



**SAMM 1058**



**MTA**  
**Laboratory**  
**Sdn Bhd**

**Total solution  
provider**

**For material testing and analysis**

<b>Descriptions</b>		<b>Pages</b>
1.0	Company Background	3
2.0	The Company - Quality - Health, safety & environment	4
3.0	Personnel	6
4.0	Mission	7
5.0	Vision	7
6.0	Testing Provided	8
7.0	Company Details	17
8.0	Key Personnel	18
9.0	Certificates	24
10.0	Appendices	31

# COMPANY BACKGROUND

3

Material Testing and Analysis Sdn Bhd (MTA) is a wholly owned subsidiary of NDE Group of Company (formerly known) as NDE Consultancy Services Sdn Bhd. It is the objective of MTA providing laboratory services in mechanical testing, chemical analysis, material characterization, metallography analysis, corrosion testing, coating and painting system including the production of test specimens.

MTA Laboratory Sdn Bhd contains the quality management system organizational structures and meet MS ISO/IEC 17025:2017 requirement.

The MTA policies and procedures follows in the pursuit of performance excellence which located at:

**C-20-GF, Jalan Raja Udang 1,  
River Front Business Centre,  
24000, Kemaman, Terengganu.**

MTA's goal is to be **"The First Choice"** when selecting a testing company to client's quality needs. MTA through NDE Group for over 8 years, has provided comprehensive quality control services to a broad range of industries. Our extensive capabilities allow clients to use NDE Group as a sole source for quality control needs, eliminating the expense of multiple vendors.

## QUALITY

MTA Laboratory Sdn Bhd Management and its staff is fully committed to the performance excellence that is characteristic of a global leader in Testing and Analysis Services. Our goal is to provide these services that meet the needs and exceed the expectations of our customers and deliver outstanding value to the industry.

In striving the expectation MTA Laboratory Sdn Bhd Quality Management System is built upon competence, impartiality, and consistent operation of the laboratory based on International Standard ISO/IEC 17025:2017.

MTA Laboratory Sdn Bhd personnel is responsible to apply Quality to all work process leading toward the culture of continuous improvement.

## HEALTH, SAFETY & ENVIRONMENT

**MTA Laboratory Sdn Bhd main intention is to carry out to proactively work with all level of Employees, Customers, Suppliers, Sub-Contractors, Public and Government Agencies in order to ensure that our work has no harmful impact on Health, Safety and Environmental matters.**

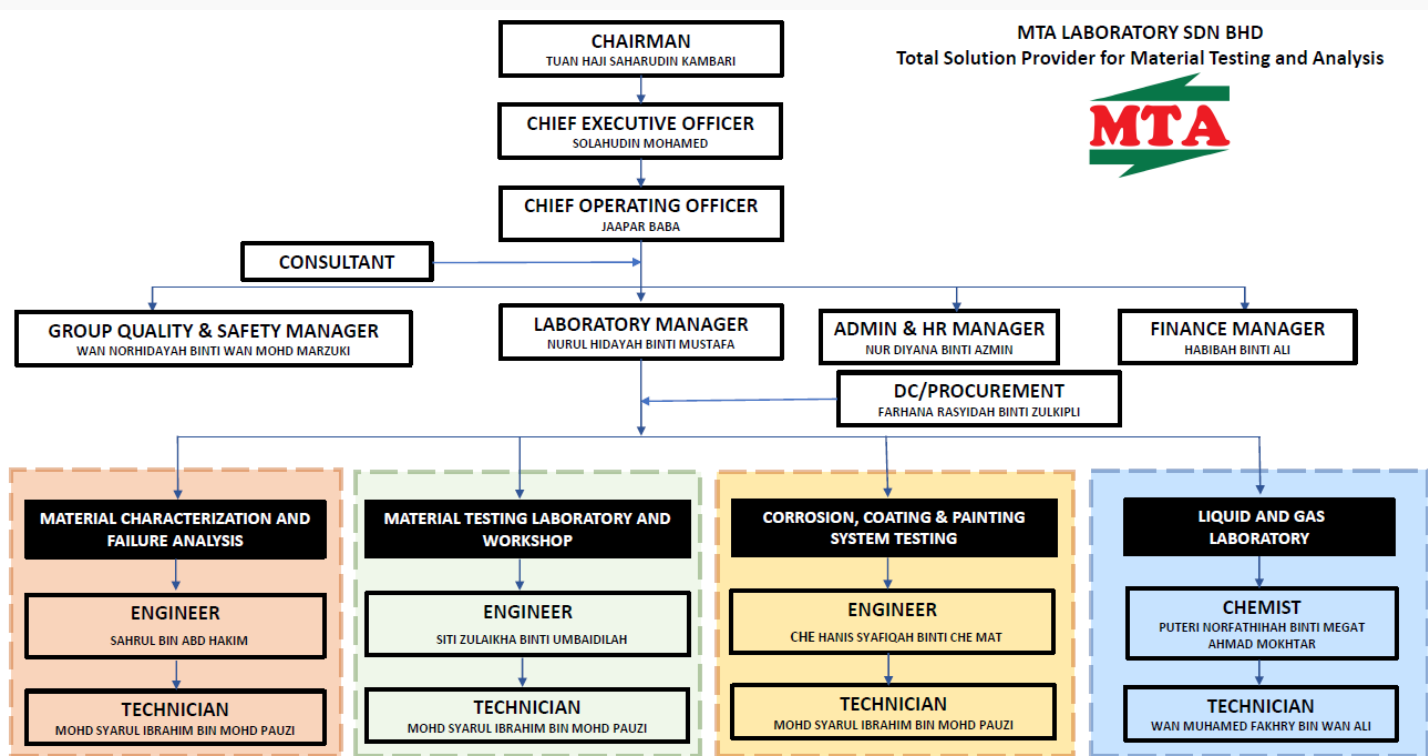
**We are committed in the conduct of the activities and endeavor to :**

1. Make continuous improvement to our Occupational Safety, Health and Environment in the field of Supply and Services.
2. Protect the Health Safety and Welfare of its employees and others who may be affected by the activities.
3. Comply with applicable HSE Laws and Regulations.
4. Formulate and implement HSE objectives and targets in our HSE management programmed to support and encourage the use of HSEMS.
5. Implement and sustain HSE awareness among all staffs by enhancing the HSE culture through visible leadership and commitment by the management.
6. Safeguard the conservation of the natural environment.

MTA recruitment and personnel policies are targeted at attracting and retaining personnel of the highest caliber. We expect our staff to assume responsibility; to use initiative; to work with minimum supervision; to be mature and to demonstrate integrity and flexibility. The ability to adapt to the unique social environment of the region is considered essential.

All our engineers and technicians are qualified and hold professional accreditation, degrees, diplomas or certificates in their particular disciplines. Our staffs, many of which are multi-disciplined, are actively encouraged to study for further qualifications or undergo specialized training.

MTA Organization chart is shown as below;



## VISSION

**To be a creative pioneer in the field of material testing and analysis and a quality partner for the related industries.**

## MISSION

**In order to achieve quality, safety and trust, we strive to provide accurate and reliable services with professionalism and integrity.**



## MECHANICAL TESTING

### Hardness Testing

[Micro and Macro Vickers Hardness]

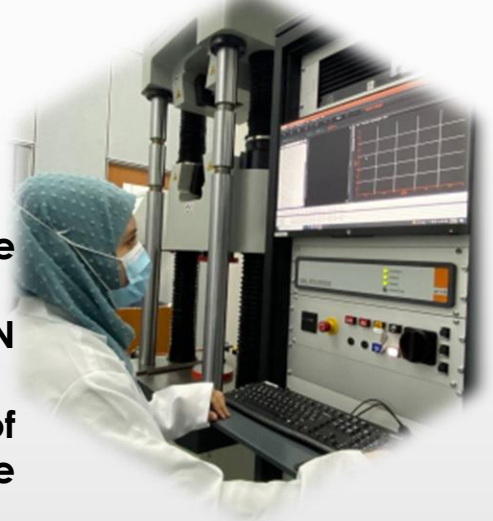


- Measure the hardness of materials at microscope scale.
- Applicable for Rockwell, Brinell and Vickers test method.
- Wide range of test force available (from 0.5gF to 1000gF) for micro hardness and > 1000gF for macro hardness.

