

HBPTU Testing Unit

HBPTU TESTING UNIT (HBPTU)

MS ISO/IEC 17025 : 2017
ACCREDITED TESTING LABORATORY
SAMM NO. 617
School of Housing, Building and Planning
Universiti Sains Malaysia

LABORATORY PROFILE

BUILDING & CONSTRUCTION MATERIAL TESTING SERVICES



MS ISO/IEC 17025
TESTING
SAMM NO. 617

HBPTU TESTING UNIT (HBPTU)

The HBP Testing Unit (HBPTU) is under The School of Housing, Building and Planning, Universiti Sains Malaysia (USM), Penang, Malaysia. HBPTU is situated in the laboratory area on the Ground Floor of Room 006,007 and 008 Building E40. HBPTU was accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 by Standards Malaysia for the period November 2013 to November 2016. This accreditation demonstrates technical competence for specific tests related to Concrete, Metallic Material and Hot Rolled Steel Bar and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF Communique dated January 2009).

Aside from servicing the Housing, Building and Planning needs and the centre for student's development in practical training. The centre offers engineering testing services for building materials and building site testing. The service is apply to all government agencies and private agencies associate with building infrastructure industries.

S/N: 1517



STANDARDS
MALAYSIA

Certificate of Accreditation

No: SMM 617

Accredited since: 20 November 2013

This is to certify that

HBP TESTING UNIT (HBPTU)
SCHOOL OF HOUSING, BUILDING AND PLANNING
UNIVERSITI SAINS MALAYSIA
PULAU PINANG
MALAYSIA



Scan this QR Code or visit
www.ism.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* (SMM), the Laboratory Accreditation Scheme of Malaysia.

Laboratories accredited under SMM 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).



(SHAHARUL SADRI BIN ALWI)
Director General
Department of Standards Malaysia

Date of issue: 2 March 2020

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

HBPTU POLICY

The HBPTU provides testing services to customers from the construction industry, especially in the testing of tensile strength of steel, compression strength of concrete cube and concrete core. In achieving better customer satisfaction, we are wholly committed to:

- a. Provide our technical services via professional and competent personnel;
- b. Use quality management systems and procedures to achieve our goal as a reference centre for service, consultancy in test and measurement for building and construction industries;
- c. Continue to strive to improve standard of service through maintaining conformance to ISO 17025, personnel training and the use of latest testing methods and procedures;
- d. Provide relevant testing services that meet the requirements of our customers within the construction industry that meet testing service turnaround expectation and customer satisfaction through consistency, quality and efficiency of service;
- e. Ensure that our personnel are well versed in our quality documentation as well as to duly comply with the implementation of our quality policies and procedures;
- f. Comply with MS ISO/IEC 17025:2005 and SAMM requirements as well as continually improving the efficacy of our management system.

HBPTU QUALITY OBJECTIVES

HBPTU will continuously monitor its quality objectives by way of its Key Performance Index (KPI) as declared as below:-

- a. To issue a test report within 10 working days after full payment date.
- b. The relevant personnel undergo at least one training program a year whenever necessary.
- c. Maintain a minimum 80% customer satisfaction of the testing services provided.

HBPTU CLIENT'S CHARTER

HBPTU is committed to provide full client's satisfaction through the following :-

- a. To provide competent services in testing activities.
- b. To deliver testing mutually agreed time.
- c. To protect the client's confidentially.
- d. To provide services at competitive costs.
- e. To provide quality, effective and friendly services.

SCOPE OF SAMM ACCREDITATION

HBPTU was accredited under *Skim Akreditasi Makmal Malaysia (SAMM)* meets the requirements of MS ISO/IEC 17025:2017 'General requirements for competence of testing and calibration laboratories'. This Malaysia Standards is identical with ISO/IEC 17025:2017 published by the International Organization for Standardization (ISO).

Schedule

Issue date: 16 November 2022
Valid until: 20 November 2025



NO: SAMM 617

LABORATORY LOCATION:
(PERMANENT LABORATORY)



HBPTU TESTING UNIT (HBPTU)
SCHOOL OF HOUSING, BUILDING AND PLANNING
UNIVERSITI SAINS MALAYSIA
11800 PULAU PINANG
MALAYSIA

FIELD OF TESTING: MECHANICAL

This laboratory has demonstrated its technical competence to operate in accordance with MS ISO/IEC 17025:2017 (ISO/IEC 17025:2017).

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).

