JABATAN STANDARD MALAYSIA
(Kementerian Sains, Teknologi dan Inovasi)
Century Square, Tingkat 1 & 2, Blok 2300, Jalan Usahawan
63000 Cyberjaya, Selangor Darul Ehsan

DEPARTMENT OF STANDARDS MALAYSIA
(Ministry of Science, Technology, and Innovation)
Century Square, Level 1 & 2 Block 2300, Jalan Usahawan
63000 Cyberjaya, Selangor Darul Ehsan

STANDARDS MALAYSIA
Tel : 603-8318 0002
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E-mail : central@jsm.gov.my

Ref. File No.: JSM/AD-700/01/04/795
Date: 4 September 2018

LA 602-2B
Issue 5, 9-June-16

TERIMA
18 SEP 2018
Pej. Timbalan Pendaftar
Fak. Kejuruteraan
UPM

Faculty of Engineering
Universiti Putra Malaysia
43400 UPM Serdang
SELANGOR
(Attn: Mr. Fahrul Asmady Yunus)

Dear Sir,

***SKIM AKREDITASI MAKMAL MALAYSIA* (SAMM) - LETTER OF RENEWAL OF ACCREDITATION**
Certificate no.: SAMM 711, issue date: 19 August 2018

We are pleased to inform you that your laboratory's SAMM accreditation renewal has been approved by the Department of Standards Malaysia (Standards Malaysia).

The assessment report was analysed and found to be complete and in order. Based on this report, the Director General of Department of Standards Malaysia (Standards Malaysia) has approved the renewal of your certificate of accreditation.

We wish to draw your attention that the renewal is subject to your laboratory's continued compliance with the SAMM accreditation standard, policies and requirements. Please find enclosed the original copy of the certificate of accreditation for your attention and retention. Kindly acknowledge the receipt of the certificate using the receipt note as below and return the obsolete certificate to Department of Standards Malaysia (Standards Malaysia) for our record. The scope of accreditation can be downloaded from www.jsm.gov.my/cab-directories.

Please complete the undertaking form (LA 602-4) attached and return it to Standards Malaysia for our further action.

You may refer to the attached forward plan for better view and understanding of the assessment schedule.

We would like to thank you for your participation and interest in SAMM accreditation.

Yours faithfully,

(WAN RUKIMAN WAN MAMAT)
Accreditation Division
for the Director General
Department of Standards Malaysia

.....

(RECEIPT NOTE)

I confirmed that I have received the certificate of accreditation as above. Attached please find obsolete certificate for your record.

Signature: Date: 19/9/2018

Name: FAHRUL ASMADY YUNUS
Deputy Quality Manager
MS ISO/IEC 17025
Faculty of Engineering
Universiti Putra Malaysia

Laboratory's stamp: .....

S/N: 0930

STANDARDS MALAYSIA

Certificate of Accreditation

No: SAMM 711

Accredited since: 19 May 2015

This is to certify that

FACULTY OF ENGINEERING
UNIVERSITI PUTRA MALAYSIA
SERDANG, SELANGOR
MALAYSIA

Scan this QR Code or visit
www.jsm.gov.my/cab-directories
for the current scope of accreditation

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.

Laboratories accredited under SAMM meet the requirements of MS ISO/IEC 17025. This Malaysian Standard is identical with ISO/IEC 17025 published by the International Organization for Standardization (ISO).

(DATUK FADILAH BAHARIN)
Director General
Department of Standards Malaysia

Date of issue: 19 August 2018

Issuance of this Certificate is governed by Section 16 Subsections (2) and (3) of Standards of Malaysia Act, 1996 (Act 549)

ASSESSMENT PROGRAMME (SUBSEQUENT CYCLE)

SKIM AKREDITASI MAKMAL MALAYSIA (SAMM)

1. Name of laboratory: **Faculty of Engineering, Universiti Putra Malaysia**
3. SAMM No.: **711**

2. For details of the laboratory, please scan this QR code or visit www.jsm.gov.my

4. Requirements: MS ISO/IEC 17025:2005 ~~/ MS ISO/IEC 17025:2017~~ and relevant SAMM requirements.
5. Assessment will be conducted on-site using the following techniques but are not limited to interview, witnessing, document review, file review. Standards Malaysia reserves the right to conduct the unscheduled assessments unannounced, where necessary.
6. The assessment team may consist a group of assessor depends on the number, field(s) and complexity of the scope of accreditation, and outcome of the previous assessment.
7. The assessors will witness different test/calibration from the previous assessment and in order to cover a various scope/field within the 3 years cycle. The laboratory is required to arrange witnessing for test/calibration which has not been witnessed by assessment team in previous assessment.
8. The laboratory is required to submit the LA 1501-3 (PT record) during surveillance, reassessment and extension of scope (EOS), and submit the LA 1501-5 (PT Plan) during reassessment.