### Tensile and Bend Testing

[Universal Testing Machine]

- Tensile test provides quantitative data of the material's strength and behavior.
- Capable of testing samples up to 1000kN (100 tonne) of force.
- Bend test allows for the determination of material's ductility, bend strength, fracture strength and resistance to fracture.



### Impact Testing

[Charpy V-Notch Test]

- Measure the amount of energy absorbed by the specimen during fracture.
- Different hammer weights are available to suit the different tests and international standard.
- Capable of testing samples at ambient until subzero temperature.





## METALLOGRAPHIC EXAMINATION

### Microstructure and Elemental Analysis

[Scanning Electron Microscope (SEM) & Energy Dispersive Spectroscopy (EDS)]

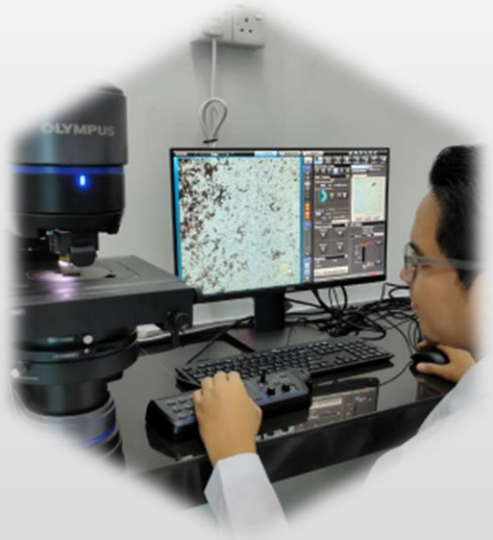
- Provide morphological information
- Magnification over 1000000 times
- Equipped energy dispersive spectroscopy (EDS) is integrated with the instrument – used to identify the presence of element in the sample.

For non-conductive sample, Chromium and other elements of sputter coating is provided for optimal results

### Microstructure Analysis

(Digital Microscope)

- Inspect the microstructure of the material.
- Magnification of 140x Macro to Micro versatility.
- Material Analysis :
  - Phase analysis
  - Grain intercept
  - Count and measure



# TESTING PROVIDED<sup>10</sup>

## Macro Etching Examination



- A non-destructive testing technique used to examine the macrostructure of metallic materials.
- It involves etching the surface of a metal sample to reveal its macroscopic features, such as grain size, inclusions and segregation.
- For welds, etching a the cross section may reveal internal discontinuities, weld profile, extent of penetration and the quality of weld.

## CHEMICAL ANALYSIS

### Chemical Analysis

[Arc Spark Spectroscopy]



- Fast, precise and highly sensitive analysis of elemental composition of metal solid samples.
- Fe-base, Ti-base and Ni-base materials.
- Provide spectral range 200nm-800nm and shortest time analysis 10s.
- Low detection limits of a wide range of element

## DIMENSIONAL EXAMINATION

### Dimensional Examination

(Vision Measuring System)

- Fast measurement speeds, high precision, high resolution and large measurement ranges.
- Non-contact measurement technology which capture multiple images of a measured object to obtain the 3D size and morphology information.



## STRUCTURAL ANALYSIS



### Structural Analysis

[X-Ray Diffraction (XRD) ]

- Measuring the intensities and scattering angles of the X-rays that leave the material.
- Application:
  1. Determine the crystallographic structure of a material by irradiating a material with incident X-rays.
  2. Measuring the weight fraction of the compound present in the sample.

## CHEMICAL ANALYSIS

### Chemical Analysis

(Fourier Transform Infrared Spectroscopy (FTIR))

- Identify compounds and the general type of material being analyzed when there are unknowns.
- Characterize unknown materials such as purify of inorganic sample especially in polymer composition (e.g., films, solids, powders, or liquids)
- Recognize contamination on or in a material (e.g., particles, fibers, powders, or liquids).



## THERMAL ANALYSIS

### Thermal Analysis

[Differential Scanning Calorimeter (DSC)]

- Provide quantitative & qualitative information about physical chemical changes that involve endothermic or exothermic processes.
- The main application of DSC is in studying phase transitions, such as melting, glass transitions, or exothermic decompositions.

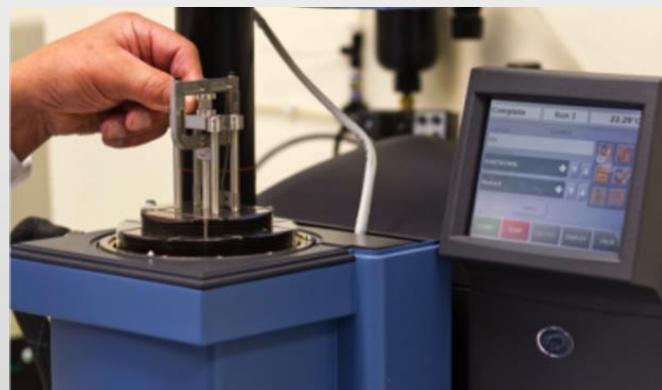


## MECHANICAL ANALYSIS

### Mechanical Analysis

(Dynamic Mechanical Analysis (DMA))

- Provide information on the transitions of materials and characterize bulk properties of the material.
- Determine glass transition of polymers or the response of a material to application and removal of a load, as a few common examples.



