

A quarterly magazine PP18691/01/2018(034114)/ISSN2289-9030



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Institute of Materials, Malaysia



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To develop and enhance competency and skills for all categories and practitioners



To be the forum for industry and academia collaboration



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The membership renewal online form can be accessed through IMM website at this link https://www.iomm.org.my/membership-renewal/

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33RD ANNUAL GENERAL MEETING (AGM) IMM PRESIDENT SPEECH

The President expressed that in 2022, there are proud achievements and various challenges that need to be improved as well as dissatisfaction that has been taken up by the IMM Secretariat and the chairman of respective committees.



The Institute of Materials, Malaysia has the ultimate intention to combine expertise and professionalism within academia and industry practitioners. These two expert groups have gathered in ІММ.

The President expressed his opinion that we are now in the post-covid phase. However, there are constraints that are obstacles to IMM's activity. He also mentioned the world's economy and politics are now divided into 2 major blocks, the European-American and Russian-China union. We as members of Asian countries have a

neutral stand because we do not have the capability to lead the new block in terms of economics and politics.

The President mentioned IMM needs to contribute not only at the domestic level but also at the global level. Now, with the IMM's achievements from management and support from IMM members, the current IMM's financial situation has been able to generate a surplus.

The President also mentioned that IMM needs to intensify other programs so that the existence of IMM in the community can be activated more widely. In addition, with the current situation having more flexibility, the President hopes that more physical activities and interaction can be carried out as before.

Finally, the President hopes that the spirit and motivation between members will grow stronger and intact to adapt to the technological changes in the future in terms of academia and industry to remain relevant and able to compete with other professionals.







Institute of Materials, Malaysia

Environmental, Social and Governance (ESG) Implementation in Malaysia...The Future Outlook

Prepared by: Ir. Ts. Hisham Yahaya, GPM-rca

Of late, there were numerous talks and discussions on Environmental, Social and Governance (ESG) within the industry players on what is required of them to be recognized as ESG implementation company.

What is ESG?

To put everyone at the same level of understanding, ESG, in short stands for Environmental, Social and Governance; the key pillars companies used for the measurement of sustainability practices in doing their business. It also represents three (3) main topic areas that companies are expected to report their sustainability practices, with an objective to capture the non-financial risks and opportunities as part of their day-to-day activities.

ESG is currently being used, especially for Public Listed Companies (PLC) in Malaysia to evaluate their corporate performances with regard to their robustness in managing the company's governance and its ability to effectively manage its environmental and social impacts.

While Malaysia is still new and in its infancy stage when it comes to ESG compliance and integration, plans for better and more effective implementation are already underway. ESG forms one of the major themes in the 12th Malaysia Plan, which is on advancing sustainability, with Malaysia being committed to becoming a carbon-neutral nation by 2050.

What is ESG Reporting?

ESG reporting is the company's voluntary disclosure of data explaining its business impact and added value in these three areas: Environment, Social and Corporate Governance. As a company normally would produce financial reports, ESG or sustainability reports provide a summary of quantitative and qualitative disclosures supported by an analysis of performance across these ESG factors.

Examples of these factors:

Environment: Climate change and carbon emissions, air and water quality, biodiversity, deforestation, energy efficiency, waste management;

Social: Customer satisfaction, data protection and privacy, gender and diversity, employee engagement, community relations, human rights, labor standards;

Governance: Board composition, audit committee structure, antibribery and anti-corruption, executive compensation, lobbying, political contributions, whistle-blower program.

Many companies choose to integrate their ESG reporting in their annual reporting to demonstrate their sustainability practices as being part of how they conduct their business.



Figure 1: Utilizing clean energy and buying carbon credits are part of the 'environment' in ESG practices - AFPpic

How to Report ESG Information?

ESG reporting usually is part of the company's annual report in which the company presented its sustainability narrative that is aligned with its business strategy and financial performance.

Before the ESG in information reporting needs to be established, the company must first identify the range of stakeholders being impacted or will be impacting the company's business activities. Then, identify the material sustainability issues, inside and outside the business, relevant to the stakeholders.

After the company has identified the importance of these issues to the stakeholders and how to report progress to them, the company needs to formulate the ESG management framework, focusing in the areas such as;

- ESG issues to stakeholders
- Performance metrics and targets
- Internal and external reporting standards

Then, the company has to report ESG performance based on its ESG management framework and continually improve it by engaging with stakeholders and understanding emerging sustainability issues affecting their business.

Some of the examples in ESG reporting are to ascertain that the company's business activities comply with local and international sustainability guidelines, frameworks, and regulations.



For the Environment reporting information, depending on which sector the company belongs in, common areas for review include examining a company's waste management process and pollution prevention measures. A step-up with ESG in mind will now mean examining whether stakeholders in the supply chain adopt ESG sufficient practices to address climate change, for example utilizing clean energy and buying carbon credits.

On the Social reporting information, apart from providing basic protection to employees, compliance with the law such as the Occupation Safety and Health Act (OSHA) 1994 and Employees' Minimum Standards of Housing, Accommodations and Amenities Act 1990. The other areas that can be reported include the integration of diversity and inclusion policies,

adequate training to promote individual development, and any other effort by a company to strengthen its relationship with its employees and the community.

Looking at the Governance reporting information, objectivity in the company's internal polices in addition to their antimoney laundering and know-your-customer policies to guarantee good corporate governance and to keep track of their sustainability goals.

As awareness on ESG issues continues to grow, companies that failed to uphold ESG standards may risk legal or reputational consequences; thus, ESG will become the license to do business in the future.

Why the Need for EGG Compliance?

In today's business environment, the way how we operate our business or in carrying out our business practices to the acceptance of various stakeholders are the key measurements of sustainability in continuing our business. ESG engagement information to form the opinions of a company will maintain and enhance the reputation and acceptance of stakeholders such as employees, customers, financial institutions, investors, and the general public.

The future of business sustainability is about managing risks and opportunities for a stronger, more resilient, and more profitable business over the long term.

Managing Risk, a common pitfall for any businesses:

- Environmental risks such as air/gas emission and effluent water quality discharge, energy efficiency or waste management (domestic, industrial and scheduled wastes);
- Social risks such as customer satisfaction, data protection and privacy, community relations or labour well-being;
- Governance risk such as bribery and corruption, lobbying or political contributions.

Managing Opportunities, what can be gained from ESG compliance:

- Cost Management such as green operations are lean operations. ESG fosters cleaner and more efficient practices that drive down the company's operating cost and environmental footprint.
- New Revenue Opportunities such as from the low carbon transition may create demand for new sustainable goods and services. The transportation sector has seen rapid growth in zero-emission vehicles and the explosion of new mobility services.
- Associating with ESG Investor Expectations and Values in areas of attracting investments due to lowering of business risk and sustainable business model.

Who is Affected by ESG Compliance?

Since 2007, sustainability reporting has been made mandatory for all Public Listed Company (PLC) by Bursa Malaysia. Then, it was focusing on Corporate Social Responsibilities (CSR) activities. Later, in 2016, Bursa Malaysia requires all PLC to report Environmental, Social and Governance (ESG) activities through disclosure narrative statements of their management of material economic, environmental, and social risks and opportunities in the annual report.

In the near future, SME companies are expected to comply and carry out their ESG reporting to satisfy their business partners, who are the public listed companies. These PLCs must demonstrate compliance and reporting of ESG activities throughout their supply chain; their suppliers and service providers as well.

How Can ESG Practices Be Assessed?

Currently in Malaysia, there is no assessment framework for an effective ESG reporting validation. What is being reported is not being assessed to a specific standard. In supporting the business and organization to achieve this goal, GPM Global, USA has released a P5 Standard; an internationally recognized standard for sustainable project management. This P5 Standard is aligned with leading ESG disclosure frameworks and sustainability reporting standards, making the ESG reporting process can be effectively validated, and a common shared value in tackling global issues being recognized worldwide. By placing sustainability practices as an integral part of project management, sustainable development will be the essence of project implementation.

