MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

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NON-DESTRUCTIVE TESTING (NDT) FOR FABRIC MAINTENANCE

"Enhancing Asset Integrity through Practical Application of NDT Techniques"

Schedule

Date	Venue	Fees (Face-to-Face)
15 – 19 Jun 2026	Istanbul, Turkey	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Non-Destructive Testing (NDT) plays a critical role in maintaining the integrity and performance of industrial structures, coatings, and equipment—especially in harsh environments where deterioration and corrosion can compromise safety. This comprehensive course provides practical, hands-on training in the application of NDT methods to support fabric maintenance programs and asset reliability.

Participants will gain in-depth understanding of major NDT techniques, including visual inspection, ultrasonic testing, magnetic particle, dye penetrant, eddy current, and radiographic methods. Emphasis is placed on interpreting results accurately, choosing the right NDT method for each situation, and integrating inspection data into maintenance decision-making.

Objectives

By the end of this course, participants will be able to:

- Understand the principles and applications of key NDT methods
- Select appropriate NDT techniques for various materials and defect types
- Interpret test results to support maintenance and repair strategies
- Ensure compliance with applicable codes, standards, and safety practices
- Integrate NDT into a proactive fabric maintenance and integrity program

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Why Attend

- Enhance your ability to detect surface and subsurface flaws without damaging assets
- Learn how to apply NDT techniques in field and plant environments
- Understand inspection procedures, safety considerations, and reporting standards
- Support better asset life-cycle decisions and predictive maintenance
- Receive practical guidance from experienced NDT professionals

Target Audience

This program is designed for:

- Maintenance and Reliability Engineers
- Inspectors and QA/QC Personnel
- Fabric Maintenance Supervisors and Planners
- Asset Integrity and Corrosion Engineers
- Anyone involved in plant inspection, repair, or condition monitoring

Individual Benefits

Key competencies that will be developed include:

- Selection and application of appropriate NDT techniques
- Interpretation of inspection results and documentation
- Integration of NDT into maintenance and reliability workflows
- Understanding limitations, advantages, and use-cases of each method
- Improved compliance with industry standards (ASNT, ISO, API)

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved inspection accuracy and defect detection
- Reduced risk of unexpected failures and downtime
- Optimized maintenance scheduling based on inspection data
- Compliance with regulatory and safety standards
- Extended asset life and improved structural integrity

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – Overview of NDT methods, regulations, and safety
- Case Studies – Real-world inspection scenarios and lessons learned
- Workshops – Method selection, flaw analysis, defect categorization
- Peer Exchange – Experience sharing across industries and asset types
- Tools – Demonstrations of NDT equipment and reporting templates

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Course Outline

Training Hours: 7:30 AM – 3:30 PM Daily Format: 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Fundamentals of Fabric Maintenance and NDT

- Module 1: Introduction to Fabric Maintenance and Degradation Mechanisms (07:30 – 09:30) • Corrosion, erosion, fatigue, coating failures
- Module 2: Overview of NDT Techniques and Selection Criteria (09:45 – 11:15) • Surface vs. volumetric, portable vs. lab methods
- Module 3: Regulatory and Safety Considerations (11:30 – 01:00) • ASME, API 653/570, PPE, radiation safety
- Module 4: Workshop – Create a Maintenance-NDT Strategy Map (02:00 – 03:30) • Integrate inspection plans with asset classes

Day 2: Visual, Dye Penetrant & Magnetic Particle Testing

- Module 5: Visual Inspection (VT) Techniques and Lighting (07:30 – 09:30) • Direct, remote, and aided visual inspection
- Module 6: Liquid Penetrant Testing (PT) for Surface Cracks (09:45 – 11:15) • Steps, limitations, dye types
- Module 7: Magnetic Particle Testing (MT) for Ferromagnetic Materials (11:30 – 01:00) • Circular and longitudinal magnetization, dry/wet methods
- Module 8: Workshop – Perform VT/PT/MT Simulations (02:00 – 03:30) • Inspection forms and flaw identification

Day 3: Ultrasonic and Radiographic Testing

- Module 9: Ultrasonic Testing (UT) Principles and Equipment (07:30 – 09:30) • A-scan, B-scan, phased array, wall thickness
- Module 10: UT Applications for Welds and Coated Structures (09:45 – 11:15) • Calibration, defect sizing, attenuation
- Module 11: Radiographic Testing (RT) Techniques (11:30 – 01:00) • X-ray vs gamma-ray, film and digital methods
- Module 12: Workshop – Interpret UT and RT Test Results (02:00 – 03:30) • Defect type, location, severity

Day 4: Eddy Current and Advanced Techniques

- Module 13: Eddy Current Testing (ET) and Applications (07:30 – 09:30) • Surface/subsurface flaw detection, tubing, conductivity
- Module 14: Advanced NDT Techniques (09:45 – 11:15) • TOFD, thermography, acoustic emission
- Module 15: Equipment Demonstrations and Use Cases (11:30 – 01:00) • Field-ready tools, probes, scanners
- Module 16: Workshop – Compare Techniques for Use Cases (02:00 – 03:30) • Method selection matrix and report drafting

Day 5: Data Integration, Reporting & Final Exercise

- Module 17: Reporting, Recordkeeping, and Compliance (07:30 – 09:30) • NDT report structure, image storage, compliance documentation
- Module 18: Integrating NDT into Maintenance Programs (09:45 – 11:15) • Linking inspection to CMMS, RBI, and scheduling
- Module 19: Final Case Study – NDT Planning for a Shutdown (11:30 – 01:00) • Design an inspection sequence with timelines
- Module 20: Final Workshop – Present an NDT Inspection Plan (02:00 – 03:30) • Group presentations and peer feedback

Certification

Participants will receive a Certificate of Completion in Non-Destructive Testing (NDT) for Fabric Maintenance, validating their practical capability to plan, conduct, and interpret NDT methods as part of a structured fabric maintenance and reliability strategy.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

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In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**