MAWA EVENTS

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

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CORROSION INTEGRITY MANAGEMENT

"Protect Infrastructure and Ensure Asset Reliability through Proven Corrosion Control Strategies."

Schedule

Venue (InHouse)	Fees
At Your Organization Premises	Ask For The Quotation

► **Available delivery methods:** In-House Training

Introduction

Corrosion is a critical threat to asset integrity, safety, and operational efficiency across industries like oil & gas, power, water, marine, and manufacturing. This course equips engineers, inspectors, and maintenance personnel with the practical knowledge and tools to identify, assess, monitor, and control corrosion-related risks.

It covers modern corrosion management principles within an integrity framework, helping organizations develop robust systems for corrosion monitoring, mitigation, and long-term asset sustainability.

Objectives

- Understand corrosion mechanisms and their impact on asset integrity
- Identify corrosion-prone systems and apply risk-based assessment
- Develop and implement Corrosion Management Systems (CMS)
- Interpret inspection data and select suitable mitigation techniques
- Align corrosion integrity strategies with international standards
- Improve lifecycle performance and reduce unplanned shutdowns

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Why Attend

- Learn how to prevent costly failures and extend asset life
- Build a corrosion management framework aligned with ISO 55000 and API 580
- Enhance decision-making using data-driven integrity assessment tools
- Contribute to safe, compliant, and efficient operations
- Strengthen your professional capabilities in asset and maintenance management

Target Audience

- Integrity, corrosion, and inspection engineers
- Maintenance and reliability engineers
- Asset integrity and plant managers
- HSE and operations personnel
- Pipeline, tank, and pressure equipment owners
- QA/QC professionals and consultants

Individual Benefits

- Gain hands-on understanding of corrosion control methods
- Build capability in corrosion monitoring, data analysis, and reporting
- Expand your career in integrity, reliability, and risk management
- Earn a recognized certificate in corrosion management

Organizational Benefits

- Reduced downtime and failure-related costs
- Improved regulatory compliance (e.g., API, NACE, ISO)
- Enhanced safety, reliability, and lifecycle performance of assets
- Consistent corrosion monitoring and reporting procedures

Instructional Methodology

- Instructor-led technical sessions with real-world case studies
- Corrosion mechanism demonstrations and lab visuals
- Risk-based integrity assessment modeling
- Group workshops and practical exercises
- Corrosion mitigation planning templates

Course Outline

DETAILED 5-DAY COURSE OUTLINE (CUSTOMIZABLE)

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: Introduction to Corrosion and Asset Integrity

- Module 1: Fundamentals of Corrosion (07:30 – 09:30)
- Electrochemical basics, types of corrosion, and influencing factors
- Module 2: Industry Impact of Corrosion Failures (09:45 – 11:15)
- Case studies from pipelines, refineries, and marine assets
- Module 3: Asset Integrity and Corrosion Risk (11:30 – 01:00)
- Role of corrosion in integrity failures and risk analysis
- Module 4: Integrity Management System Overview (02:00 – 03:30)

Day 2: Corrosion Mechanisms and Risk Assessment

- Module 1: Common Corrosion Forms (07:30 – 09:30)
- Uniform, pitting, galvanic, crevice, MIC, under-deposit
- Module 2: Corrosion Mapping and Risk Models (09:45 – 11:15)
- Risk-based inspection (RBI), API 580/581 overview
- Module 3: Criticality Analysis and Degradation Mechanisms (11:30 – 01:00)
- Module 4: Workshop – Risk Ranking of Asset Types (02:00 – 03:30)

Day 3: Monitoring, Detection, and Inspection

- Module 1: Corrosion Monitoring Techniques (07:30 – 09:30)
- Online/offline sensors, corrosion coupons, ER probes
- Module 2: Non-Destructive Testing for Corrosion (09:45 – 11:15)
- UT, RT, EC, LRUT, PAUT, drones & AI in inspection
- Module 3: Corrosion Data Management & Trend Analysis (11:30 – 01:00)
- Module 4: Case Study – Interpreting Real Inspection Data (02:00 – 03:30)

Day 4: Mitigation Strategies and Materials Selection

- Module 1: Corrosion Prevention Techniques (07:30 – 09:30)
- Coatings, cathodic protection, inhibitors
- Module 2: Materials Selection and Compatibility (09:45 – 11:15)
- Material classes, sour service, chloride environments
- Module 3: Integrity Operating Windows (11:30 – 01:00)
- Module 4: Group Exercise – Mitigation Plan Design (02:00 – 03:30)

Day 5: CMS, Standards, and Certification Wrap-Up

- Module 1: Corrosion Management Systems (CMS) (07:30 – 09:30)
- Components, KPIs, integration with Asset Integrity Mgmt
- Module 2: International Standards and Compliance (09:45 – 11:15)
- NACE, API 571, ISO 55000, EN standards
- Module 3: Capstone – Develop a Site Corrosion Strategy (11:30 – 01:00)
- Module 4: Certification Ceremony and Final Discussion (02:00 – 03:30)

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Certification

Upon completion, participants receive a Certificate in Corrosion Integrity Management, endorsed by industry-recognized training authorities.

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.

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

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