In this P5 Standard, the company's or organization's project implementation is evaluated using the P5 Impact Analysis (P5IA). The P5IA provides good decision-making by identifying and describing the project's potential impacts on sustainability to justify changes to the project in meeting the sustainability reporting standards and ESG reporting process.

The P5 Impact Analysis undertakes the following meticulous steps:

- Review the category, sub-category, and element descriptions in the P5 Standard for Sustainability in Project Management (as stated in Figure 2);
- Identify internal and external events which may occur during the project or during the useful life of the project's product for each of the elements;
- Describe the cause(s) of the event and the potential sustainability impacts of each;
- Rate the impacts based on the magnitude of their effect on sustainability;
- Identify possible responses to each event to minimize the impact of negative events and maximize the impact of positive events;
- Re-rate the impacts based on the assumption that the response is implemented.

The planet (environmental) category of sustainability concerns the impacts that a project's activities and results may have on living and non-living natural systems. These systems include land, air, and water as well as the flora, fauna, and people that live in them. The focus of the planet category is on preserving, restoring, and improving these natural systems.

The planet (environmental) category contains the following subcategories:

- Transport
- Energy
- Land, Air, and Water
- Consumption

The people (social) category of sustainability concerns the impacts that a project's activities and results may have on Figure 2: P5 Impact Analysis (P5IA) Framework individuals, society, and communities. The focus of the people category is on operating ethically and maintaining beneficial relationships with employees, customers, suppliers, supply chains, and the wider community in general.

The people category as shown in Figure 4 contains the following subcategories:

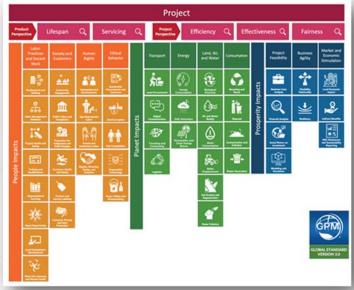
- Labour practices and decent work
- Society and customers
- **Human rights**
- Ethical behaviour

Utilizing P5 in ESG Disclosures and Sustainability Reporting

The P5 Standard addresses sustainability performance and impacts from a project. It provides useful inputs to support the organization's ESG disclosures as well as its GRI, UNGC (UN Global Compact), and other sustainability reports.

Most guidance on reporting requires that the organization determine material topics starting with identifying actual and potential impacts as a first step. In practice, a P5 Impact Analysis accomplishes this for the project.

The second step is to disclose material topics by listing them out and explaining how they are managed. By including the P5 Impact Analysis (P5IA) outcomes in a Sustainability Management Plan (SMP), the project will have identified individual impacts, scored their severity, identified causes and outcomes, and documented recommendations to mitigate.



Planet Impacts

	Planet Impacts							
İ	Transport		Energy		Land, Air, and W	/ater	Consumption	
	Local Procurement	វ៉ាង	Energy Consumption	()	Biological Diversity	€	Recycling and Reuse	O
	Digital Communication	#	GHG Emissions	<u>ਵ</u> ੱ	Air and Water Quality	Óш	Disposal	lìt
	Traveling and Commuting	*	Renewables and Clean Energy Return	mi.	Water Consumption	۵	Contamination and Pollution	242
	Logistics	Ġ			Water Displacement	€~	Waste Generation	4
					Soil Erosion and Regeneration	k		
•					Noise Pollution	ď		

Figure 3: P5IA -Planet (or Environmental) Impact

People Impacts

People Impacts							
Labor Practice and Decent We		Society and Custon	Human Right	s	Ethical Behavior		
Employment and Staffing	∎\$	Community Engagement	ån	Harassment and Discrimination	**	Sustainable Procurement and Contracts	
Labor/Management Relations	#	Public Policy/ Compliance	血	Age-Appropriate Labor	Ťe.	Anti-Corruption	-61
Project Health and Safety	ĸ	Protection for Indigenous and Tribal Peoples	222	Forced/Involuntary Labor	RA	Fair Competition	ŤŤ
Training and Qualification		Customer Health and Safety	签	Dignity, Diversity, Equity, and Inclusion	*	Responsible Technology	9
Organizational Learning	斑	Product and Service Labeling	•			Green Claims and Greenwashing	91
Equal Opportunity	hi	Customer Privacy and Data Protection	49				
Local Competence Development	₽.						
Work-Life Harmony and Mental Health	够						

Figure 4: P5IA -People (or Social) Impact

References

- www.thesundaily.my/business/7-11-2022
- The GPM P5 Standard for Sustainability in Project Management, version-3.0 by GPM Global

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Compiled by: IMM Secretariat, The information was updated as of 20th April 2023

STUDENT EDITORIAL

Using Rice Husk to Produce Silica Water Filters: A Green Technology Approach

Student Editorial Board from Universiti Tun Hussein Onn Malaysia

The abundance of rice husks today is the reason why many researchers want to study the benefits and appropriate ways to increase the use of rice husks as well as reduce the waste produced by paddy agriculture. Many advantages can be produced by rice husk which is into fuel and fertilizer. Rice husk is not popular with farmers because it is so cheap to sell. Therefore, the waste produced by paddy crops is a contributor to abundance and causes this waste not to be used. Rice husk recycling aims to conserve limited resources by reusing materials or finding sustainable substitutes to study the fundamental of water filters.

Rice is an oat grain that is consumed by a large portion of the world's population, particularly in Asia. Rice husk, on the other hand, is the outer layer of rice that forms throughout the rice production process. It is widely produced and readily available around the world, and it is classified as agro-waste. Abundant paddy husks are dumped in open areas. This is very harmful to the soil and pollutes the environment [1]. Various measures have been taken throughout the year to incorporate rice husk into various materials with the goal of producing a new class of compounds with enhanced qualities, ensuring that it remains in high demand.

Rice husk is an excellent insulator that makes it difficult to digest and hard for parasites to breed. It also has an infinite number of floristic fibers, proteins, and some useful assemblies like carboxyl and amidogens Various business applications will lead to inspections of rice husk usage in rice-producing countries. Agriculture wants to turn rice husk from profitable products into to maximize consumption. Rice husk is a low-cost raw material that is tough to come by. Several regulations have been passed prohibiting the use of rice husk in construction materials, pillows, and fertilizers. Figure 1 shows the cycle of sustainability of this research study.

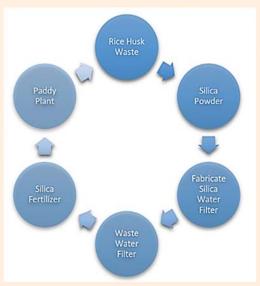


Figure 1: the cycle of sustainability of this research study [3]

Most of the silica in rice husks comes in the form of active silica. Amorphous silica, crystalline silica, and silica zeolite are the three types of silica. When rice husk is burned until it turns to ash, the phases of silica change to amorphous, which means it is not totally transformed into silica. Silica is also known as SiO2 which is another name for a chemical compound composed of silicon and oxygen with the chemical formula SiO₂ or silicon oxide. Table 1 shows the composition of rice husk ash. According to Sharifnasab. H and Alamooti M.Y. [4], the silica content of the rice husk ash can be as high as 90-98%.

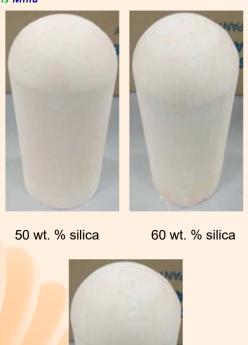
This rice husk can be used as a fertilizer in agriculture or as an additive for cement and concrete fabrication. Due to its high silicon content, rice husk has become a source for the preparation of elementary silicon and several silicon compounds, especially silica, silicon carbide and silicon nitride [5].

