AMVIP
SUSTAINABLE TECHNOLOGIES · ECONOMY · ENVIRONMENT

A CRITICAL SOLUTION FOR EFFECTIVE CORROSION PROTECTION: THE EVALUATION OF BARRIER COATINGS IN PREVENTING CORROSION

RM400

MasterClass series

Boost your knowledge in corrosion fundamentals, coating evaluation, EIS testing, and improvement strategies with industry experts in our master class.

OUR SPECIAL MENTORS

Session 01

DR. HJ. MOHAMAD KAMAL BIN HJ. HARUN

- THE PRESIDENT OF AMVIP
- FELLOW OF THE ACADEMY OF SCIENCES OF MALAYSIA (ASM)

Session 02

DR ISMALIZA ISMAIL

- SENIOR RESEARCHER AT MALAYSIAN RUBBER BOARD (MRB)
- PHD IN CORROSION PROTECTION AND ADHESION SCIENCE

Session 03

MR. DANNY TAN KIM CHEW

- CORROSION UNDER INSULATION (CUI)
- THE PROJECT OPTIMIZATION TASK FORCE COMMITTEE (POTF) FOR COATING & INSULATION GROUP

DATE & TIME

UPON REQUEST

8.30AM - 5.00PM

LOCATION

TO BE ARRANGED

CONTACT US

CONTACT
AMVIP2019@GMAIL.COM
FOR MORE INQUIRY

FOR REGISTRATION & INFORMATION

WWW.AMVIP.ORG

COURSE DESCRIPTION

This course provides a comprehensive understanding of the corrosion processes of metal surfaces and the chemical and electrochemical mechanisms that drive metal degradation. It highlights the role of protective coatings, such as paints, in preventing corrosion by acting as barriers against environmental factors such as moisture and oxygen. With this knowledge, participants will be able to better appreciate how protective coatings serve as an essential line of defence against environmental damage.

Participants will be introduced to electrochemical impedance spectroscopy (EIS) to evaluate the barrier properties of coatings. Participants will learn how EIS is used to measure key electrical properties of the coating, including electrical resistance and capacitance, while providing detailed insight into its barrier performance. The course covers the practical aspects of EIS, including measurement parameters, data analysis, and interpretation, to ensure that participants gain valuable knowledge in this area. The course also aims to encourage practitioners to self-innovate by equipping them with the scientific and technical knowledge required to effectively interpret coating performance data. The knowledge gained from EIS measurement will enable practitioners to identify weaknesses in the coating formulation and application, not only in terms of coating properties but also in terms of barrier properties and performance, thus identifying specific opportunities to improve the formulation.

Key Learning Outcomes

- Understand Corrosion Fundamentals
- Evaluate Barrier Coating Performance
- Apply and Interpret Electrochemical Impedance Spectroscopy (EIS)
- Identify Opportunities for Coating Improvement

WHO SHOULD ATTEND?

Anyone involved in applying, inspecting, and managing the quality of protective coatings and corrosion prevention for industrial assets.

- **Coatings Specialists and Coatings Inspectors /Quality Controllers**
- **Asset Owners & Operators (Oil & Gas, Energy & Power, Utilities, Water, Rail, Marine, Ports and Buildings)**
- **Corrosion Engineers & Specialists**
- **Materials Failure Investigation Practitioners**
- **Blasting & Painting Applicators**
- **Consultants & Contractors with interest in Improved Quality Assurance of Painting Projects**
- **Standards and QA/QC Regulatory & Compliance Officials**
- **Health, Safety & Environmental (HSE) Personnel**

**No Pre-Requisites in Qualifications*
**Participants require a reasonable understanding of English*

SCHEDULE

8:30am – 9:00am	Registration
9:00am – 10:30am	Session 1 (1.5 hours)
10:30am – 11:00am	Tea-break
11:00am – 12:30pm	Session 2 (1.5 hours)
12:30pm – 2:00pm	LUNCH (included)
2:00pm – 4:00pm	Session 3 (2 hours)
4:00pm – 4:30pm	Tea-break & Group Photo
4:30pm	ADJOURN

- Face-to-face lectures conducted in English
- AMVIP Certificate of Attendance (5 hours CPD)
- **Industry-focused**: 100% case studies from real industrial failures

SYLLABUS

Session 1	Session 2	Session 3
Fundamentals for corrosion protection by paint	Introduction and measurement of barrier properties of paint through impedance measurement	Industry application of impedance for measuring the barrier properties of paint for corrosion protection

ABOUT THE TRAINER

Session 01

DR. HJ. MOHAMAD KAMAL BIN HJ. HARUN

- The President of AMVIP
- Fellow of the Academy of Sciences of Malaysia (ASM)