CERTIFICATE EXPIRY	SURVEILLANCE (12 months from date of last certificate expiry)		RE-ASSESSMENT (6 months before certificate expiry)	
	Date*	Lead Assessor in charge	Date*	Lead Assessor in-charge
19 May 2021	**19 May 2019** (Transition to MS ISO/IEC 17025:2017 may be done during this time)	**Mr. Irfan Yeoh Abdullah**	**19 November 2020**	**Mr. Irfan Yeoh Abdullah**

Note: 1) *The assessment dates scheduled may fall on a rest day or public holiday.
2) The laboratory may negotiate with the lead assessor to confirm the actual dates, provided that the dates proposed are no later than two months from the scheduled date above.

Prepared by
(Accreditation Officer)

Name : Muhammad Asyraf Mahmood Dean

Reviewed by
(SAMM Manager)

Signature : .....

Date : 4/9/2018

LABORATORY LOCATION: (PERMANENT LABORATORY)

FACULTY OF ENGINEERING
UNIVERSITI PUTRA MALAYSIA
43400 UPM SERDANG
SELANGOR
MALAYSIA

FIELDS OF TESTING: **CHEMICAL AND MECHANICAL**

FIELD OF CALIBRATION: **MASS**

This laboratory has demonstrated its technical competence to operate in accordance with MS ISO/IEC 17025:2005 (ISO/IEC 17025:2005).

This laboratory's fulfillment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001 (see Joint ISO-ILAC-IAF Communiqué dated April 2017).

MATERIAL CHARACTERIZATION LABORATORY (MCL)

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Surface Water (Sample analyzed as submitted)	Ni, Zn and Cu	APHA 3111B (21st Edition)

Signatory:

1. **Mrs. Shafizah Binti Masuri** **IKM No.: M/3597/6354/13**

MATERIAL CHARACTERIZATION LABORATORY (MCL)

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Amorphous, partially crystalline materials	Glass Transition Temperature (Tg) of amorphous, partially crystalline materials from 30°C - 300°C	ASTM 1356-98 Standards Test Method for Assignment of the Glass Transition Temperature by Differential Scanning Calorimetry or Differential Thermal Analysis.

Signatories:

1. **Mrs. Shafizah Binti Masuri** — **IKM No.: M/3597/6354/13**
2. **Dr. Dayang Radiah Binti Awang Biak**
3. **Assoc. Prof. Dr. Norhafizah Binti Abdullah**

STRENGTH OF MATERIALS LABORATORY (SML)

SCOPE OF TESTING: MECHANICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Metallic materials form of rectangular and circular cross sections	Determination of the tensile properties for metallic materials : i. Tensile Strength ii. Elongation after fracture Load: 5 kN to 100 kN	ASTM E8/E8M –15a Standard Test Methods for Tension Testing of Metallic Materials (excluding preparation of specimen)

Signatories:

1. **Dr. Eris Elianddy Bin Supeni**

AEROSPACE STRUCRURE LABORATORY (ASL)

SCOPE OF TESTING: MECHANICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Metallic materials in Rectangular Cross Section Form	Fatigue Strength	ASTM E466 – 15

Signatories:

1. **Dr. Noorfaizal Yidris**
2. **Prof. Ir. Dr. Faizal Mustapha**
3. **Assoc. Prof. Dr. Dayang Laila Abang Abdul Majid**

CONSTRUCTION MATERIALS LABORATORY (CML)

SCOPE OF TESTING: MECHANICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Concrete Cube	Compressive Strength	MS EN 12390-3: 2012 BS EN 12390-3: 2009

Signatories:

1. **Dr. Noor Azline Mohd Nasir**
2. **Mrs. Ernaleza Mahsum**

*** The expanded uncertainties are based on an estimated confidence probability of approximately 95% and have a coverage factor of *k*=2 unless stated otherwise.**

MASS METROLOGY LABORATORY (MML)

SCOPE OF CALIBRATION: MASS

Instrument Calibrated/ Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty(±)*	Remarks
Standard Weights	1 g 2 g 5 g 10 g 20 g 50 g 100 g 200 g 500 g 1 kg 2 kg 5 kg 10 kg	0.02 mg 0.02 mg 0.03 mg 0.03 mg 0.04 mg 0.06 mg 0.1 mg 0.2 mg 0.4 mg 0.8 mg 2 mg 4 mg 9 mg	Calibrated Using Standard Weight Sets and Mass Comparator Based on OIML R111-1

Signatories:

1. **Assoc. Prof. Ir. Dr. B.T. Hang Tuah Baharudin**
2. **Dr. Khairil Anas Md Rezali**

MASS METROLOGY LABORATORY (MML)

SCOPE OF CALIBRATION: MASS

SITE CALIBRATION: CATEGORY I

Instrument Calibrated/ Measurement Parameter	Range	Calibration and Measurement Capability Expressed as an Uncertainty(±)*	Remarks
Electronic Balances	Up to 100 g	0.1 mg	Calibrated Using Standard Weight
	Up to 1 kg	1 mg	
	Up to 10 kg	11 mg	

Signatories:

1. **Assoc. Prof. Ir. Dr. B.T. Hang Tuah Baharudin**
2. **Dr. Khairil Anas Md Rezali**