Table 1: The composition of rice husk ash [6]

Compound/Element	Weight percent (wt. %)
Silica (SiO ₂)	91.59%
Carbon (C)	4.8%
Calcium oxide (CaO)	1.58%
Magnesium oxide (MgO)	0.53%
Potassium oxide (K ₂ O)	0.39%
Haematite (FE ₂ O ₃)	0.21%
Sodium (Na)	trace
Titanium oxide (TiO ₂)	0.20%

Considering the size of the wastewater treatment plants, removal parameters such as production, maintenance cost and the efficiency of treatment, could be improved by introducing a thin mesoporous silica filter. In meantime, as the mesoporous based filters have a refreshment capability, their production price will be significantly lower than for a conventional filter. This shows that the process to produce silica from the rice husk and the suitable silica was the amorphous types of silica to produce the water filter.

In this research, amorphous silica will be produced for water filter application. From previous research, there are a lot of proposed designs to produce silica water filters. But the best among the best of the design for producing the silica water filter is by making it a cylindrical shape design that will be used in this research study. Figure 2 shows the sample of water filters that have been made in this study.



70 wt. % silica

Figure 2: Samples of water filter

Ceramic water filtration is the process of filtering [5] water from pollutants or bacteria using a porous ceramic medium [7]. From generation to generation, water filters have evolved out of a desire to improve bad tastes, then [6] to effectively remove that may cause diseases, and finally to eliminate items that affect appearance. The purpose of this study is to fabricate a silica filter utilizing the Cold Isostatic Press (CIP) method and Compaction method, as well as to investigate the physical and [7] mechanical characteristics of silica before and after constructing the water filter.

Following the study, the parameters of the silica [8] filter will be optimized, and the waste product will be crushed and utilized as fertilizer for paddy planting [8]. The use of rice husk in the fabrication of water filters is one of the green technologies because the effect of manufacturing products reduces the impact on the environment.

Conclusion

The research study focuses on the production of amorphous silica from rice husk waste and its application in the fabrication of water filters. Rice husk is an agrowaste that is widely produced and readily available around the world. Its recycling aims to conserve limited resources by reusing materials or finding sustainable substitutes. The study highlights the physical and mechanical characteristics of silica before and after constructing the water filter and the optimization of parameters for the silica filter. The waste product will be crushed and utilized as fertilizer for paddy planting. The use of rice husk in the fabrication of water filters is a green technology that reduces the impact on the

environment. Overall, the study provides a sustainable approach to waste management and the production of a useful product that can benefit agriculture and the environment.

Based on the information provided, the conclusion that can be made is that rice husk, which is an agro-waste product, has the potential to be a valuable resource that can be utilized in various ways, such as producing fuel, fertilizer, and silica for water filters. The study aims to fabricate a silica filter using rice husk ash through the Cold Isostatic Press (CIP) method and Compaction method and investigate its physical and mechanical characteristics. The waste product generated from the process can also be used as fertilizer for paddy planting. This approach demonstrates the potential of using green technologies that have a reduced impact on the environment. Overall, this research has the potential to provide sustainable solutions to both waste management and water treatment.

References

- [1] Tiwari. S and Pradhan M.K. 2017. Effect of Rice Husk Ash on Properties of Aluminum Alloys: A Review. Mater. Today Proc. 4 486–95
- [2] Md Yusof A.T., Ab Fatah N.A., Mohamad D. and Aziz N. 2020. Adsorption Capability of Activated Carbon Prepared from Silica Extracted Rice Husk by Chemical. Activation, 11–8.
- [3] Pode R. 2016. Potential Applications of Rice Husk Ash Waste from Rice Husk Biomass Power Plant. Renew. Sustain. Energy Rev. 53 1468–85
- Renew. Sustain. Energy Rev. 53 1468–85
 [4] Sharifnasab H. and Alamooti M. Y. 2017.
 Preparation of Silica Powder from Rice Husk.
 Agric. Eng. Int. CIGR J. 19 158–61
 - Della V.P., Kühn I. and Hotza D. 2002. Rice Husk Ash as An Alternate Source for Active Silica Production. Mater. Lett. 57 818–21
 - Alanemea K.K. and Adewalea T.M. 2013. Influence of Rice Husk Ash-Silicon Carbide Weight Ratios on The Mechanical Behaviour of Al-Mg-Si Alloy Matrix Hybrid. Composites Tribol. Ind. 35 163 –72
 - 7] Shukur M.M., Aswad M.A. and Bader S.M. 2018. Effects of Sawdust and Rice husk Additives on Physical Properties of Ceramic Filter. J. Univ. Babylon 26 221–8
- [8] Rao G.B., Pi P.Y. and Syriac E.K. 2015. Silicon Nutrition in Rice-A Review. Agric. Rev. 26 223–8



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The 33rd IMM Annual General Meeting

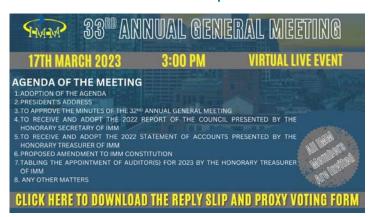


Prepared by: Syazana Shahabudin, IMM Secretariat

Edited by: Wong Wing Kiong, General Manager of IMM Secretariat

Reviewed by: Assoc. Prof. Ts. Dr. Tay Chia Chay, Honorary Secretary of IMM Secretariat

Date: 17th March 2023 Venue: Virtual Live Event Time: 3.00 pm



The 33rd IMM Annual General Meeting was commenced by the IMM President, Dato' Dr. Ir. Ts. Haji Mohd Abdul Karim Abdullah. The IMM President thanked all the members who were participating in IMM and expressed his gratitude towards the Management Committee, Council Members, the Chairpersons and all the members of Committees and all IMM members for their support and contribution to IMM.

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1. Adoption of the agenda
2. President's address
3. To approve the minutes of the 32nd Annual General Meeting
4. To receive and adopt the 2022 report of the council presented by the Honorary Secretary of IMM
5. To receive and adopt the 2022 statement of accounts presented by the Honorary Treasurer of IMM
6. Proposed amendment to IMM Constitution
7. Tabling the appointment of auditor(s) for 2023 by the Honorary Treasurer of IMM
8. Any other matters

Figure 1: Opening speech by Dato' Dr. Ir. Ts. Haji Mohd Abdul Karim Abdullah (IMM President)

The meeting was then continued with the Honorary Secretary's presentation by Assoc. Prof. Ts. Dr. Tay Chia Chay for the 2022 Annual Report of IMM. All activities conducted by various IMM Committees were highlighted and these included:

- the Surveillance Audit of MS ISO/IEC 17024
- the activities of the technical and working committees
- the collaboration with university and training bodies the summary of training, examination, certification, and membership admission of 2022

The Honorary Secretary's presentation was followed by the statement of account tabled by the Honorary Treasurer of IMM, Ts. Dr. Mohamed Ackiel Mohamed which was then accepted by all IMM AGM attendees.

The Deputy President, Ts. Dr. Chew Khoon Hee then tabled the proposed amendment to the IMM constitution and amongst these were the inconsistencies in some clauses and editorial corrections of the existing IMM Constitutions, the addition of element of virtual meetings, hybrid meeting and online banking. The proposed changes were unanimously accepted by the IMM members.

The reinstatement of internal auditor for 2023 was proposed by Honorary Treasurer and accepted by all IMM AGM attendees before the AGM was adjourned.