# SAMPLE PREPARATION

13

**Abrasive Cutter**

**Precision Cutter**

**Milling Machine**

**Band Saw**

**Lathe Machine**

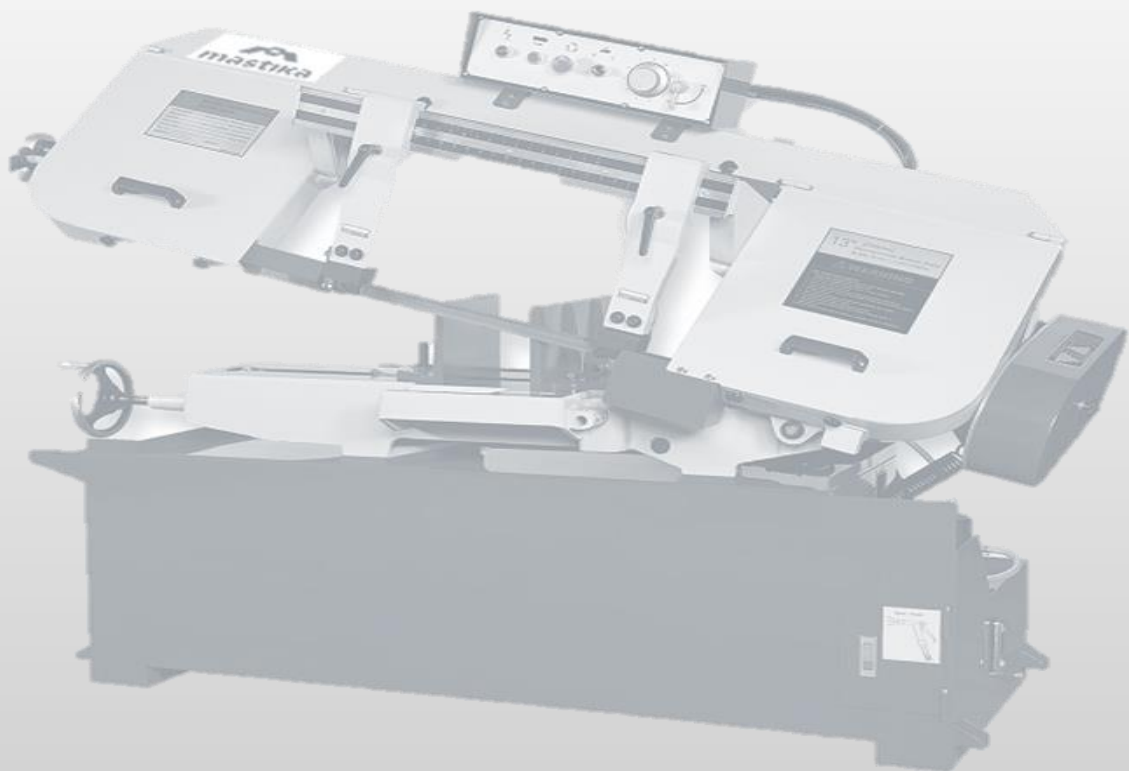
**Hot and Cold Mounting  
Press**

**Grinder and Polisher**

**Sputter Coater**

**Etching Process**

**V Notch Maker**



## OIL TESTING

### BVD Oil Transformer

[Oil Testing]



- Dielectric strength of transformer oil is also known as the breakdown voltage (BDV) of transformer oil.
- Breakdown voltage is measured by observing at what voltage, sparking strands between two electrodes immersed in the oil, separated by a specific gap.
- A low value of BDV indicates presence of moisture content and conducting substances in the oil.

### Interfacial Tension Test

[Oil Testing]

- Interfacial tension between the water and oil interface is the way to measure the attractive molecular force between water and oil.
- Determine the presence of polar contaminants and oil decay products. Good new oil generally exhibits high interfacial tension. Oil oxidation contaminants lower the IFT.

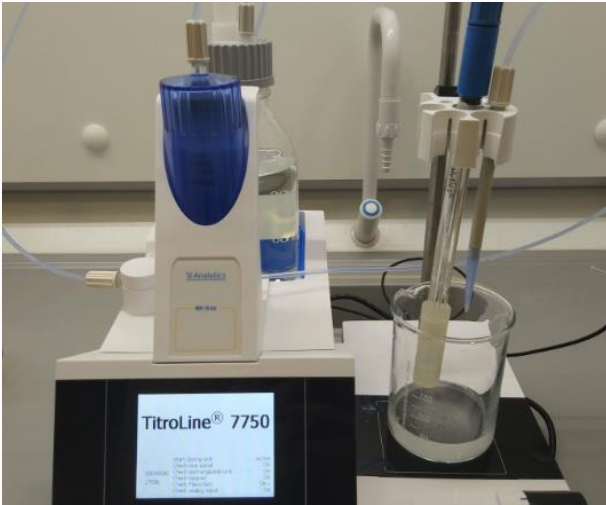


### KINEMATIC Viscosity Test

[Oil Testing]

- Kinematic Viscosity is measuring the time for a volume of liquid to flow under gravity through a calibrated glass capillary viscometer. Different sized capillaries are available to support fluids of varying viscosity.
- Thin oils have lower viscosity and pour more easily at low temperatures than thicker oils that have a higher viscosity.
- The viscosity of a lubricant has a big influence on the performance and long-life of the downtime and maintenance costs.





## Total Acid Number (TAN) Test

[Oil Testing]

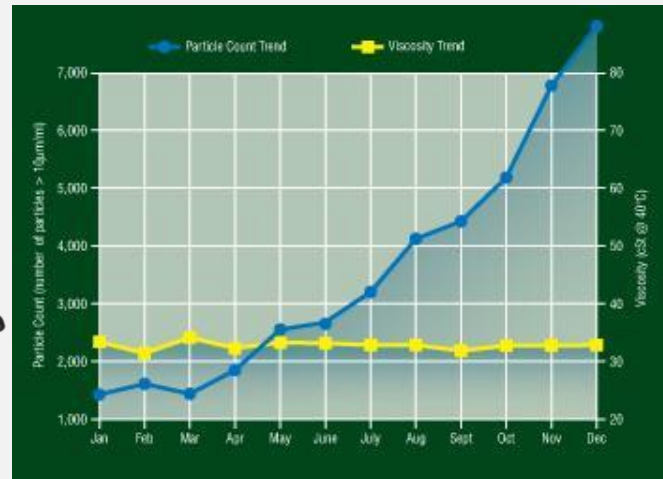
- The total acid number (TAN) is a measurement of acidity that is determined by the amount of potassium hydroxide in milligrams that is needed to neutralize the acids in one gram of oil.
- The more acidic the oils is, the more degradation occurs. As the fluid degrades, the level of along with the danger of compenant failure.

## Moisture Test

(Oil Testing)

- Water is one of the most destructive contaminants in most all lubricants. It attacks additives, induces base oil oxidation and interferes with oil fil production.
- High levels of water ingressin merit attention and are rarely correctable by performing an oil changes.
- Karl Fischer titration is a classic titration method in chemical analysis that uses coulometric or volumetric titration to determine trace amounts of water in a sample.





## Particle Count

(Oil Testing)

- Particle count is a proven test method for industrial oil analysis. The principle is simple: by measuring the number of particles in used oil, and the contamination ratio of the oil. That way, it helps to determine whether the oil is clean enough for reliable operation.
- Visual inspections of oil samples are not sufficient to obtain a complete and correct image of the degree of oil contamination. The oil might look clean for the naked eye, yet it could still cause abrasive wear, reducing equipment performance and system efficiency.



## MTA Laboratory Sdn Bhd

Registration No: 202001035726  
 Registration Date: 5<sup>th</sup> Nov 2020

### Company Registration

ISO / IEC 17025 : 2017  
 (SAMM 1058)

### Name & Address of Bank(s)

Maybank Islamic Berhad  
 Kemaman Branch,  
 PT 16096 – PT 16098  
 Jalan Kubang Kurus  
 24000 Kemaman  
 Terengganu

### Principal Owners of Company

Saharudin Kambari	– 25%
Solahudin Mohamed	– 25%
Mohd Rohaimi Yusof	– 25%
Zulkifli Mohamed	– 25%

## Equity Structure

Bumiputera Shareholding – 100%

### Board of Directors

Saharudin Kambari  
 (Director)

Solahudin Mohamed  
 (Director)

Mohd Rohaimi Yusof  
 (Director)

Zulkifli Mohamed  
 (Director)

### Malaysian Content

Category	Bumiputera	Non - Bumi	Total
Management	100%	0%	100%
Admin	100%	0%	100%
Technical	100%	0%	100%

## **SAHARUDIN KAMBARI** **[Director]**

### **Education Background**

- Bachelor of Science in Civil Engineering
- Diploma in Computer Science

### **Technical Qualification**

- API 510 Pressure Vessel Inspector
- API 570 Piping Inspector
- API 653 Aboveground Storage Tank Inspector
- ASNT/ACCP NDT Level III in Ultrasonic Testing, Radiographic Testing, Magnetic Particle Testing and Liquid Penetrant Testing.
- MLVK Radiographic Testing Level II
- LPTA Radiation Protection Officer

### **Industrial Contribution**

- IMM committee member for the development of a National Standard for CIDB in Welding Inspection
- MLVK committee member for the development of a National Standard for SKM in Welding inspection and Radiographic Testing

### **Technical Experiences**

- **[1989 - 1991]** : NDT Technician
- **[1992 - present]** : Inspection engineer, NDT Level III, welding inspector, plant inspector, radiation protection officer, trainer for NDT and welding inspection

### **Management Experiences**

- **[1992 - 1994]** : Involved in the management and supervision of NDT and inspection activities for an inspection company.
- **[1995 - present]** : As a founder and executive director for an inspection company.