SCOPE OF TESTING: MECHANICAL

| Materials/ Products Tested | Type of Test/ Properties Measured/ Range of Measurement | Standard Test Methods/ Equipment/Techniques |
|-------------------------------|---|--|
| Concrete | Compression -Cube -Core (up to 3000 kN) | MS EN 12390-3: 2012 MS EN 12504-1: 2013 |
| Metallic Material | Tensile Test (up to 2000 kN) | MS ISO 15630-1: 2012 ISO 6892-1: 2019-11 |
| Hot Rolled Steel Bar | Tensile Test (up to 2000 kN) | MS 146: 2014 (Clause 7.3.3) BS 4449+A3: 2016 (Clause 7.2) |
| Soil | Determination of In-situ Density (Field Density) of Soil (Sand Replacement Method) | BS 1377: Part 9: 1990 (Clause 2.1 & 2.2) MS 1056: Part 9: 2005 (Clause 4.2 & 4.3) |
| | Determination of Dry Density Moisture Content Relationship (Proctor Compaction Test) 4.5 kg Rammer | BS 1377-2:2022 (Clause 11.5 and 11.6) MS 1056: Part 9: 2005 (Clause 4.2, 4.5 & 4.6) |

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SCOPE OF TESTING: MECHANICAL

| Materials/ Products Tested | Type of Test/ Properties Measured/ Range of Measurement | Standard Test Methods/ Equipment/Techniques |
|-------------------------------|---|--|
| Soil (continued) | 2.5 kg Rammer | BS 1377-2:2022 (Clause 11.5 and 11.6) MS 1056: Part 9: 2005 (Clause 4.2, 4.3 & 4.4) |
| | Determination of Moisture Content (Oven Drying) | BS 1377: Part 4: 1990 (Clause 3.2) MS 1056: Part 9: 2005 (Clause 4.2) |
| | Determination of California Bearing Ratio (CBR) | BS 1377-2:2022 Clause 15.2 (Preparation of Sample) Clause 15.3 (Soaking) Clause 7.4 (Penetration) BS 1056: Part 4: 2005 (Confirmed 2013) Clause 8.2.3.3 (Preparation of Sample) Clause 8.3 (Soaking) Clause 8.4 (Penetration) |
| | Determination of In-Situ California Bearing Ratio (CBR) | BS 1377: Part 9: 1990 (Clause 4.3) MS 1056: Part 9: 2005 (Clause 6.4) |

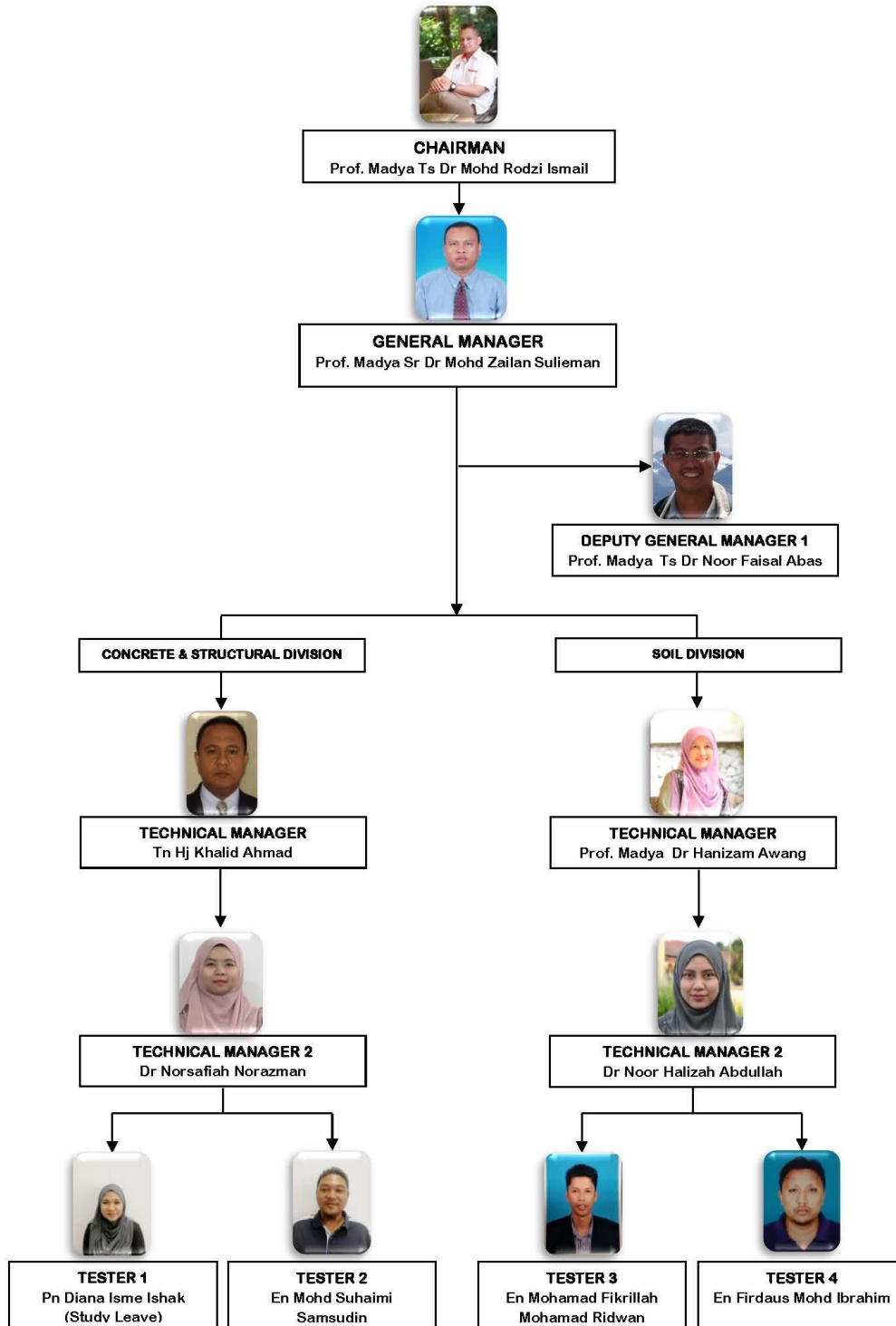
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Signatories:

1. Prof. Madya Ir. Dr. Abdul Naser Abdul Ghani
2. Prof. Madya Dr. Noor Faisal Abas
3. Prof. Madya Sr. Dr. Mohd Zailan Sulieman (except Soil Testing)
4. Tn. Hj. Khalid Ahmad (except Soil Testing)

HBPTU ORGANIZATION CHART

HBPTU ORGANIZATION CHART



**LIST OF TEST AND SERVICE FEE FOR COMPETENCE OF SPECIFIC TESTS
(SCOPE OF ACCREDITATION)**

SAMM Accredited Testing List:-

| No. | Description of Test | Unit | Service Fee (RM) |
|-----|---|---|---|
| 1 | <p>Determination of Compressive Strength of Concrete Cores (Capacity - 3000kN) (Preparation + Testing + Report) Standard Test Methods:- MS EN 12390-3 : 2012 MS EN 12504-1 : 2013</p> <p>Core Extracting Mobilization will be charged if number of cores <u>less than 10</u> Mobilization for > 10km (Penang) Mobilization for > 10km (Outside Penang)</p> | <p>Nos.</p> <p>Nos.</p> <p>LS</p> <p>LS</p> | <p>420.00</p> <p>200.00</p> <p>500.00</p> <p>500.00 ++</p> |
| 2 | <p>Determination of Compressive Strength of Concrete Cube (Capacity - 3000kN) (Testing + Report) Standards Test Methods:- MS EN 12390-3 : 2012 MS EN 12504-1 : 2013</p> | Per set of 3 cubes | 60.00 |
| 3 | <p>Hot Rolled Steel Bar Tensile Test (Capacity - 2000kN) (Testing + Report) Standards Test Methods:- MS 146 : 2006 (Clause 16.1) BS 4449 : 2005 (Clause 7.2.3)</p> <p>1. Ø size up to 10 mm 2. Ø size 12 - 16 mm 3. Ø size 20 - 25 mm 4. Ø size 32 mm 5. Ø size 40 mm</p> | Per set of 3 bars | <p>400.00</p> <p>470.00</p> <p>520.00</p> <p>700.00</p> <p>750.00</p> |
| 4 | <p>Metallic Material Tensile Test (Capacity - 2000kN) (Testing + Report) per specimen Standards Test Methods:- MS EN 15630-1 : 2012 ISO 6892-1 : 2009</p> | Per pieces | 200.00 |