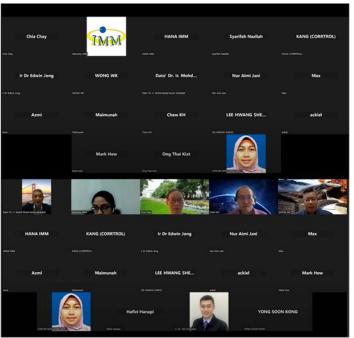


Figure 2: Members of IMM

One-Day IMM Facility Integrity & Maintenance Conference 2023



Prepared by: Nur Athirah Mohd Azly, Materials Technology Education Sdn. Bhd (MTE) Reviewed by: Karen Cheng, Materials Technology Education Sdn. Bhd (MTE)

Date : 16th March 2023 Venue: GoldenBay Hotel, Bintulu Sarawak

On 16th March 2023, the Bintulu Committee of the Institute of Materials, Malaysia (IMM) hosted the One-Day IMM Facility Integrity and Maintenance Conference 2023. There were 130 attendees, and 12 table-top exhibition stands at the conference. There was a total of 12 presentations from various fields and companies shared their industry experiences and expertise. This conference allows the delegates to learn new things and gain meaningful insights, especially from the presentations while engaging with others by sharing their industry expertise and knowledge.



Figure 1: Group photo session with the delegates.



Figure 2: Delegates from various companies gathered in the Marina Ballroom of the GoldenBay Hotel in Bintulu.

The event began with a speech by Dr. Ts. Muhammed Ackiel Muhammed, Honorary Treasurer of IMM. Following that, Mr. Aid Farhan Maarof of GTS Petronas presented a first paper title 'Revolutionized PRBI for Future Asset Integrity Management'.



Figure 3: The opening speech was delivered by Dr. Ts. Muhammed Ackiel Muhammed.



Figure 4: A presentation was delivered by GTS, Petronas.



Figure 5: A presentation was delivered by Ankaa Consulting.



Figure 6: A presentation was delivered by Petronas LNG Sdn. Bhd .



Figure 7: A Q&A session was held during the event.







Figure 8: The delegates visited the exhibitors' booth.

During the tea break, the delegates had the opportunity to visit the exhibition where the latest products and services were showcased by a few companies participating in this conference.

At the end of the One-Day IMM Facility Integrity & Maintenance Conference 2023, Mr. Raymond Phen, the Chairman of IMM Bintulu Chapter presented certificates to all presenters who participated in the program. The event was empowering and highly successful. IMM would like to express sincere appreciation to all sponsors, presenters, delegates and exhibitors for their support.



Figure 9: Mr. Raymond Phen, the Chairman of IMM Bintulu Chapter presented certificates to all presenters who participated in the program at the end of the conference.



Post-Flood Mission UTHM-IMM Student Chapter



Reported by: Mr. Zolhafizi Jaidi, Universiti Tun Hussein Onn Malaysia, UTHM-IMM Student Chapter

Edited by: Assoc. Prof. Ts. Dr. Hamimah Abd.Rahman, Universiti Tun Hussein Onn Malaysia, UTHM-IMM Student Chapter Advisor

Date : 15th March 2023 Venue: Sri Gading, Batu Pahat

The Universiti Tun Hussein Onn Malaysia – Institute of Materials, Malaysia (UTHM-IMM) Student Chapter has carried out a post-flood mission to Sri Gading, Johor on 15th March 2023 as part of our corporate social responsibility (CSR). Batu Pahat is one of the floods affected areas in the state of Johor and indeed needs volunteers to reduce the burden on the residents in the cleaning process of their houses. Following the flood disaster that hit the state of Johor, the UTHM-IMM Student Chapter took the initiative to lend energy to help the flood victims when they came back from relief centres.

A total of 8 volunteers, consisting of 6 students and accompanied by 2 lecturers became the strength of the team in carrying out the cleaning. On 15th March 2023, the cleaning session was started at two UTHM lecturers' houses located at Jalan Sri Mutiara, Sri Gading, Johor. The cooperation from the volunteers has eased the burden of the victims to make the clean-up process faster. The cooperation among the volunteers is also a strength for the UTHM-IMM Student Chapter to continue contribute and serve the community in need. To conclude, UTHM-IMM Student Chapter not only focuses on academics and research but also involves in CSR activities



Figure 1: Part of community service activities



Figure 2: Volunteers clean the drain area



Figure 3: UTHM-IMM Student Chapter volunteers



IKM PROFESSIONAL CENTRE TRAINING CALENDAR 2023



Date	Training Topics	Trainer
7 - 8 Feb 2023 (Tuesday - Wednesday)	Calibration of Test and Measuring Instruments and Metrological Traceability (ONLINE TRAINING)	MR CHEN SOO FATT
15 - 16 Feb 2023 (Wednesday - Thursday)	Method Validation & Quantification of Measurement Uncertainty in Microbiological Testing (In-Person Training)	DR NEW CHIA YEUNG
6 Mar 2023 (Monday)	Decision Rules and Conformity Assessment Meeting The MS ISO/IEC 17025:2017 Requirements (ONLINE TRAINING)	CHM CHANG HON FONG
7 Mar 2023 (Tuesday)	Root Cause Analysis and Corrective Actions on Unsatisfactory PT Performance (In-Person Training)	ChM LI HUI LING
8 - 9 Mar 2023 (Wednesday - Thursday)	Measurement Uncertainty in Chemical Analysis (In-Person Training)	CHM CHANG HON FONG
11 - 12 Mar 2023 (Saturday - Sunday)	Basic Laboratory Skills & Techniques (ONLINE TRAINING)	PROF CHM DR SHARON TEH GEOK BEE
6 - 7 Apr 2023 (Thursday - Friday)	Management of Chemicals & Chemical/Lab Wastes (ONLINE TRAINING)	ChM DR MALARVILI RAMALINGAM
8 - 9 May 2023 (Monday - Tuesday)	Chemical Safety and Security (In-Person Training)	DATIN CHM DR ZURIATI ZAKARIA
17 - 18 May 2023 (Wednesday - Thursday)	Basic Nuclear Magnetic Resonance Spectroscopy (In-Person Training)	ASSOC PROF CHM DR JALIFAH LATIP
30 - 31 May 2023 (Tuesday - Wednesday)	Advanced Nuclear Magnetic Resonance Spectroscopy: 2 Dimensional 1H and 13C NMR (In-Person Training)	ChM DR CHE PUTEH OSMAN
7 - 8 June 2023 (Wednesday - Thursday)	Interpretation Of Infra Red Spectra (In-Person Training)	ASSOC PROF CHM DR INTAN SAFINAR ISMAIL
14 - 15 June 2023 (Wednesday - Thursday)	General QA/QC Procedures for Testing Laboratories (In-Person Training)	ChM PUA HIANG
21 - 22 June 2023 (Wednesday - Thursday)	MS ISO/IEC 17025:2017 Management Systems Internal Auditing (In-Person Training)	ChM PUA HIANG

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Practical Course: *In-situ* Metallography Using the Replication Method





Reported by: Mohd Faizal Tukimon, Universiti Tun Hussein Onn Malaysia, UTHM-IMM Student Chapter Secretary

Edited by: Assoc. Prof. Ts. Dr. Hamimah Abd.Rahman, Universiti Tun Hussein Onn Malaysia, UTHM-IMM Student Chapter Advisor

Date: 26th - 27th February 2023 Venue: Metallurgy Laboratory FKMP, UTHM

The Replica method, also known as the replication method, is used during maintenance activities to examine faults for metallic equipment through microstructure analysis. This approach is commonly used for welding evaluation, material verification, failure analysis, and so on. Therefore, a practical course, Insitu metallography has been held as part of a joint programme organized by the Functional Composite Structure (FCS) Focus Group of Universiti Tun Hussein Onn Malaysia (UTHM) and the UTHM-Institute of Materials, Malaysia (IMM) Student Chapter to develop an understanding of this method. A two-day practical course was successfully held on $26^{th} - 27^{th}$ February 2023 for final-year students who were interested in the replication method. Ir. Abdul Rohim Md Said, a metallurgical specialist from TNB REMACO, has been invited as a speaker during the practical session.



