE OF ACCREDITATION:

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Coal and Coke	Total Moisture	ASTM D 3302/ D 3302M-12 (excluding procedure 9:3)
	Preparing coal and coke samples for analysis	In-house method STP-001 based on ASTM D2013/D 2013M-12

NOTE: ASTM: American Society for Testing and Materials

Signatories:

- | | | |
|----|--------------|----------------|
| 1. | Chew Bee Yan | M/2378/4983/06 |
| 2. | Tan Ai Ling | L/1775/5789/10 |

The valid scope of accreditation is in www.ism.gov.my/cab-directories.