INSTITUTE OF MATERIALS, MALAYSIA

IMM Corrosion Certification Scheme

Certified Cathodic Protection Practitioner Level 2

Code: CPP-2 *HRDF claimable*

This certification program covers more advanced theoretical knowledge and practical techniques on cathodic protection compared to the Cathodic Protection Level 1 certification. The Cathodic Protection Practitioner Level 2 certification program will equip the candidate with the knowledge and skills in carrying out installation, testing, inspection, monitoring and troubleshooting including data collection for new cathodic protection installations as well as old cathodic protection systems

Reference standards (reference used shall refer to the latest published document):

- DNV-RP-B401: Cathodic Protection Design
- ISO 15257: Cathodic Protection - Competence Levels of Cathodic Protection Persons - Basis for a Certification Scheme
- ISO 15589-1: Petroleum, Petrochemical and Natural Gas Industries - Cathodic Protection of Pipeline Systems - Part 1: On-land Pipelines
- ISO 15589-2: Petroleum, Petrochemical and Natural Gas Industries - Cathodic Protection of Pipeline Transportation Systems - Part 2: Offshore Pipelines
- NACE SP0169: Control of External Corrosion on Underground or Submerged Metallic Piping Systems

Who should apply

Technicians, scientists, engineers, or any personnel with related work experience and/or has been certified with IMM Certified Cathodic Protection Practitioner Level 1 certification.

Objectives

To access the following knowledge and skills in:

- CP systems
- Electrical measurements
- Pipeline survey techniques
- Operation, maintenance and troubleshooting.

Examination topics

- Electricity relevant to CP applications and measurements
- Corrosion, electrochemistry and coatings relevant to CP
- Theory, principles and criteria of CP
- Requirements related to the application of CP
- Application methods of CP, galvanic anodes, impressed current
- CP measurements and test procedures
- Relevance of voltage gradient errors and influence on the structure to electrolyte potential measurement
- Factors influencing the correct selection of reference electrodes for potential measurements
- Effects of excessive CP on coatings, high-yield strength steels and corrosion-resistant alloys
- Diagnostics of CP systems
- Interference conditions (alternating current and direct current)

- Standards and Codes of Practice relevant in CP practices.
- Health, Safety and Environmental issues relating to CP practices.
- Code of Ethics and Professional Conduct of all CP persons.
- Interpersonal communication skills.
- Report writing and technical analytical skills relating to CP practices.

Examination format

This open book examination comprises both theory and practical assessments, as follows:

- Theory examination: 75 multiple choice questions.
- Practical assessment: Hands-on handling of cathodic protection equipment.

Candidates can bring in their training manual and other textbooks plus calculator.

Examination duration

Theory exam: 3 hours
Practical assessment: 3 hours

Examination fee

As specified on the IMM website.

**Candidate's criteria **

Candidate should have

- Fresh degree graduate without IMM Cathodic Protection Practitioner Level 1 requires 1 year related working experience OR
- Non-degree holder (diploma or equivalent) with IMM Certified Cathodic Protection Practitioner Level 1 requires minimum 1 year of related working experience OR
- Non-degree holder (SPM or equivalent) without IMM Certified Cathodic Protection Practitioner Level 1 requires minimum 3 years of related working experience OR
- Attended relevant academic Cathodic Protection Course dedicated to the IMM Cathodic Protection Practitioner Level 2 with at least 12 months of practical field experience in cathodic protection.

Pre-requisite training

A candidate without experience is required to attend IMM approved/recognized Cathodic Protection Practitioner Level 2 training course with a minimum duration of 3 days (24 hours) which prepares and provides comprehensive guidance and practice aligned to the topics covered in the examination.

A candidate with experience is encouraged to attend an IMM approved/recognized Cathodic Protection Practitioner Level 2 training course for examination preparation and scheme alignment.

Note: Evidence of training completion (where applicable) shall be submitted to the IMM prior to examination approval.

Criteria for certification

Pass in both theory paper and practical assessment with a minimum 70% for each assessment.

Certificate awarded

IMM Certified Cathodic Protection Practitioner Level 2

Validity period of certificate

5 years

Re-sit of examination

A candidate who had failed in one or more of the examination parts can apply to re-sit for the failed component(s) of the examination within a year from the date of the first examination. The candidate shall have to pay the full examination fee for the re-sit and without the need to attend any pre-requisite training course.

Information on re-certification

Candidates may submit a recertification application up to six (6) months before or within six (6) months after the certificate expiry date. Applications submitted within this period will be processed as usual and may require attendance at a refresher course, if applicable.

Applications submitted more than six (6) months after the certificate expiry date require the candidate to:

- Attend the refresher course, if applicable; and
- Retake the certification examination, regardless of work experience.

Candidates may apply to renew their certification for an additional five (5) years within six (6) months prior to the expiry of the certification period (after either the initial 5-year certification or the subsequent 5-year renewal) by:

- Providing proof to IMM of employment in a related field; and
- Attending the refresher course, if applicable.

Candidates who have been out of the profession for more than eighteen (18) months at any point during a 5-year certification or recertification period must retake the certification examination.