## **SOLAHUDIN MOHAMED** **[Director]**

### **Education Background**

- Bachelor of Science in Civil Engineering (Housing, Building & Planning)
- Certificate in Executive Management

### **Technical Qualification**

- PCN Level III in Ultrasonic Testing
- PCN level II in Ultrasonic Testing and Radiographic Interpretation
- CSWIP Welding Inspector

### **Industrial Contribution**

- IMM committee member for the development of a National Standard for CIDB in Welding Inspection
- MLVK committee member for MLVK Examination Board for SKM in Non-Destructive Testing

### **Technical Experiences**

- **[1994 - 1995]** : NDT Technician
- **[1996 - present]** : Inspection engineer, NDT Level III, welding inspector, plant inspector and trainer for NDT and welding inspection.

### **Management Experiences**

- **[1990 - 1991]** : As a site engineer for a construction
- **[1992 - 1993]** : As a manager for a technical school.
- **[1996 - 2004]** : As a founder and managing director for a training center in Non-Destructive Testing and Inspection

## **MOHD ROHAIMI YUSOF** **[Director]**

### **Education Background**

- Diploma in Electrical Engineering (Electronic)

### **Technical Qualification**

- API 510 Pressure vessel Inspector
- PCN Level II in Ultrasonic Testing, Magnetic Particle Testing, Liquid Penetrant Testing, Eddy Current Testing and Radiographic Interpretation
- CSWIP Welding Inspector

### **Technical Experiences**

- **[1993 - 2001]** : NDT Technician and Welding Inspector
- **[2002 - present]** : Inspection engineer, NDT Level II, welding inspector, plant inspector and trainer for NDT and welding inspection

### **Management Experiences**

- **[2002 - 2004]** : As a technical coordinator and trainer to a training center in Non-Destructive Testing and inspection

## ZULKIFLI MOHAMED [Director]

### Technical Qualification

- API 510 Pressure Vessel Inspector
- API 570 Piping Inspector
- API 653 Aboveground Storage Tank Inspector
- PCN Level III in Ultrasonic Testing, Magnetic Particle Testing, Liquid Penetrant Testing and Radiographic Interpretation
- CSWIP Welding Inspector
- ICCOR Level I Painting Inspector

### Technical Experiences

- **[1993 - 1996]** : NDT Technician and Welding Inspector
- **[1997 - present]** : Inspection coordinator, NDT Level III, welding inspector, plant inspector and examiner for NDT.

### Management Experiences

- **[1997 - 2004]** : As an examination coordinator and examiner for a training center in Non-Destructive Testing and Inspection.

## **JAAPAR BABA** **[Chief Operating Officer]**

### **Professional Qualification**

- The Institute of Occupational Safety and Health, United Kingdom – Working Safety Certification
- Train the Trainer Course, NIOSH
- 'Life Saving' Instructor Certificate obtained from Persatuan Penyelamat Kelemasan Malaysia, SMTC
- Scuba Diving Certificate – Master Open Water Diver, Borneo
- Safety and Health Officer - NIOSH

### **Technical Experiences**

- **[1979 - 1995]** : Sergeant at The Royal Malaysian Air Force as Welder and Mechanist Aircraft Fabrication
- **[1996]** : Assistant Instructor, Conducting Offshore & Onshore Safety, Basic Scaffolding Helicopter Underwater Escape Training, Sea Survival, Breathing Apparatus and Fire Fighting Course.

### **Management Experiences**

- **[2005]** : As an Operation Manager in Terengganu Safety Training Centre Sdn Bhd (TSTC)

## GUEST CONSULTANT(S)

### **1. DR. MAT HUSIN SALEH**

PhD Metallurgy and Material Sciences

### **2. TS. DR. SAMSIAH BINTI SULAIMAN**

PhD Material Engineering

### **3. DR. BADROL AHMAD**

PhD Scanning Transmission Electron Microscope

### **4. IR. AHMAD ZAKI MOHAMAD AFIFI**

Meng Mechanical Engineering

### **5. DR. MOHD HARUN**

PhD Metal, Material/Physic

### **6. DR. MAHMOOD DOLLAH**

PhD Material/Corrosion/NDT

### **7. EN AZMAN SAID**

Bachelor of Science (Mechanical Engineering)

### **8. DR. MOHAMAD PAUZI ISMAIL**

PhD (Str & Civil Engineering)

S/N: 2030



**STANDARDS  
MALAYSIA**

## Certificate of Accreditation

No: SAMM 1058 Accredited since: 15 March 2022

This is to certify that

**MTA LABORATORY SDN. BHD.**  
KEMAMAN, TERENGGANU  
MALAYSIA



Scan this QR Code or visit  
[www.jst.mam.gov.my/standards](http://www.jst.mam.gov.my/standards)  
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 *Skema 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).



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

Date of issue: 15 March 2022

This certificate is made pursuant to subsections 16(2) and 16(3), [Act 541]



## Schedule

Issue date: 18 July 2023  
Valid until: 15 March 2025



**NO: SAMM 1058**

Issue 02, 18 July 2023 replacement  
of SAMM 1058 dated 15 March 2022)

Page: 1 of 2

**LABORATORY LOCATION:**  
(PERMANENT LABORATORY)



**MTA LABORATORY SDN. BHD.**  
LOT 51888, JALAN NILAM 2/1,  
RAYHAR CEMERLANG,  
JALAN AIR PUTIH,  
24000 KEMAMAN,  
TERENGGANU  
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
Carbon Steel / Low Alloy Steel	<u>Spark Spectroscopy</u>  Elemental Analysis: C, Si, S, Mn, P, Ni, Cu, Cr, Ti, V, Mo, Nb, B, Al, Ca, N	ASTM E415 – 21
Metal	<u>Vickers Hardness Testing</u>  200 HV to 700 HV	ASTM E384 - 17
Metal & Metal Product	Tensile Test (Up to 100 tonnes)  Bend Test  Nick Break Test  Charpy Impact Test  Macro Hardness Test	ASTM E8-E8M-21  ASTM E190-21  API Std. 1104, Ed. 2021  ASTM E23-18  ASTM E82-17

**Signatories:**

1. Nurul Hidayah binti Mustafa
2. Siti Zulaikha binti Umbaidillah
3. Sahrul bin Abd Hakim
4. Mohd Syarul Ibrahim bin Mohd Fauzi

## Schedule

Issue date: 18 July 2023  
Valid until: 15 March 2025



**NO: SMM 1058**  
Issue 02, 18 July 2023 replacement  
of SMM 1058 dated 15 March 2022)

Page: 2 of 2

### SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Used Oil	Moisture Test	ASTM D6304-20
	Total Acid Number Test	ASTM D664-18
	Kinematic Viscosity Test	ASTM D445-21

### Signatory:

- Puteri Norfathihah binti Megat Ahmad Mokhtar L/1931/6428/13



Serial No: 2023/0158



Please Scan To Verify

**INSTITUTE OF MATERIALS, MALAYSIA**

*(Formerly known as INSTITUT BAHAN MALAYSIA)*

(PPM-004-10-11061987)

*Awarded this*

*Certificate of Membership*

*to*

**MTA LABORATORY SDN. BHD.**

*granted as*

**COMPANY MEMBER (C-2023-0382)**

*on*

**ISSUED DATE: 16 NOVEMBER 2023**

**EXPIRY DATE: 31 DECEMBER 2024**

A handwritten signature in black ink, appearing to be 'TCC'.