Dr Hj. Mohamad Kamal Bin Hj. Harun is a retired professor at Universiti Teknologi MARA (UiTM) and is widely recognized for his expertise in corrosion protection through paint adhesion and polymer barrier coatings. With decades of experience in academia and industry, he continues work on advancing professionalism in materials science and engineering practices in Malaysia. Dr Kamal's expertise is highly sought after by industry professionals. He has conducted numerous masters courses under the Institute of Materials Malaysia (IMM) and delivered special courses for various organisations focusing on practical approaches to corrosion protection through barrier coatings. He is currently the President of AMVIP. His professional standing is also reflected through his appointments as: Fellow of the Academy of Sciences of Malaysia (ASM), Member of the Malaysian Solid State Science & Technology Society, Member of the International Institute of Plantation Management (IIPM), Member of the Board of Governors of Tunku Abdul Rahman University of Management and Technology (TAR UMT).

Dr Kamal continues to contribute to the advancement of science, technology and education by taking a leadership role, mentoring and actively engaging in national and international scientific communities.

ABOUT THE TRAINER

Session 02

DR ISMALIZA ISMAIL

- Senior researcher at Malaysian Rubber Board (MRB)
- PhD in Corrosion Protection and Adhesion Science

Dr. Ismaliza Ismail is a senior researcher at the Malaysian Rubber Board (MRB) with more than 19 years of experience in the design and development of advanced rubber products for engineering applications. She holds a PhD in Corrosion Protection and Adhesion Science, reflecting her extensive expertise in material interfaces and protection technologies. Throughout her career, Dr Ismaliza has been involved in a variety of significant research projects, including rubber applications for offshore environments, railway systems, buildings and structural components, and rubber to-metal bonding systems. Her work bridges the gap between innovation and industrial needs, delivering high-performance solutions for various sectors. Her main research interests are in adhesion science and protective coatings, with a particular focus on bonding mechanisms at rubber-metal, rubber-rubber and rubber-fabric interfaces. She also specializes in corrosion protection through polymer coatings and the modification of metal surfaces, making an important contribution to the durability and reliability of rubber-based systems in harsh environments.

ABOUT THE TRAINER

Session 03

MR. DANNY TAN KIM CHEW

- Corrosion Under Insulation (CUI)
- The Project Optimization Task Force Committee (POTF) for Coating & Insulation Group

Danny has a degree in Chemical Engineering from Manchester, UK and has over 40 years of in-depth exposure in coating's formulations, in-field protective coatings, insulation installation practices, specialties coating additives & rheology, and as Regional Director for key principals in coatings, insulation, and currently focusing on Corrosion Under Insulation (CUI) with Institute Materials of Malaysia (IMM) & Association of Vibrations, Materials, Insulation Practitioners (AMVIP) as the Project Optimization Task Force Committee (POTF) for Coating & Insulation Group. Danny Tan is also a Certified HRDC TTT for Corrosion & Insulation Certifications.

Danny is also a strong advocate of adopting innovative technology such as EIS via Coating Degradation Measurement (CQM) to determine coating degradation instead of the usual visual inspection. The demand for longer lifetime for coating system has increased and this has resulted in higher thickness, higher production and application standards, but also improved formulation and new coating systems. To verify the added performance, the testing of coatings evolved to longer test times and cyclic testing, as in ISO12944-9.

As the visual appearance of the high-performance protective coatings is always good, the actual development of coatings is more towards the corrosion creep. Also, the visual appearance of a tested coating does not relate to the actual situation in which the coating really is degraded over this exposure compared to the original state. Also in the field, visual examinations primarily focus on corrosion spots; a coating can look intact for 15 years, to suddenly break and show a corrosion spot. This means a lot of information on coating degradation is not discovered. Danny will delve in-depth of actual real-world cases of applied EIS via CQM.