Figure 3: Practical session from the guest speaker with UTHM final year students.



Figure 1: A Presentation was given by the guest speaker on the introduction to REPLICA Method.

The purpose of the Replica method is to assess the condition of the material after prolonged operation. For example, the degree of material degradation such as phase transformation, coarsening of precipitates, grain coarsening, creep void, and microcrack can be characterized using this method. From this practical course, Ir. Abdul Rohim presented information on the actual conditions for material characterization that need to be carried out at the industry level, particularly in REMACO's related service industries. Since this method might endanger the researcher during the collection of samples, safety precaution steps were highlighted during the practical course. In summary, this program had provided an opportunity for researchers to obtain more information about replication testing equipment as well as career opportunities to boost UTHM graduate's employability.



Figure 2: A group photo of the guest speaker with organizer and final year students from UTHM.







This program is a collaboration between the Functional Composite Structure (FCS) Focus Group, UTHM and UTHM-IMM Student Chapter with TNB REMACO.

National Human Capital Conference & Exhibition (NHCCE) 2022



Reported by: Mohamad Ikmal Hisham bin Ashari, Materials Technology Education Sdn. Bhd (MTE) Edited by: Karen Cheng, Materials Technology Education Sdn. Bhd (MTE)

Date : 29th - 30th November 2022 Venue: Malaysia International Trade & Exhibition Centre (MITEC) Kuala Lumpur

Materials Technology Education Sdn Bhd (MTE), an IMM Associate Training Partner, and the Institute of Materials, Malaysia (IMM) participated in the National Human Capital Conference & Exhibition (NHCCE) 2022 organized Human which was by Resource 29th-30th Development Corporation (HRDC) on November 2023. As an exhibitor, MTE and IMM aim to create awareness to public visitors about the training courses which mainly focus on IMM certification programs such as related to Coating, Corrosion, Welding, Insulation, Coating Fingerprint, Vibration and many more.

At the exhibition booth, the visitors were given the reading materials to help them understand on IMM's organization, training and certification programs, membership subscription and networking opportunity through IMM's available conferences. MTE also opened walk-in registration for training and membership application for interested visitors. Visitors were also given the Materials Mind which contained information about IMM activities over the years.

During the two-day exhibition, MTE and IMM had the opportunity to connect with employers' HR and training focal persons, who play a vital role in gathering training information and matching it to their Training Need Analysis (TNA).



Figure 1: MTE's exhibition booth and promotes IMM conferences to visitors.



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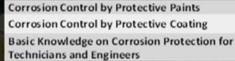
IMM AUTHORISED TRAINING BODY

PROGRAM: COATINGS





NON-CERTIFICATION COURSES

























IMM Programs in **KOTA KINABALU**

Follow us

- G Sabah Skills & Technology Centre
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COATINGS



- Certified Assistant Blaster & Painter B1/B2
- Certified Protective Coating Technician (Blaster and/or Painter)L1L2
- Certified Coatings Inspector Level 1
- Certified Coatings Inspector Level 2

For enquiries or registration, please contact;

Devyne

(devyne@sstc.org.my) ext 105 Sharlene

(sharlene.sstc@gmail.com) ext

General line 088-496613/14 TOLL FREE

1800-22-SSTC (7782)

MECHANICAL JOINT INTEGRITY

- · Certified Mechanical Joint Integrity for Small-bore, Piping, Tubing & Valves.
- Certified Mechanical Joint Integrity for Flange Bolted Conections

Our Address

Sabah Skills & Technology Centre, No.8, Jalan 1c, Industrial Zone 1 (IZ1) KKIP Selatan, Kota Kinabalu Industrial Park KKIP, 88460 Kota Kinabalu Sabah

Doc No: IMM-CF-316 | Rev No: 2 | Date: 13 Aug 2022



CONTINUING PROFESSIONAL DEVELOPMENT REPORT

MEMBE	RSHIP NO:		CERTIFICATION NO:					
M CERTIF	CONTI	NUING PROFES	SIONAL DEVE	LOPMENT (CPI	O) LOG			
Date or Period	Developme	ent Activity escription	Role	No. of Activity Hours	Weightage	No. of CPD Points		
					TOTAL			
Developm	ssional ent Activity ode	Professio	nal Developme	nt Activity Sco		eightage Factor		
	A	Attend		4				
	В	Trainer/Facili	enter	3				
			Attend Online or minar/Conference		2			
	D	Main Author (max 30 hours/ye	Paper Author 30 hours/year)Co-author (max 10 hours/year)				
	E		ine or Physical (1		
	F	Fieldwork (n	nax claimable 48	30 hours per yea	ar) **	0.1		
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Year					Total CF	D Points		
CPD Points					10.0.0	5 1 011110		
reby declare	that the inform	nation and partic	ulars provided b	y me in this form	n is true and co	orrect.		

(Signature)

(Date)

NEW IMM PROFESSIONAL MEMBERS

ASSOC. PROF. TS. DR. TSHAI KIM YEOW

Age: 47 years old

Organization: University Of Nottingham Malaysia

Position: Associate Professor Working experience(s):

- 7 years as Associate Professor at University of Nottingham Malaysia
- 7 years as Assistant Professor at University of Nottingham Malaysia
- 1 year as Assistant Professor at University Tunku Abdul Rahman
- 2 years as Project Manager (Global Packaging Platform) at DANONE, Evian-les-Bains,
 France
- 1 year as Post-Doctoral Research Assistant at Queen's University Belfast, UK Qualification(s):
- PhD in Engineering [Queen's University Belfast, UK]

Professional membership(s):

- Member (MBOT)
- Member (FHEA)
- Member (IMechE)

Involvement in IMM committees:

• Polymer Committee (2020-2024)

MR. OON KOK WOI (DENNIS)

Age: 38 years old

Organization: Petronas Floating LNG 1 (L) Ltd

Position: Senior Inspection Executive

Working experience(s):

- 3 years 3 months as Senior Inspection Engineer at Sea Hibiscus North Sabah PSC
- 4 months as Static Equipment Inspector at Petronas MLNG, Sarawak
- 2 years 4 months as Inspection Engineer at IDC Plant Technology Sdn Bhd & IDC Training House Sdn Bhd
- · 4 months as Senior Engineer, Project at OAG Group, Selangor
- 4 years 7 months as Project & QAQC Engineer at IEV Group SEA

Qualification(s):

•Master of Science in Petroleum Engineering (Distinction) [London South Bank University]

Professional membership(s): NIL Involvement in IMM committees: NIL









IMM TRAINING AND CERTIFICATION PROGRAM OVERVIEW

The Institute of Materials, Malaysia (IMM) offers engineering & technical professionals and practitioners a range of Certification Schemes and technical training courses to meet the requirements of the oil & gas, refining, petrochemical, transport, construction and other industries. Our programs have been developed together with the industry, academia and relevant stakeholders to ensure that the technical training and certification provided meet the relevant industry standards and requirements.