Other Testing Service List:-

TESTING OF STEEL

| | | | |
|-----------------|---|---|--------|
| 1 | Determination of Bend and Re-bend Test of Hot Rolled Steel Bar | Per set of 2 bars | |
| | 1. Ø size up to 10 mm | | 290.00 |
| | 2. Ø size 12 - 16 mm | | 320.00 |
| | 3. Ø size 20 - 25 mm | | 380.00 |
| | 4. Ø size 32 mm | | 550.00 |
| 5. Ø size 40 mm | 650.00 | | |
| 2 | Determination of Tensile and Welded Joint Test of Steel Fabric | Per set of 4 specimen/test | 600.00 |
| 3 | Determination of Tensile/Bend of Flat Bar Welded Joint | Per set of 3 specimen (2 Tensile + 1 Bending) | 600.00 |

TESTING OF CONCRETE

| No | Description of Test | Service Fee (RM) |
|----|--|---|
| 1 | Determination of Flexural Strength of Concrete Prism (Size 100x100x500 & 150x150x750) (mm) | 70.00 – 100.00 (per unit) |
| 2 | Portable Ultrasonic Non-Destructive Indicating Tester (PUNDIT) | 300.00 – 450.00 (per location of 12-16 reading) |
| 3 | Rebound Schmidt Number - per location of 12 reading | 150.00 – 250.00 (per location of 12-16 reading) |
| 4 | Mobilization | 300.00 ++ |

TESTING OF CONCRETE MATERIALS

| No | Description of Test | Service Fee (RM) -per sample |
|----|--|---------------------------------|
| 1 | Particle Size Distribution (Coarse/Fine) | 80.00 (per sample) |
| 2 | Clay, Silt and Dust Content | 80.00 (per sample) |
| 3 | Aggregate Crushing Value | 100.00 (per sample) |
| 4 | Relative Density and Water Absorption | 80.00 (per sample) |
| 5 | Flakiness Index | 120.00 (per sample) |
| 6 | Angularity Number | 120.00 (per sample) |
| 7 | Compressive Test of Rock Core | 100.00 (per unit) |
| 8 | Determination of Abrasion Value (LA Abrasion Machine) | 300.00 (per sample) |
| 9 | Soundness Test | 100.00 (per sample) |

TESTING OF BRICK, BLOCK & CEMENT

| No | Description of Test | Service Fee (RM) |
|----|--------------------------------|---------------------------------------|
| 1 | Testing of Bricks and Blocks | 150.00 (per set of 10 unit) |
| 2 | Test of Setting Time of Cement | 200.00 (per test) |

TESTING OF SOIL

| No | Description of Test | Service Fee (RM) |
|-----------------------------------|--|-------------------------------------|
| Soil Classification Tests: | | |
| 1. | Determination of the moisture content | 15.00 |
| 2. | Determination of the liquid limit | 60.00 |
| 3. | Determination of the plastic limit | 60.00 |
| 4. | Determination of the plasticity index | 60.00 |
| 5. | Determination of the linear shrinkage | 100.00 |
| 6. | Determination of the specific gravity of soil particles | 75.00 |
| 7. | Determination of the particle size distribution | |
| | - Dry sieving | 120.00 |
| | - Wet sieving | 150.00 |
| Soil Compaction Tests: | | |
| 8. | Determination of the dry density/moisture content relationship (2.5kg rammer method) | 300.00 |
| 9. | Determination of the dry density/moisture content relationship (4.5kg rammer method) | 300.00 |
| 10. | Determination of the dry density of soil on the site | 1 st sample RM 160.00 |
| | | Subsequent sample RM 120.00 each |
| Soil Strength Test: | | |
| 11. | Determination of the California Bearing Ratio (Site) | |
| | - In-situ | 400.00 |
| | - Soaked | 300.00 |
| | - Unsoaked | 250.00 |

CONTACT DETAILS

HBP TESTING UNIT (HBPTU)
School of Housing, Building and Planning
Universiti Sains Malaysia
11800 Pulau Pinang, Malaysia



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- Service Fees will be charged according to type and number of testing.
- All payment should be made upon submission of the testing specimen/samples.
- All cheque, cash deposit, IBG or banker's cheque should be made out to:-

| | |
|---------------------------|--|
| Nama Akaun | : PERUNDING PINANG SDN BHD (USM's Business Partner / Spin Off Company) |
| CIMB Islamic Bank A/C No. | : 86-0094616-6 |
| SST Reg. No. | : 001408204800 |

- The official report will be sent directly to the client's address within 10 working days upon receipt of payment.
- All service fees are subject to 6% Sales and Service Tax
- All fees could be revised without any prior notice