**ASSOC. PROF. TS. DR. TAY CHIA CHAY**  
Honorary Secretary



A handwritten signature in black ink, appearing to be 'MKA'.

**DATO DR. IR. TS. MOHD ABDUL KARIM ABDULLAH**  
President

SALINAN SAH  
CERTIFIED TRUE COPY

  
DATIN KALTHANA BINTI RAMLI  
MCA (M), B ACC (HONS) (BUM, ASA) (AUST)  
MIA NO. 25685  
DATE :

  
SURUHJAJAYA SYERIKAT MALAYSIA  
COMPANIES COMMISSION MALAYSIA  
(Agensi di bawah SPRK01P)

COMPANIES ACT 2016  
(ACT 777)

SECTION 17


**CERTIFICATE OF INCORPORATION  
OF PRIVATE COMPANY**

This is to certify that

**MTA LABORATORY SDN. BHD.  
202001035726 (1392047-A)**

is, on and from the 5<sup>th</sup> day of November 2020, incorporated under the Companies Act 2016, and that the company is a company limited by shares and that the company is a private company.

Dated at **KUALA LUMPUR** this 5<sup>th</sup> day of November 2020.

  
**NOR AZIMAH BINTI ABDUL AZIZ**  
REGISTRAR OF COMPANIES  
MALAYSIA



User ID: EZZATIYAJID      Date: Mon Dec 07 16:45:50 2020      Printing Date: 07/12/2020

This certificate is generated from MYDATA SSM Services as at 07/12/2020 16:45:50  
MENARA SSM@SENTRAL, NO.7, JALAN STESEN SENTRAL 5, KUALA LUMPUR SENTRAL, 50470 KUALA LUMPUR,  
TEL : 03-2269 4480 FAX : 03-2269 4411



**KEMENTERIAN KEWANGAN MALAYSIA  
SIJIL AKUAN PENDAFTARAN SYARIKAT**

NO. SIJIL : K10104138943127370  
NO. RUJUKAN PENDAFTARAN : 357-0002344072  
TEMPOH SAH LAKU : 15/02/2022 - 14/02/2025

Bahawa dengan ini diperakui syarikat :

MTA LABORATORY SDN. BHD. ( 1392047-A )  
LOT 51888., JALAN NILAM 2/1  
RAYHAR CEMERLANG  
JALAN AIR PUTIH  
KEMAMAN  
24000 CUKAI  
TERENGGANU, MALAYSIA

Telah berdaftar dengan Kementerian Kewangan Malaysia dalam bidang bekalan/perkhidmatan di bawah sektor, bidang dan sub-bidang seperti di Lampiran A. Kelulusan ini adalah tertakluk kepada syarat-syarat seperti yang dinyatakan di Lampiran B. Individu yang diberi kuasa oleh syarikat bagi urusan perolehan Kerajaan adalah seperti berikut :

HAI SOLAHUDIN BIN MOHAMED

660120115501

DIRECTOR

t.t

**DATO' INDERA AB RAHIM BIN AB RAHMAN**

Bahagian Perolehan Kerajaan

*b.p.* Ketua Setiausaha Perbendaharaan

Kementerian Kewangan Malaysia

Tarikh Berdaftar Dengan Kementerian Kewangan Malaysia : 15/02/2022

(Sijil ini adalah cetakan komputer dan tidak memerlukan tandatangan)

**LAMPIRAN A**

NO SIJIL : K10104138943127370  
 NO RUJUKAN PENDAFTARAN : 357-0002344072  
 TEMPOH SAH LAKU : 15/02/2022 - 14/02/2025

BIL	TARIKH DAFTAR BIDANG	KOD BIDANG	KETERANGAN	STATUS
1	09/02/2022	090102	BAHAN BINAAN DAN PERALATAN KESELAMATAN JALAN RAYA/ BAHAN BINAAN/ PAIP DAN KELENGKAPAN	Aktif
2	09/02/2022	130401	PERALATAN KEJURUTERAAN DAN MESIN PENGELUARAN/ PERALATAN PERINDUSTRIAN MINYAK/ PERALATAN PERINDUSTRIAN HULUAN	Aktif
3	09/02/2022	130402	PERALATAN KEJURUTERAAN DAN MESIN PENGELUARAN/ PERALATAN PERINDUSTRIAN MINYAK/ PERALATAN PERINDUSTRIAN HILIRAN	Aktif
4	09/02/2022	220508	PERKHIDMATAN/ PENYELENGGARAAN/PEMBAIKAN KEJURUTERAAN DAN KOMUNIKASI/ BAIKPULIH BARANG-BARANG LOGAM	Aktif
5	09/02/2022	222705	PERKHIDMATAN/ PERKHIDMATAN LAIN-LAIN/ UJIAN MAKMAL	Aktif

Tarikh Berdaftar Dengan Kementerian Kewangan Malaysia : 15/02/2022

No.	Contact/Project Description and Location	Client	Contract/ Project Duration
<b>MECHANICAL TESTING</b>			
1.	Mechanical Test for Tensile Test and Bend Test	Kontrak Bina Enterprise Sdn Bhd	January 2024
2.	Mechanical Test for Hardness Test, Tensile Test, Macro Examination and Bend Test	MNM Oil and Gas Tranding Sdn Bhd	January 2024
3.	Mechanical Test for Macro Examination, Hardness Test and Charpy Impact Test	HHA Associates Sdn Bhd	January 2024
4.	Mechanical Test for Hardness Test	Ampi Synergy Sdn bhd	January 2024
5.	Mechanical Test for Chemical Analysis	Baseera Engineering Sdn Bhd	November 2023
6.	Mechanical Test for Tensile Test and Bend Test	Key One Resources Sdn Bhd	November 2023
7.	Mechanical Test for Chemical Analysis, Bend Test, Tensile Test, Hardness Test, Macro Examination, Corrosion Test and Ferrite Count	Bucida Engineering & Consultancy Sdn Bhd	November 2023
8.	Mechanical Test for Tensile Test, Bend Test, Charpy Impact Test, Hardness Test, Macro Examination, Chemical Analysis, Corrosion Test, Ferrite Count and Digital Microscope	TSM Maintenance and Construction Services Sdn Bhd	November 2023
9.	Mechanical Test for Side Bend Test	Petro Sep Engineering Sdn Bhd	November 2023
10.	Mechanical Test for Fracture Test and Macro Examination	Pioneer Engineering Sdn Bhd	November 2023
11.	Mechanical Test for Tensile Test and Bend Test	Key One Resources Sdn Bhd	November 2023
12.	Mechanical Test for Hardness Test	HHA Associates Sdn Bhd	October 2023
13.	Mechanical Test for Tensile Test, Bend Test, Charpy Impact Test, Hardness Test, Macro Examination Test, Corrosion Test, Ferrite Count and Chemical Analysis	Ostal Engineering Sdn Bhd	October 2023
14.	Mechanical Test for Hardness Rockwell and Corrosion Test	Dermaga Oil & Gas Sdn Bhd	September 2023
15.	Mechanical Test for Ferrite Count	Dermaga Oil & Gas Sdn Bhd	September 2023
16.	Mechanical Test for Bend Test, Charpy Impact Test, Macro Examination and Macro Hardness Test	HHA Associates Sdn Bhd	September 2023
17.	Mechanical Test for Tensile Test, Hardness Test, Corrosion Test, Chemical Analysis and Microstructure Test	Dermaga Oil & Gas Sdn Bhd	September 2023

