



American Welding Society

AWS Magnetic Particle Testing
(MT Dry Powder Yoke Method)
Endorsement Description

Introduction

AWS QC1, Standard for AWS Certification of Welding Inspectors, provides for endorsements that may be added to the CWI and SCWI certifications. Endorsements are an indication of an additional knowledge, skill or ability documented in writing and added to an individual's certification credential(s).

This endorsement meets a portion of the requirements for SWI Alternative Qualification in AWS B5.1 and Alternative Certification for the SCWI in QC1.

Endorsement Scope

The current MT qualification examination covers content from the following references:

- ❖ AWS Magnetic Particle (MT Dry Powder Yoke Method) Endorsement Book of Specification
- ❖ STM E-709, Guide for Magnetic Particle Testing
- ❖ ASNT "Personnel Training Publications: Magnetic Particle Testing (MT), Classroom Training Book"

This endorsement shall govern Magnetic Particle testing (MT) of welds in ferromagnetic materials using an electromagnetic yoke with visible dry powder. The General Exam will require the candidate to demonstrate an understanding of the AWS Magnetic Particle (MT Dry Powder Yoke Method) of the basics of the other MT methods. The Specific and Practical Exams will focus on the Magnetic Yoke Technique.

Endorsement Candidate Eligibility Criteria

Existing CWIs and SCWIs who wish to obtain an endorsement which documents their knowledge, skills, and abilities in using the Magnetic Particle (MT Dry Powder Yoke Method) can take the examination.

Training Requirements

This endorsement has no mandatory training requirements. Candidates are encouraged to attend training seminars or workshops related to the Magnetic Particle (MT Dry Powder Yoke Method) or to self-study to improve their familiarity with this endorsement.

Examination Requirements

Candidates seeking the MT endorsement are required to pass three MT examinations. To begin, candidates must successfully complete the Practical section of the exam (Part B) at an approved accredited testing facility (ATF). After completing the Part B exam, candidates will proceed to complete the Parts A and C exams at a Prometric Test Center of their choice.

The passing score for each MT exam part is 70% with an overall composite score (simple average of three parts of the examination) of 80%.

Test Specifications

| Test | General Exam Information | Passing Score |
|--------|---|---------------|
| Part B | <ul style="list-style-type: none"> ➤ Exam Type: Open book examination ➤ Exam Delivery: Approved Accredited Testing Facilities ➤ Exam Content Time: 60 minutes ➤ Exam Question Type: Practical Test performed on actual Welded Test Joints. ➤ Number of Exam Questions: The candidate will map out the relevant indications on a sketch in a test report form. | 70% |
| Part A | <ul style="list-style-type: none"> ➤ Exam Type: Closed book examination ➤ Exam Delivery: Prometric Test Center ➤ Exam Content Time: 60 minutes ➤ Exam Question Type: Multiple-choice questions ➤ Number of Exam Questions: 40 | 70% |
| Part C | <ul style="list-style-type: none"> ➤ Exam Type: Open book examination ➤ Exam Delivery: Prometric Test Center ➤ Exam Content Time: 60 minutes ➤ Exam Question Type: Multiple-choice questions ➤ Number of Exam Questions: 21 | 70% |
| | Overall Composite Score | 80% |

Examination Reference

Most exam questions are directly answerable from the provided reference material.

- ❖ AWS Magnetic Particle (MT Dry Powder Yoke Method) Endorsement Book of Specification

Candidates are permitted to bring a printed copy of the reference material listed above.

A PDF version of the reference material will be accessible on-screen for this exam. AWS recommends becoming proficient at navigating digital reference material prior to the exam. For example, experience using PDF bookmarks to navigate PDF documents can help test-takers find important portions of the material more quickly. Candidates not familiar with navigating conventional PDF documents are welcome to review the computer-based testing frequently asked questions (CBT FAQs) found [HERE](#). Some features of conventional PDF navigation may be disabled by Prometric for security reasons.

Endorsement Fee Structure

For candidates in the United States and Canada, exam fees are due at time of registration and are paid directly to AWS. For the AWS exam price list, click [HERE](#).

For international (outside of the US and Canada) candidates, exam fees are due at time of registration and paid to the International Agent representing AWS. Agents can provide pricing information regarding international exams. At this time, the MT examination is only offered in English.

Endorsement Credential

Endorsements earned will be updated in each CWI or SCWI's certification profile on the AWS website. Status can be checked via the QR code on the back of the CWI wallet card or via the [Quikcheck web link](#).

Renewal Requirements

In order to maintain the endorsement valid and active existing CWI's and SCWI's will need to take the practical portion (Part B) of the MT exam every 9 years.

Eligibility for initial certification or 9-year recertification

For new candidates to the CWI program, this examination is **NOT** an option for initial certification.

For existing CWIs and SCWIs, successful completion of this endorsement satisfies the examination requirements for recertification under Clauses 16.2.1 or 16.3.1, as applicable, of AWS QC1:2016-AMD1- *Specification for AWS Certification of Welding Inspectors*, provided that the endorsement is taken during the immediate 9-year period.

In order to maintain the endorsement valid and active, existing CWIs and SCWIs will need to take the practical portion (Part B) of the MT exam every nine (9) years.

Professional Development Hours

Candidates who successfully complete pre-exam training to prepare for the MT endorsement examination may gain Professional Development Hours (PDHs) in accordance with QC1 clause 16.5.

Candidates who successfully pass the MT endorsement examination and desire to gain Professional Development Hours (PDHs) should contact the AWS Certification Department.