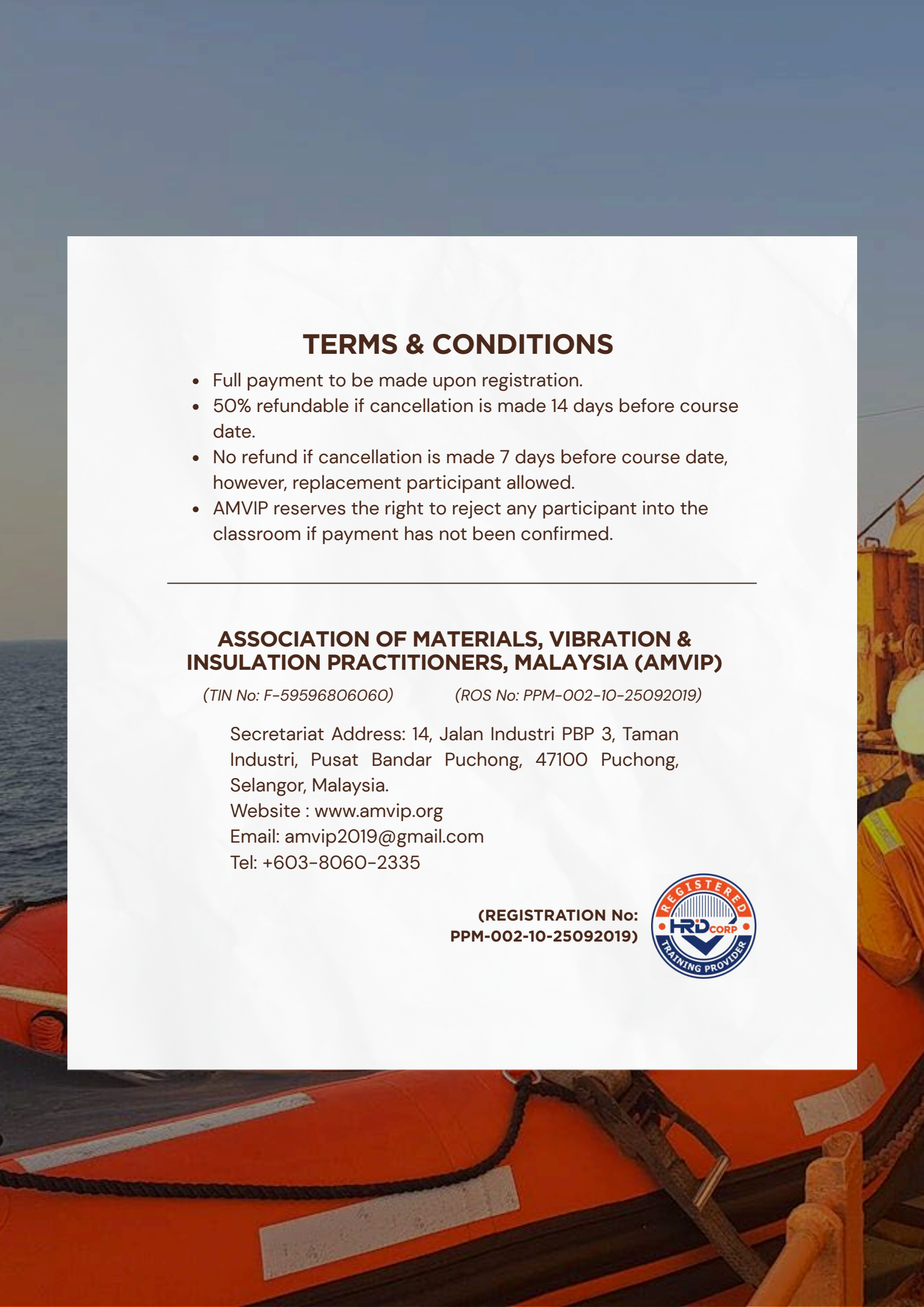
PARTICIPANT FEE

CATEGORY	DEADLINE	AMOUNT (RM) AMVIP MEMBER	AMOUNT (RM) NON MEMBER
EARLY BIRD FEE	15TH APRIL	400.00	450.00
NORMAL FEE	22ND APRIL	440.00	490.00
LATE REGISTRATION	28TH APRIL	500.00	550.00

PAYMENT METHODS

IBG, CDM, Cheque, telegraphic transfer or bank draft
SEND PAYMENT SLIP WITH REGISTRATION TO
amvip2019@gmail.com

Account Name: PERSATUAN AHLI MAHIR BAHAN, GETARAN DAN PENEBAT MALAYSIA
Account No: 8010289200
Swift Code: CIBBMYKL
Bank Name: CIMB BANK BERHAD
Bank Branch: BANDAR PUTERI PUCHONG, SELANGOR
Country: MALAYSIA



TERMS & CONDITIONS

- Full payment to be made upon registration.
- 50% refundable if cancellation is made 14 days before course date.
- No refund if cancellation is made 7 days before course date, however, replacement participant allowed.
- AMVIP reserves the right to reject any participant into the classroom if payment has not been confirmed.

ASSOCIATION OF MATERIALS, VIBRATION & INSULATION PRACTITIONERS, MALAYSIA (AMVIP)

(TIN No: F-59596806060) *(ROS No: PPM-002-10-25092019)*

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