# APPENDICES

18.	Mechanical Test for Bend Test and Dye Penetrant Testing	Tanjung Offshore Services Sdn Bhd	September 2023
19.	Mechanical Test for Hardness Test	Leads One Sdn Bhd	September 2023
20.	Mechanical Test for Tensile Test and Chemical Analysis	Dynaciate Engineering Sdn Bhd	September 2023
21.	Mechanical Test for Bend Test	Newwin Engineering Sdn Bhd	August 2023
22.	Mechanical Test for Tensile Test, Hardness Test, Charpy Impact Test, Pitting/Corrosion Test, Digital Microscope and Ferrite Count	Dermaga Oil & Gas Sdn Bhd	August 2023
23.	Mechanical for Charpy Impact Test	HHA Associates Sdn Bhd	August 2023
24.	Mechanical for Macro Etching	Epic OG Sdn Bhd	August 2023
25.	Mechanical Test for Bend Test, Hardness Test, Tensile Test and Macro Examination	KSL PD Engineering Sdn Bhd	August 2023
26.	Mechanical Test for Charpy Impact Test	AOG Group of Companies	July 2023
27.	Mechanical Test for Tensile Test, Bend Test, Hardness Test and Macro Examination	Newwin Engineering Sdn Bhd	July 2023
28.	Mechanical Test for Tensile Test, Bend Test, Hardness Test and Macro Examination	Newwin Engineering Sdn Bhd	July 2023
29.	Mechanical Test for Bend Test, Macro Examination and Charpy Impact Test	HHA Associates Sdn Bhd	July 2023
30.	Mechanical Test for Hardness Test, Tensile Test Charpy Impact Test, Corrosion Test, Pren, Digital Microscope/SEM and Ferrite Count	Dermaga Oil & Gas Sdn Bhd	June 2023
31.	Mechanical Test for Bend Test, Macro Examination and Fracture Test	HHA Associates Sdn Bhd	May 2023
32.	Mechanical Testing for Fracture Test, Macro Examination and Macro Hardness Test	HHA Associates Sdn Bhd	May 2023
33.	Mechanical Testing for Tensile Test	Newwin Engineering Sdn Bhd	Apr 2023
34.	Mechanical Testing for Bend Test	HHA Associates Sdn Bhd	Apr 2023
35.	Mechanical Testing for Tensile Test, Chemical Analysis and Hardness Test	Hyperwave Systems Engineering Sdn bhd	Apr 2023
36.	Mechanical Testing for Tensile Test, Hardness Test, Charpy Impact Test, Microstructure Examination, Ferrite Count and Corrosion Test	Dermaga Oil & Gas Sdn Bhd	Mar 2023
37.	Mechanical Testing for Tensile Test	Syarikat Ismail Bin Abu Bakar Sdn Bhd	Mar 2023
38.	Mechanical Testing for Macro Hardness	Usahawan Bersama Teknik Sdn Bhd	Mar 2023
39.	Mechanical Testing for Bend Test	Hans Matrix Sdn Bhd	Mar 2023
40.	Mechanical Testing for Macro Hardness, Chemical Analysis, Metallographic Examination and SEM Examination	Usahawan Bersama Teknik Sdn Bhd	Feb 2023



41.	Mechanical Testing for Macro Examination and Nick Break Test	GTS Construction Sdn Bhd	Dec – Jan 2023
42.	Mechanical Testing for Nick Break Test, Macro Examination and Radiographic Test	GTS Construction Sdn Bhd	Nov – Oct 2022
43.	Mechanical Testing for Tensile Test and Bend Test	MF Welding Enterprise	Oct – Nov 2022
44.	Mechanical Testing for Micro Hardness Test and Spark Spectroscopy	PCLDPE Sdn Bhd	Oct – Nov 2022
45.	Mechanical Testing for Charpy Impact Test, Tensile Test and Chemical Analysis	MSET	Oct – Nov 2022
46.	Mechanical Testing for Nick Break Test and Macro Examination	Golden Smartland Sdn Bhd	Oct 2022
47.	Mechanical Testing for Tensile Test	MF Welding Enterprise	Oct 2022
48.	Mechanical for Tensile Test	MF Welding Enterprise	Oct 2022
49.	Mechanical Testing for Bend Test and Tensile Test	MF Welding Enterprise	Sept – Oct 2022
50.	Mechanical Testing for Macro Examination and Nick Break Test	Censerv Solutions Sdn Bhd	Sept 2022
51.	Mechanical Testing for Tensile Test	ECMS Resources Sdn Bhd	July – Aug 2022
52.	Mechanical Testing for Tensile Test & Bend Test	ECMS Resources Sdn Bhd	July – Aug 2022
53.	Mechanical for Tensile Test, Hardness Test and Chemical Analysis.	T & S Timur Sdn Bhd	July – Aug 2022
54.	Mechanical Testing for Tensile, Nick Break Test & Bend Test.	ECMS Resources Sdn Bhd	June – July 2022
55.	Mechanical Testing for (1) WPS and (7) WQT for corrosion resistant overlay test coupons.	IVEC Resources (M) Sdn Bhd	June 2022
56.	Mechanical Testing for WPQT hot Tapping Test Piece.	Dominant Energy Sdn Bhd	Apr 2022
<b>FAILURE ANALYSIS</b>			
1.	Failure Analysis on Leaked Tube of Heat Exchanger EB-0201.2A	PETRONAS Chemicals MTBE Sdn Bhd	January 2024
2.	X-Ray Diffraction (XRD) Analysis on Three (3) Packet of Metal Powder (C701.2, RX-3 & EB110)	PETRONAS Chemicals MTBE Sdn Bhd	October – November 2023
3.	X-Ray Diffraction (XRD) Analysis on Two (2) Packet of Metal Powder (D105 & C102)	PETRONAS Chemicals MTBE Sdn Bhd	October 2023 – November 2023
4.	Failure Analysis of X-Ray Diffraction (XRD) Analysis on Three (3) bottle of Metal Powder from Reactor I, II, III	PETRONAS Chemicals MTBE Sdn Bhd	October 2023
5.	Failure Analysis on Chendor Wellhead CD-C09 Flowline Piping	Reliacraft Engineering Sdn bhd	August 2023
6.	Provision of Failure Analysis Examination on Drain Pipe P5156	Bumiwangsa TMS Sdn Bhd	August 2023
7.	Failure Analysis of X-Ray Diffraction (XRD) Analysis on Three (3) Packets of Metal Flake from Reactor R301 A/B	PETRONAS Chemicals MTBE Sdn Bhd	July – August 2023
8.	Failure Analysis of X – Ray Diffraction (XRD) Analyses on One (1) Packet Sludge of Internal Tube Equipment TD – 931	Petronas Gas Berhad	July – August 2023
9.	Failure Analysis of Leaked Elbow	Petronas Gas Berhad (GPK).	July – August 2023
10.	Failure Analysis of One (1) Fractured Superheater Tube Comb Boiler (B1003)	PETRONAS Chemicals MTBE Sdn Bhd	Mar 2023
11.	Failure Analysis of Debris Samples	PETRONAS Chemicals MTBE Sdn Bhd	Mar 2023

