INSTITUTE OF MATERIALS, MALAYSIA

IMM Welding Certification Scheme

Certified Welding Inspector

Code: CWI *HRDF claimable*

Participants are exposed to different aspects of industrial welding technology and fabrication, such as safety, weld inspection, reporting, joint design, welding processes, welding metallurgy and materials behaviour during welding production. Theoretical and practical aspects of inspection techniques such as visual inspection (VT), weld measurements, magnetic particle examination (MT), penetrant examination technique (PT), ultrasonic examination (UT) and radiographic examination (RT) will be part of the training by qualified welding personnel.

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

- TBA

Who should apply

This program is suitable for professionals with working experience in welding and fabrication, who are willing to upgrade their skills according to international standards.

Objectives

- To improve safe welding practices
- To understand the welding practices carried out in their industry
- To implement good welding practices in their industry
- To select the right welding equipment in their industry
- To identify common welding defects and ways to overcome them
- To make the right selection of electrodes & materials
- To understand Weld Procedure Specification (WPS), Procedure Qualification Record (PQR) and Welder Qualification Test (WQT) for the repair of fired & unfired pressure vessels

Examination topics

- Introduction and safety
- Duties and responsibilities
- Inspection test plan
- Inspection report
- Welding procedure specification
- Construction drawings (ISO standards, piping and instrumentation diagrams, detailed drawings)
- Codes/standards
- Joint design
- Construction and design
- Welding processes
- Welding symbols
- Welding metallurgy
- Materials strength and testing
- Materials behaviour of metals
- Welding defects
- Damage mechanisms
- Non-destructive examination

Examination format

Written examination

- Part 1: 10 multiple choice questions and 5 subjective questions (Closed book)

- Part 2: Writing analysis reports – 2 questions (Open book)

Examination duration
Part 1: 3 hours
Part 2: 2 hours

Examination fee
As specified on the IMM website.

Candidate's criteria
Candidate should have
- Minimum academic qualification - SPM or equivalent with 5 years working experience in the welding related field OR
- Engineering Diploma in Engineering/Technology with 3 years working experience in the welding related field OR
- Vocational Diploma in Engineering/Technology with 3 years working experience in the welding related field OR
- Degree in Engineering with 1 year working experience in the welding related field

Pre-requisite training
A candidate without experience is required to attend IMM approved/recognized Welding Inspector training course with a minimum duration of 4 days (32 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 Welding Inspector 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 the examination with a minimum total mark of 70% for each paper.

Certificate awarded
IMM Certified Welding Inspector

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.