PROGRAM: COATING

IMM Certification Schemes and Courses	Technical Training Courses (Non-certification)
 Certified Protective Coating Technician (Blaster and/or Painter) Level 1 and Level 2 Certified IMM-B1/B2 Assistant Blaster & Painter Certified Coating Inspector Level 1 Certified Coating Inspector Level 2 Certified Blasting and Painting Supervisor Certified Thermal Spray Coating Applicator Certified Coating Quality Control Technician 	 Refresher Course of Certified Protective Coating Technician (Blaster and/or Painter) Level 1 and Level 2 Refresher Course of Certified Coating Inspector Basic Knowledge on Corrosion Protection for Technicians and Engineers Corrosion Control by Protective Coating Basic Corrosion & Coating Course

PROGRAM: COATING FINGERPRINTING

IMM Certification Schemes and Courses	Technical Training Courses (Non-certification)
 Certified Coating Fingerprint Quality Controller Level 1 Certified Coating Fingerprint Quality Controller Level 2 Certified Coating Fingerprint Trainer 	Coating Fingerprint Foundation Course Refresher Course of Certified Coating Fingerprint Quality Controller Level 1/Level 2

PROGRAM: CORROSION

IMM Certification Schemes and Courses	Technical Training Courses (Non-certification)
 Certified Corrosion Monitoring Practitioner Level 1 Certified Corrosion Monitoring Practitioner Level 2 Certified Corrosion Monitoring Practitioner Level 3 Certified Cathodic Protection Practitioner Level 1 Certified Cathodic Protection Practitioner Level 2 Certified Cathodic Protection Practitioner Level 3 Certified Cathodic Protection Engineer 	Corrosion Control by Cathodic Protection

PROGRAM: VIBRATION

IMM Certification Schemes and Courses	Technical Training Courses (Non-certification)
 Certified Vibration Practitioner Category 1 Certified Vibration Practitioner Category 2 Certified Vibration Specialist Category 3 Certified Vibration Specialist Category 4 	±



PROGRAM: MECHANICAL JOINT INTEGRITY (MJI)

IMM Certification Schemes and Courses		Technical Training Courses (Non-certification)		
•	Certified Technician in Mechanical Joint Integrity (MJI) for Flange Bolted Connection Certified Technician in Mechanical Joint Integrity (MJI) for Small Bore – Piping, Tubing, Valves	Mechanical Joint Integrity Pressure Safety Valve Small Bore Tubing		

PROGRAM: THERMAL INSULATION

IMM Certification Schemes and Courses	Technical Training Courses (Non-certification)
Certified Thermal Insulation Installer	Introduction to Thermal Insulation

PROGRAM: WELDING

IMM Certification Schemes and Courses	Technical Training Courses (Non-certification)		
Certified Welding Inspector IMM-JWES Certified Associate Welding Engineer IMM-JWES Certified Welding Engineer IMM-JWES Certified Senior Welding Engineer	Repair Welding of Pressure Equipment in Refineries & Chemical Plants Welding & Joining Technology for Non-Welding Personnel Steel Technology for Non-Technical Personnel		

MISCELLANEOUS MATERIALS SCIENCE AND TECHNOLOGY (NON-CERTIFICATION) COURSES

Technical Training Courses	Technical Training Courses
 Materials Selection & Corrosion Metallurgical Failure Investigation Basic Course on Operation of Mobile Air Compressor Competent Mobile Industrial Compressor Operator Competent Mobile Industrial Equipment Inspector Practical Approach to Inspection and Maintenance of Steam Turbine 	Practical Approach to Precision Alignment Methods Practical Approach to Precision Balancing Methods Reciprocating Compressors: Operations, Maintenance, Inspection and Troubleshooting Troubleshooting Techniques for Rotating Equipment Valve Operations, Maintenance and Inspection Including Flange Breaking

Note: A certificate of attendance will be issued to all participants of non-certification professional development training courses while candidates who pass the assessment/examination of IMM-certification schemes will be certified with the issue of IMM competency certificate and IMM certification ID card in addition to the certificate of attendance.

More information on training and certification is available on IMM's website at www.iomm.org.mv.

For further enquiries:

Call : +603 7661 1591

Email : secretariat@iomm.org.my

WhatsApp : +6018 911 3480

INSTITUTE OF MATERIALS, MALAYSIA

Suite 1006, Level 10, Block A, Kelana Centre Point, No. 3 Jalan SS 7/19, 47301 Petaling Jaya, Selangor.

IMM AUTHORIZED TRAINING BODY (ATB)/ AUTHORIZ PARTNER (ATP) FOR IMM C

AUTHORISED TRAINING BODIES (ATBs)

(Offer IMM Certification Training Programs and Courses)

ATBs

Training Programs & Courses

- Seacademy Sdn. Bhd. (Sarawak)
- Some Topfields Borneo Sdn. Bhd. (Sarawak)
- Sabah Skills & Technology Centre (Sabah)
- SRC Global Resources Sdn. Bhd. (Peninsular Malaysia)
- Advance Multiskills Training Centre Sdn. Bhd. [Excludes courses marked with *] (Sarawak)

Coating

- Certified Assistant Blaster & Painter Level 1 & Level 2
- Sertified Protective Coating Technician (Blaster and/or Painter) Level 1 & Level 2
- S Certified Blasting and Painting Supervisor
- Sertified Coating Inspector Level 1 & Level 2
- S Certified Quality Control Technician*
- Sertified Thermal Spray Coating Applicator*
- Basic Knowledge on Corrosion Protection for Technicians and Engineers*
- S Corrosion Control by Protective Paints*
- Sorrosion Control by Protective Coating*

Mechanical Joint Integrity

- Certified Mechanical Joint Integrity for Small-bore Piping, Tubing and Valves
- Sertified Mechanical Joint Integrity for Flange Bolted Connections

SRC Global Resources Sdn. Bhd.

Sabah Skills & Technology Center

(Peninsular Malaysia)

(Sabah)

Thermit Welding

S Prasarana Malaysia Berhad (Malaysia)

- Sertified Thermit Welding Practitioner (Level 1)
- Sertified Thermit Welding Senior Practitioner (Level 2)

Note: The respective coverage area is indicated in brackets.

AUTHORISED TESTING CENTRE (ATC)

(Offers IMM Examination and Assessments)

ATC: JOTAC Academy Sdn. Bhd.

(Peninsular Malaysia)

Certification Examination/Assessments

- Some Certified Protective Coating Technician (Blaster and/or Painter) Level 1 & Level 2
- Sertified Coating Inspector Level 1 & Level 2
- Sertified Corrosion Monitoring Practitioner Level 1
- Sertified Cathodic Protection Practitioner Level 1



NNOUNCEMEN

NEW RE-CERTIFICATION REQUIREMENTS FOR ALL IMM

IMM has introduced CPD points requirements and relevant refresher course for candidates seeking re-certification to IMM certification schemes

GO TO WWW.IOMM.ORG.MY FOR MORE INFORMATION

ED TESTING CENTRE (ATC)/ AUTHORIZED TRAINING OURSES & CERTIFICATION

ASSOCIATE TRAINING PARTNER (ATP)

(Offers IMM Certification Training Programs and Courses)

ATP: Materials Technology Education Sdn Bhd (Malaysia and Overseas)

IMM Training Programs & Courses

Coating

- Sertified Protective Coating Technician (Blaster and/or Painter) Level 1 & Level 2
- Sefresher Course for Certified Protective Coating Technician (Blaster and/or Painter) Level 1 and Level 2
- Sertified Assistant Blaster & Painter Level 1 & Level 2
- Supervisor
 Supervisor
- Sertified Coating Inspector Level 1 & Level 2
- Refresher Course for Certified Coating Inspector Level 1 and Level 2
- Sertified Coating Quality Control Technician
- S Certified Thermal Spray Coating Applicator
- Sasic Knowledge on Corrosion Protection for Technicians and Engineers
- Sorrosion Control by Protective Paints
- Sorrosion Control by Protective Coating

Coating Fingerprinting

- Society Course
 Society Course
 Society Course
 Society Course
- Sertified Coating Fingerprint Quality Controller Level 1
- Sertified Coating Fingerprint Quality Controller Level 2
- Refresher Course of Certified Coating Fingerprint Quality Controller Level 1/Level 2

Train-the-Trainer

Certified Trainer

Corrosion

- S Certified Corrosion Monitoring Practitioner Level 1
- Sertified Corrosion Monitoring Practitioner Level 2
- Sertified Corrosion Monitoring Practitioner Level 3
- Sertified Cathodic Protection Practitioner Level 1
- Sertified Cathodic Protection Practitioner Level 2
- Sertified Cathodic Protection Practitioner Level 3
- Sertified Cathodic Protection Engineer
- Sorrosion Control by Cathodic Protection