# APPENDICES

12.	Failure Analysis of Choke Spool RaA 09-u	EQ Petroleum Production Malaysia Ltd	Oct – Dec 2022
13.	Failure Analysis for Chemical Analysis of One (1) Packet Deposit Samples from Internal Compressor	PETRONAS Chemicals Ethylene Sdn Bhd	Oct – Nov 2022
14.	Failure Analysis of T - 503 Bottom Plate HVGO Storage Tank	Kemaman Bitumen Company Sdn Bhd	Sept – Oct 2022
15.	Failure Analysis of Bypass Spool 4V-2003	Petronas Gas Berhad (GPK).	Sept – Oct 2022
16.	Failure Analysis of Seal-Spool from Pressure Relief Valve	Velosi (M) Sdn Bhd	Aug – Dec 2022
17.	Failure Analysis of NC3 Glycol Circulations Pump	Velosi (M) Sdn Bhd	June – Dec 2022
18.	Failure Analysis of Crack Condensate Piping Line PL-1512-01005	Pengerang Refinery Company Sdn Bhd	Aug – Oct 2022
19.	Failure Analysis of Inner Screen from Regeneration Tower R - 0701	PETRONAS Chemicals MTBE Sdn Bhd	July – Aug 2022
20.	Terminology for Chemical Analysis of Steel Product of One (1) Packet of Deposit Sampe from Strainer	PETRONAS Chemicals MTBE Sdn Bhd	Aug – Sept 2022
21.	Failure Analysis of Pitted Tube from Charge Heater F-2001	PETRONAS Chemicals MTBE Sdn Bhd	May – June 2022
22.	Failure Analysis drain pipe/nozzle of feed gas cooler	Petronas Gas Berhad (GPK).	Oct – Nov 2022
23.	Energy Dispersive Spectroscopy for debris samples.	Petronas Gas Berhad (UG).	Oct 2022
24.	Failure Analysis of detached stainless steel plate of exhaust and thermocouple.	Petronas Gas Berhad (GPS).	Mar – Apr 2022
25.	Failure Analysis of Detached Stainless Steel Plate and Thermocouple Components from Exhaust System KT56-2201B at Circumferential Weld Joint	Petronas Gas Berhad	Mar 2022
26.	Failure Analysis of Two (2) Cracked Heat Exchanger Tubes from LD1-E250-2	PCLDPE Sdn Bhd	Feb 2022
27.	Failure Analysis of One (1) Fractured Superheater Comb of Boiler (B1003)	PETRONAS Chemicals MTBE Sdn Bhd	Dec 2021
28.	Failure Analysis of Pitted Tube #50 from Charge Heater F-2001	PETRONAS Chemicals MTBE Sdn Bhd	Oct 2021
29.	Organic Elemental C,H,N,S Analysis of Lignin Samples	Petronas Research Sdn Bhd	May 2021
30.	Failure of Immersion Test G31	Petronas Gas Berhad	Apr 2021
31.	Failure assessment on perforated and Bulged Boiler Tube	Petronas Gas Berhad	Feb 2021
32.	XRD and EDX Analysis on Debris and/or Deposit Samples	Petronas Gas Berhad	Aug 2020
33.	Failure Analysis of One (1) Broken Shaft of Pump P1102A	PETRONAS Chemicals MTBE Sdn Bhd	May 2020
34.	Failure Analysis of One (1) Failed Flange	Petronas Gas Berhad	Mar 2020
35.	Analysis of One (1) Leaked Stainless Steel Expansion Bellows (UNIT-0200)	PETRONAS Chemicals MTBE Sdn Bhd	Jan 2020
36.	Metallurgical Analysis of Main Lub Oil Pump Shaft Failure	Petronas Gas Berhad	Jan 2020
37.	Energy Dispersive X-Ray and X-Ray Diffraction Analyses of Deposit samples from Nozzle and Cap of Pressure Safety Valve 'E' at Utilities Kertih	Petronas Gas Berhad	Dec 2019
38.	Failure Analysis of Four (4) Bolts of A Spring Cylinder	Petronas Gas Berhad	Dec 2019
39.	Failure Analysis on Leaked Stainless Steel Spools	Petronas Gas Berhad	Sep 2019

40.	XRD and EDX Analysis on Debris and/or Foreign Material Samples	Petronas Gas Berhad	Aug 2019
41.	Chemical Testing on Two (2) Samples	PETRONAS Chemicals OGD Sdn Bhd	July 2019
42.	Metallurgical Analysis of Governor Valve Failure	Petronas Gas Berhad	Apr 2019
43.	Failure Analysis of Two (2) Broken Support Lugs and Two (2) Failed Tubes of Furnace F-1301	PETRONAS Chemicals OGD Sdn Bhd	Dec 2018
44.	Failure Analysis of Leaked Bottom and Top Stub Ends of E6945 Cooler	PETRONAS Chemicals OGD Sdn Bhd	Dec 2018
45.	Failure Analysis of One (1) Failed Section of a Grating Panel	PETRONAS Chemicals MTBE Sdn Bhd	Mar 2018
46.	Farm in Agreement for Provision to Carry Out Lab and In-Situ Failure Analysis for Metallurgy Including Material Compositional Analysis, Mechanical Test and Non-Destructive Test (In-Situ Replica Test)	PCEPE & PGB-GPU	Mar 2018 – May 2019
	i) Failure Analysis of One (1) Deposit Sample of A Probe from Starter Speed Motor in Compressor K6-501B		Apr 2019
	ii) Failure Analysis of One (1) Packet of Deposit Sample (HRSG Unit F)		Apr 2019
	iii) Failure Analysis on one perforated spool (1" pipe), one perforated at weld on 2" Flange, X-ray Spectrometry analysis on 10 deposit samples and material composition analysis on two (2) samples		Apr 2019
	iv) Analysis (EDX and XRD) of Two (2) Deposit Samples from Strainers E6-0407 and E6-0410		Mar 2019
	v) Failure Analysis of One (1) Leaked Economizer U-Bend Tube (TC2R2)		Feb 2019
	vi) Corrosion Assessment on A182F304 SCH 40S Spool		Nov 2018
	vii) Analysis (EDX and XRD) of Two (2) Deposit Samples from Strainers E6-0407 and E6-0410		Oct 2018
	viii) EDX and XRD Analysis of One (1) Packet of Deposit Sample from A Strainer		Sep 2018
	ix) EDX and XRD Analysis of Three (3) Packets of Deposit Samples from V6-0401, C6-0401 and P6-0405		July 2018
x) Analysis of Two (2) Packets of Deposits Samples from Strainer of Cold Box E6-0407 and Pump P5-0604		June 2018	
47.	Provision to Carry Out Lab and In-Situ Failure Analysis for Metallurgy Including Material Compositional Analysis, Mechanical Test and Non-Destructive Test (In-Situ Replica Test)	PETRONAS Chemicals Ethylene Sdn Bhd	May 2017 – May 2019
	i) Analysis of Two (2) Tubes		Feb 2019
	ii) Analysis of One (1) Cracked Weld Joint of Radiant Coil Tube of F-106 COIL C10		Feb 2019
	iii) EDX and XRD Analysis of Deposit Sample from Boiler A Sample Cooler SP2		Apr 2018
	iv) Energy Dispersive X-Ray Spectrometry (EDX) Analysis of Fourteen (14) Deposit Samples from Various Equipment of Boiler B		Mar 2018
	v) Failure Analysis of a Gate Valve		June 2017
	vi) Failure Analysis of a Leaked BFW Pipe, a Leaked PTLE Tube, a Perforated Surface Condenser Tube and a Cracked Reducer of Pressure Gauge Piping		June 2017
	vii) Failure Analysis of a Leaked Radiant Tube Coil D10		June 2017
48.	Failure Analysis of One (1) Leaked Economizer Tube (Tube # 6, Row #2) of A5-1203A Boiler and One (1) Failed Valve Tube Fitting	Petronas Gas Berhad	Jan 2017
49.	Failure Analysis of Three (3) Leaked Tubes with an Intact Tube as Reference, Analysis of Deposit Sample and Oil Sample from U-Tube Bundle Exchanger	Petronas Gas Berhad	Dec 2015
50.	EDX & XRD Analysis of Collected Samples from GP5 Cold Box	Petronas Gas Berhad	Mar 2015

