



INSTITUTE OF MATERIAL, 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: 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 training course which prepares and provides comprehensive guidance and practice aligned to the topics covered in the examination.

A candidate with experience is encouraged to attend IMM approved/recognized training course.

Criteria for certification

- (a) If he/she obtains above 70% for each paper, he/she is qualified to be a IMM Welding Inspector Level II.
- (b) If he/she obtains 60% to 70% for each paper, he/she can only be qualified as a IMM Welding Inspector Level I.

Certificate awarded

IMM Welding Inspector Level I or IMM Welding Inspector Level II

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

6 months prior to the expiry of certification (at the end of the 5th year of certification), the candidate can apply for re-certification for another 5 years by

- providing proof to IMM that he/she has been employed in a related profession; and
- attending the relevant Refresher Course for certification (if any).

Prior to the expiry of the 5-year re-certification (at the end of the 10th year of certification), the candidate can continue to be certified for a further 5-year period by

- providing proof to IMM that he/she has been employed in a related profession; and
- attending the relevant Refresher Course for certification (if any).

The candidate must re-sit the certification examination if he/she has been out of the profession for more than 18 months continuously during the 5-year certification or re-certification period.