Thermal Insulation

- Introduction to Thermal Insulation
- S Certified Thermal Insulation Installer

Vibration

- Sertified Vibration Practitioner Category 1
- Sertified Vibration Practitioner Category 2
- Sertified Vibration Specialist Category 3
- Sertified Vibration Specialist Category 4

Welding

- S Certified Welding Inspector
- Repair Welding of Pressure Equipment in Refineries & Chemical Plants
- Welding & Joining Technology for Non-Welding Personnel
- Steel Technology for Non-Technical Personnel

IMM-JWES Courses

- Sertified Associate Welding Engineer (AWE)
- Sertified Welding Engineer (WE)
- Sertified Senior Welding Engineer (SWE)

Mechanical Joint Integrity

- Sertified Mechanical Joint Integrity for Small-bore Piping, Tubing and Valves
- Certified Mechanical Joint Integrity for Flange Bolted Connections
- Valve Operations, Maintenance
 Inspection Including Flange
 Breaking

Loss of Primary Containment

- Mechanical Joint Integrity
- Second Pressure Safety Valve
- Small Bore Tubing

Rotating Equipment

- Sompetent Mobile Industrial Compressor Operator
- Sompetent Mobile Industrial Equipment Inspector
- Solution & Maintenance of Pumps
- Practical Approach to Inspection and Maintenance of Stream Turbine
- S Practical Approach to Precision Alignment Methods
- Practical Approach to Precision Balancing Methods
- Reciprocating Compressors: Operations, Maintenance, Inspection & Troubleshooting
- Troubleshooting Techniques for Rotating Equipment

Other Materials Courses

- Materials Selection & Corrosion
- Metallurgical Failure Investigation
- Sasic Course on Operation of Mobile Air Compressor



INSTITUTE OF MATERIALS, MALAYSIA

Updated on 30th December 2022

Institute of Materials, Malaysia (IMM) is a non-profit professional society that promotes honourable practice, professional ethics and encourages education in materials science, technology and engineering. Engineers, academicians, technicians, skilled workers and professionals are amongst its members exceeding 6800.

Registered with the Registrar of Societies on 6th November 1987, the Malaysian Materials Science & Technology Society (MMS) changed its name to the Institute of Materials, Malaysia (IMM) on 16th June 1997. The objectives of IMM include the training and development of individuals and companies in Malaysia to attain professional recognition in various fields of materials science, technology and engineering.

IMM is administered by a council of 30 members, with volunteers leading more than 15 materials committees and more than 4 regional chapters, and supported by a secretariat with full time staff.

IMM Vision

To be internationally recognised leading institution in Materials Science and Technology.

IMM Mission

- (1) To be the technical authority on material science and technology
- (2) To develop an enhance competency and skills for all categories and practitioner
- (3) To become an internationally recognized certifying body
- (4) To be the forum for industry and academia collaboration
- (5) To positively contribute to society and quality of life

The IMM membership is categorised into 6 different grades and open to anyone above the age of 17 years - individuals and companies keen in developing and contributing towards the growth of materials science, technology and engineering in Malaysia.

Over the years, IMM have conducted courses on coatings, coatings fingerprinting, corrosion, welding, vibration etc in support of the oil and gas industry in Malaysia. Over 750 Coatings Inspectors have been trained and certified as well as more than 3300 Blasters & Painters, Supervisors, Corrosion Technician and Vibration Practitioners. Its certification programmes are recognized by PETRONAS and all oil & gas operators. Since January 2011, more than 80 Associate Welding Engineers, more than 90 Welding Engineers, more than 30 Senior Welding Engineers and more than 45 Coating Fingerprint Quality Controllers were trained and certified.

IMM has also organised 10 International Materials Technology conferences (IMTCE) on a biennial basis, and numerous technical seminars, educational programmes, technical visits, and materials awareness programmes since 1988.

Public courses, such as Microbiologically Influenced Corrosion (MIC) and Welding Technology for Non-Welding Personnel, are being offered occasionally. Training on materials awareness has also been conducted in public listed companies.

The courses and programmes are being organised by Authorized Training Body/Bodies and Authorized Event Organizer/Organizers.

Collaborations with the Asian Welding Federation, Sabah Skills Technology Centre (SSTC), and local universities continue to be part of IMM's vision and long term mission to educate, train and serve the materials fraternity.





GENERAL INFORMATION ON MEMBERSHIP

The IMM Membership is open to all individuals and companies in developing the contribution of Materials science, technology and engineering towards industrial growth in Malaysia. The technology of materials is advancing day-to-day throughout the world. Membership to the IMM will enable networking and exchange of knowledge from a very wide variety of specialised areas of expertise. Please feel free to download or print a copy of the application form together with the IMM regulations. If you have any doubt, please do not hesitate to contact our secretariat through the phone; +603-76611591 or email to secretariat@iomm.org.my

Annual subscriptions shall be payable in advance on 1st January of each year. Those admitted into the IMM between 1st July and 31st December in any year shall pay only half the annual subscription. Seniors (above 55 years old) get 50% discount off their annual subscriptions.

We have an online application for membership for selected grades. Membership application forms in document format can be accessed from www.iomm.org.my.

IMM SECRETARIAT

Suite 1006, Level 10, Block A, Kelana Centre Point, No. 3 Jalan SS 7/19, 47301 Petaling Jaya, Selangor

IMM MEMBERSHIP BENEFITS

- (1) IMM activities offer members to interact and network with representative from the industry, academia and government related to the Materials profession.
- (2) Members will gain knowledge on career opportunities for their children, friends etc as IMM offers certification courses in skilled trades e.g. Welding, Painting, Inspection, Corrosion etc.
- (3) IMM-JWES Welding Engineer Certification program leading to a Welding Engineer Certification which offers great employment opportunities in the oil & gas, heavy industry, marine and energy sectors.
- IMM publications quarterly magazine plus annual conferences offer presenters an opportunity for their technical research or industry-academia papers to be published in ISI- and Scopus-index journals.
- (5) IMM organizes many free technical events for members to acquire new knowledge and networking opportunities. Participants to these events will also receive Certificate of Attendance for their Continuing Professional Development records.

IMM MEMBERSHIP FEES SCHEDULE AS PER BELOW:

	Amount			
Description	Entrance Fee	Processing Fee	Transfer Fee	Annual Subscription
Fellow	-	RM 300.00	RM 10.00	RM 150.00
Professional	-	RM 150.00	RM 10.00	RM 100.00
Associate	-	RM 150.00	RM 10.00	RM 80.00
Company	RM 50.00	-	-	RM 200.00
Ordinary	RM 20.00	-	-	RM 40.00
Student	RM 10.00	-	-	RM 10.00
Ordinary/ Company	RM 40.00/ RM 50.00	-	-	NIL



INSTITUTE OF MATERIALS, MALAYSIA

Updated on 30th December 2022

REGULATIONS GOVERNING ADMISSION AND TRANSFER OF MEMBER GRADES

The Council shall establish a Membership Committee which will be responsible for these Regulations and for review of applications for new membership and transfer to other grades (upgrades). The Membership Committee shall recommend for Council approval for admission and transfer of membership. All grades of memberships are awarded at the discretion of the Council and may be withheld or withdrawn in the event of conduct likely to prejudice the standing of the Institute. Every member shall receive a membership certificate.

Every application for membership, individual or company, shall be proposed and seconded according to these regulations and shall be forwarded to the IMM Secretariat who on behalf of the Honorary Secretary will process for consideration and approval of the Membership Committee before tabling for Council's endorsement. The Council may at its discretion reject any application without assigning any reason thereof. The Council may use its discretion to exempt the need for proposer and seconder for Student, Ordinary and Company membership.