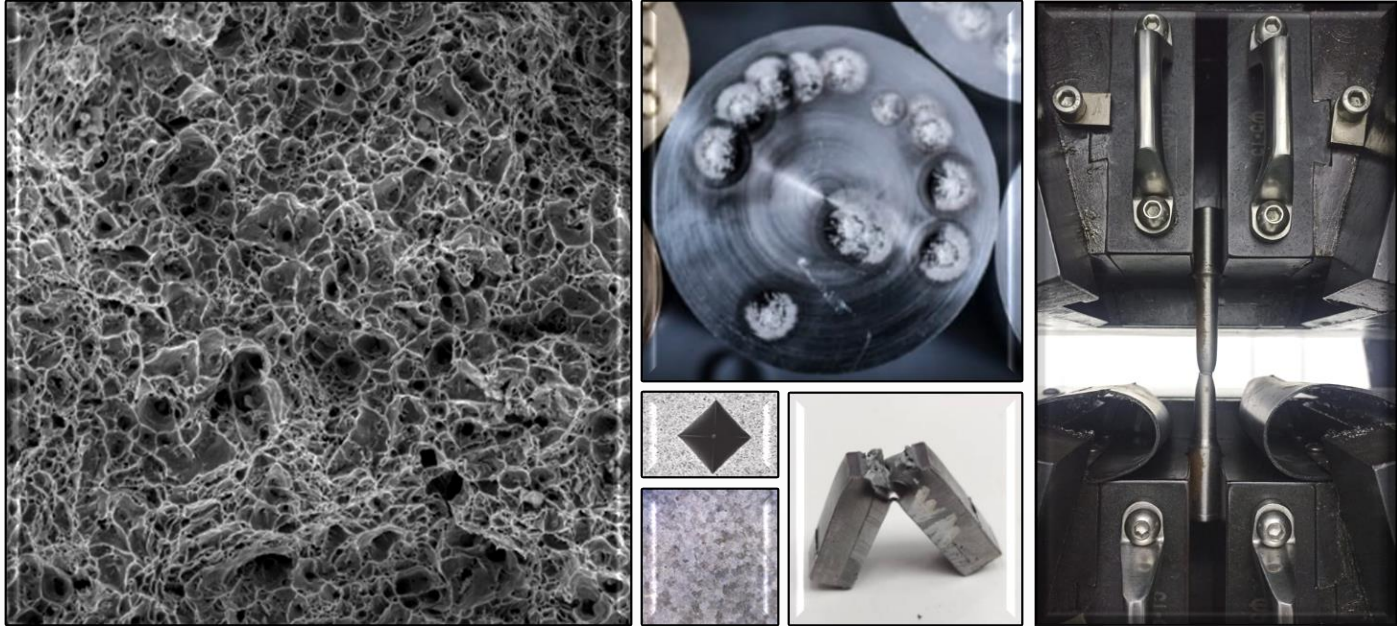
	Term Contract for Failure Analysis Including Laboratory, Mechanical and Corrosion Testing for Petronas LNG Complex for a Period of Two (2) Years with Extension Option of One (1) Year	Malaysia LNG Sdn Bhd	Aug 2015- Aug 2018
51.	i) Failure Analysis of One (1) Low Drain Point Piping (LDP) Sample		Aug 2017
	ii) Analysis of Two (2) Packets of Scale Deposit Samples from Titanium Tubes of a Heat Exchanger		May 2017
	iii) Analysis of one (1) roof tube debris sample and one (1) C-2201 reclaimers debris sample		Apr 2017
	iv) Analysis of three (3) tubes samples		Mar 2017
	v) Analysis of two (2) deposit samples		June 2016
	vi) Analysis of two (2) deposit samples from 5E-2103 and one (1) deposit sample from 5E-2415		Jan 2016
	vii) Failure analysis of a perforated tube with a reference (1E-1415D) and a perforated tube (1E-1103A)		Jan 2016
	viii) Failure analysis of a SCW 16" pipe with a reference pipe (MOV 7)		Jan 2016
	ix) Failure analysis of two (2) perforated tubes (TG-4040)		Dec 2015
	x) Assessment of three (3) samples secondary superheater tubes		Dec 2015
52.	Provision Of Metallurgical Analysis of Cracked Pipe	PETRONAS Chemicals Polyethylene Sdn Bhd	Nov 2014
53.	Analysis of Seven (7) Solid Deposit Samples	Petronas Gas Berhad	July 2014
54.	Failure analysis of Fractured Frame Rod Samples of Strainer unit TTO-037 (Feed Gas Cooler unit E5-0408)	Petronas Gas Berhad	June 2014
55.	Failure analysis of Leaked Weld Joints from 2 <sup>nd</sup> Evaporative System Pipeline	Petronas Gas Berhad	June 2014
56.	Failure analysis of Leaked Weld Joints from C6757 Overhead Line to E6710	Petronas Gas Berhad	June 2014
57.	Failure analysis of Fractured Tubes from Bottom Tubesheet of Heat Exchanger unit E6780	Petronas Gas Berhad	May 2014
58.	Failure analysis of Cracked Compensator Plate and Perforated Shell Samples from A5-0202 Acid Gas Incinerator	Petronas Gas Berhad	May 2014
59.	Failure analysis of Cracked Sockolet Weld Joint Sample from unit F2-781 of GPP A	Petronas Gas Berhad	May 2014
60.	Failure analysis of Gear Coupling	Petronas Gas Berhad	2014
61.	Failure analysis of two (2) tubes from Heat Exchangers T3-622 and T3-642	Petronas Gas Berhad	2013
62.	Analysis of four (4) Corrosion Product Samples from CUFK ASU 2	Petronas Gas Berhad	2013
63.	Analysis of deposit samples from Autodrain at Water Separator (NGU2) and MACA Intercooler (NGU1)	Petronas Gas Berhad	2013
64.	Chloride Content Analysis of a used Filter Element from Air Compressor C	Petronas Gas Berhad	2013
65.	Analysis of Deposit Samples from CUFK and CUFG	Petronas Gas Berhad	2013
66.	Failure analysis of Leaked Waterwall Tube Sample from HRSG Boiler D	Petronas Gas Berhad	2012
67.	Failure analysis of leaked tube sample from air cooler E2-251B142	Petronas Gas Berhad	2012
68.	Failure analysis of leaked heat exchanger tube sample	Petronas Gas Berhad	2012
69.	FTIR analysis of rubbery debris sample	Petronas Gas Berhad	2012
70.	Tensile testing of 6mm thick casing sample from HRSG Boiler C	Petronas Gas Berhad	2013

# APPENDICES

71.	Failure analysis of leaked 2" SS 5% acid pipe between 122D XV-2A13-VX (acid inlet) and 6" pipe	Petronas Gas Berhad	2012
72.	Failure analysis of three superheater tube samples from HRSG Boiler D	Petronas Gas Berhad	2012
73.	Failure analysis of perforated weld joint of superheater tube from HRSG Boiler D	Petronas Gas Berhad	2012
74.	Failure analysis of weld joint between M5 tube 7 and header of HRSG Boiler B	Petronas Gas Berhad	2012
75.	Failure analysis of Final Superheater Tube Sample from Heat Recovery Steam Generator D	Petronas Gas Berhad	2012
76.	Laboratory analysis of Evaporator Tube Sample (M7R3T22) #22 from Row 3 of HRSG-A, Module 7	Petronas Gas Berhad	2011



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