MAWA EVENTS

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

Phone: +601116373203 | **Email:** info@mawaevents.net

AGEING ASSETS – LIFE EXTENSION STUDIES

"Maximizing the Value and Safety of Aging Infrastructure"

Schedule

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

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

Introduction

As industrial infrastructure and mechanical assets age, the risks of failure, downtime, and regulatory non-compliance increase. This course equips engineers, asset managers, and technical leaders with the knowledge and tools needed to assess, monitor, and extend the life of aging assets. It explores degradation mechanisms, inspection techniques, and maintenance strategies to support safe and cost-effective life extension decisions.

Objectives

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

- Understand the technical and operational challenges of aging assets
- Identify degradation mechanisms across mechanical, structural, and pipeline systems
- Conduct life extension assessments using reliability and integrity data
- Apply fitness-for-service (FFS) and risk-based inspection (RBI) techniques
- Design maintenance, monitoring, and mitigation plans for aging infrastructure
- Navigate regulatory frameworks and documentation for asset life extension

MAWA EVENTS

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

Phone: +601116373203 | **Email:** info@mawaevents.net

Why Attend

- Improve reliability, safety, and performance of aging assets
- Reduce capital expenditure by extending the life of current infrastructure
- Make informed repair-or-replace decisions using structured frameworks
- Ensure compliance with international standards and best practices
- Build internal capability to manage ageing asset programs strategically

Target Audience

- Asset Integrity Engineers
- Mechanical, Civil, and Pipeline Engineers
- Maintenance and Operations Managers
- Reliability Engineers
- Project Managers in Oil & Gas, Utilities, Power, and Heavy Industry
- Health, Safety, and Environment (HSE) professionals

Individual Benefits

- Gain practical knowledge in asset life assessment and extension techniques
- Improve technical decision-making for aging infrastructure
- Advance career prospects in integrity and reliability engineering
- Enhance understanding of RBI, FFS, and condition monitoring tools

Organizational Benefits

- Extend the productive life of capital-intensive assets
- Enhance plant uptime, reduce failures, and optimize maintenance
- Build cross-functional alignment around ageing asset strategies
- Minimize regulatory and reputational risk through compliance

Instructional Methodology

- Technical lectures and interactive discussions
- Real-world case studies from energy and industrial sectors
- Group problem-solving and decision-making exercises
- Hands-on tools for asset health assessment and life extension planning
- Pre/post quizzes, worksheets, and participant workbook

MAWA EVENTS

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

Phone: +601116373203 | **Email:** info@mawaevents.net

Course Outline

DETAILED 5-DAY COURSE OUTLINE (Customizable) Training Hours: 07:30 AM – 03:30 PM Daily Format: 3–4 Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Introduction to Ageing Asset Management

- Module 1 (07:30 – 09:30): Overview of Aging Asset Challenges and Lifecycle Concepts
- Module 2 (09:45 – 11:15): Asset Integrity Management Systems (AIMS) and Regulations
- Module 3 (11:30 – 01:00): Categorization of Ageing Assets and Criticality Assessment

Day 2: Degradation Mechanisms and Life Assessment

- Module 4 (07:30 – 09:30): Corrosion, Fatigue, and Creep in Aging Assets
- Module 5 (09:45 – 11:15): Non-Destructive Testing (NDT) and Condition Monitoring
- Module 6 (11:30 – 01:00): Life Assessment Models and Remaining Useful Life (RUL) Tools

Day 3: Fitness for Service and Risk-Based Inspection

- Module 7 (07:30 – 09:30): Introduction to Fitness-for-Service (FFS) Methodologies (API 579)
- Module 8 (09:45 – 11:15): Risk-Based Inspection (RBI) Planning and Execution
- Module 9 (11:30 – 01:00): Case Study: Integrating FFS and RBI in Life Extension

Day 4: Life Extension Strategies and Mitigation Planning

- Module 10 (07:30 – 09:30): Maintenance Strategies: Repair, Replace, or Re-Engineer
- Module 11 (09:45 – 11:15): Monitoring Systems: SCADA, Sensors, and AI Integration
- Module 12 (11:30 – 01:00): Planning for Safe Operations During Extended Life Period

Day 5: Documentation, Review, and Practical Exercises

- Module 13 (07:30 – 09:30): Regulatory Requirements and Documentation Best Practices
- Module 14 (09:45 – 11:15): Stakeholder Engagement and Cost-Benefit Analysis
- Module 15 (11:30 – 01:00): Final Workshop: Life Extension Plan for a Sample Asset

Certification

Participants will receive a Certificate of Completion in “Ageing Assets – Life Extension Studies” upon successfully completing the program.

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**