Each company on admission as a member shall be entitled to nominate one representative to exercise all rights of membership. Only representatives of Company membership, as well as Fellows (F.I.M.M.). Professional Members (M.I.M.M.) and Ordinary members shall have the right to vote and to hold office in IMM.

Only Malaysian Citizens can become Ordinary Members, Associate Members (A.M.I.M.M.), Professional Members (M.I.M.M.) and Fellow Members (F.I.M.M.) with voting rights. Foreigners can have membership to similar grades but shall have no voting rights.

MEMBERSHIP GRADE & REQUIREMENT

Honorary Fellow (Hon. F.I.M.M.)

The Council shall have the power to elect Honorary Fellows who shall be persons of eminence in science or industry. The election shall be based on a majority vote within the Council. Honorary fellows shall enjoy such privileges as may from time to time be determined by the Council.

Fellow (F.I.M.M.)

A person at least 35 years of age with approved academic qualifications, training and 8 years relevant responsible experience who has made significant contributions to the science and practice of profession of Materials Science and Engineering or has given distinguished service to industry or education.

Professional Member (M.I.M.M.)

A person at least 25 years of age, with approved academic qualifications and training, having at least 3 years responsible experience in Materials Science and Engineering, or a person at least 40 years of age, with at least 15 years of experience with practical responsibility, as demonstrated by thesis/dissertation or report and interview.

Associate Member (A.M.I.M.M.)

A person at least 25 years of age, who possesses an interest in Materials Science and Engineering but have not acquired the necessary experience or obtained the qualification, governing entry to Member grade. An Associate Member, on obtaining the necessary qualifications, may apply for transfer to Member grade.

Company Member

Any company that is involved or has interest in Materials Science and Engineering will be qualified to join as a company member.

Ordinary Member

Any Malasian Citizen and above the age of 18 years engaged in activities related to research, development and applications in Materials Science and Engineering shall qualify for Ordinary Membership. Only Ordinary Members who meet the necessary minimum requirements may apply for transfer to membership grades of Fellow, Member and Associate Member and may use the abbreviated titles upon transfer.

Student Member

A student member shall be a person not under 17 years of age who at the time of application satisfies the Council that he has received a good general education and is studying subjects related to Materials Science or Engineering. A student member shall transfer to the grade of Ordinary Member after graduation provided he or she is suitably qualified and as soon as he or she is earning a full-time salary. A Student shall not become member of the IMM without the prior approval of the Vice-Chancellor or Head of Department of the university or relevant authority concerned.









1-Day IMM Corrosion Conference 2022 - Holistic Corrosion Prevention & Management



Offshore Technology Conference Asia (OTC Asia) 2022

Materials Lecture Competition 2022 (MLC 2022)

FREE Ordinary Membership for Affiliates:

The Institute of Materials, Malaysia will recognize members of various professional institutions and societies for membership at "Ordinary Grade" without any annual subscriptions. Such members shall submit to IMM proof of their current membership of the respective institutions together with their application.

Members of the following institutions and societies are eligible to apply for affiliate membership:

- 1.American Welding Society
- 2. Asian Welding Federation
- 3. Board of Architects Malaysia
- 4. Board of Engineers, Malaysia
- 5. Engineering Institutes under the Engineering Council of UK
- 6. Geological Society of Malaysia
- 7.Institut Kimia Malaysia
- 8.Institute of Corrosion UK
- 9.Institute of Materials Singapore
- 10.Institute of Physics Malaysia
- 11.Institution of Engineers, Malaysia
- 12.Jabatan Minerals & Geoscience 13.Malaysian Medical Association
- 14. Malaysian Nurses Association
- 15. Malaysian Society for Non-Destructive Testing
- 16.Malaysian Welding & Joining Society
- 17. Persatuan Arkitek Malaysia
- 18. Plastics & Rubber Institute of Malaysia
- 19. Singapore Welding Society
- 20. Society of Petroleum Engineers
- 21. The Welding Institute UK

FREE Company Membership for Affiliates:

The Institute of Materials, Malaysia will recognize various professional institutions and associations for membership at "Company Grade" without any annual subscriptions.

Companies registered with the following Trade Associations are recognized for Affiliate Company Memberships:

- 1.Federation of Malaysian Manufacturers (FMM)
- 2.Malaysian Offshore Contractors Association (MOCA)
- 3.Malaysian Oil & Gas Engineering Council (MOGEC)
- 4. Malaysian Oil & Gas Services Council (MOGSC)

The companies shall submit to IMM proof of their current membership at the respective trade associations together with their application.

NOTE: The above provisions for affiliate membership for individuals and companies was approved by the IMM Council in accordance with the powers vested in the Council as per Clause 6.1.3 of the IMM Constitution and was subsequently endorsed by members at its 21st Annual General Meeting held on 19th March 2011.





Quarterly Magazine of Institute of Materials, Malaysia





Our Readers

General Information

Frequency: Quarterly Magazine
Format: Print & Online Editions

Reader: ~ 8000 ISSN: 2289-9030

Contractor Others (Fabricator) **Operating Company** 10% Education (Oil & Gas, Marine & Power) 10% 30% Services (QA & QC) 10% Engineering Equipment / Supplier Consultant 25% Company



Magazine Content

Event & Activity Reports, Conference Information, Technical Papers, Information on IMM, IMM Course Details, Advertorial, IMM Supporting Events and many more.....

10%



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В	Standard Full Page Size: A4 210 (w) mm × 297 (h) mm	Bottom right side bar Size: 60 (w) mm × 60 (h) mm	RM 2,000 / 1 year
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D	Back Outside Cover Size: A4 210 (w) mm × 297 (h) mm	Central banner Size: 200 (w) mm × 80 (h) mm	RM 3,000 / 1 year

* Introductory price, advertisers enjoy 50% discount on IMM Materials Mind homepage



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www.iomm.org.my



secretariat@iomm.org.my



Institute of Materials Malaysia







Invitation to Advertise in Materials Mind, published by Institute of Materials, Malaysia for in Print and Online

Please tick your preferred date, write the year and preferred code for advertisemen	Please tick	your preferred	date, writ	te the yea	r and pre	eferred	code for	advertisemer
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☐ 1 st Quarter - January	☐ 2 nd Quarter - April	
☐ 3 rd Quarter - July	☐ 4 th Quarter - October	of the year :
Preferred code	(refer front page of this le	eaflet)

Technical Requirement

- JPG / Ai / PDF / PSD Format
 Ai / Illustrator Text must be outlined
 and saved together with high
 resolution picture embedded.
- Image quality should be at least 150 pixel per inch.
- Artwork prepared by the customer.

Payment

Full payment to be made 2 weeks before date of the advertisement.

Cancellation

10-day notice before the advertisement date, otherwise deposit will be forfeited.

PAYMENT NOTE

1) Payment can be made by cheque, telegraphic transfer & bank draft as follows:

Account Name: Institute of Materials, Malaysia

Account No: 8009055156 Swift Code: CIBBMYKL

Bank Name: CIMB BANK Berhad

Country: Malaysia

Cheque can be sent to

Suite 1006, Level 10, Block A, Kelana Center Point (Lobby A), No. 3 Jalan SS 7/19, Kelana Jaya, 47301 Petaling Jaya, Selangor

via post/mail or direct bank-in.

2) Payment can also be made by IBG, GIRO or Cash Deposit Machine (CDM) as follows:

Account Name: Institute of Materials, Malaysia

Account No: 8009055156
Bank Name: CIMB BANK

Please email your bank-in slip as your payment proof to secretariat@iomm.org.my



Why Use PERLITE?

WaterRepellant

Corrosion Resistant

Combat Corrosion Under Insulation (CUI)

Non Combustible

Low Thermal Conductivity

Asbestos Free

Acid/Alkali Resistant

Stable to 650°C

Lightweight

All-Weather & Takes Foot Traffic



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