MAWA EVENTS

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

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

TURBO MACHINERY - MAINTENANCE & TROUBLESHOOTING

"Master the Art of Maintaining and Troubleshooting Turbo Machinery for Maximum Efficiency"

Schedule

Date	Venue	Fees (Face-to-Face)
01 – 05 Jun 2026	London, UK	USD 3495 per delegate

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

Introduction

Turbo machinery is at the heart of many critical industrial processes, powering systems that drive everything from power generation to manufacturing. Effective maintenance and troubleshooting of turbo machinery are essential for ensuring optimal performance, minimizing downtime, and extending equipment life. This training course is designed to provide participants with the knowledge and skills necessary to effectively maintain and troubleshoot various types of turbo machinery, including turbines, compressors, and pumps.

Through a combination of theoretical lessons and hands-on exercises, participants will learn the latest maintenance strategies, diagnostic techniques, and troubleshooting methodologies. This course is aimed at engineers, technicians, and maintenance managers looking to enhance their expertise in turbo machinery.

Objectives

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

- Understand the design and operating principles of turbo machinery
- Apply effective maintenance strategies to prevent common failures
- Troubleshoot and diagnose issues in turbines, compressors, and pumps
- Utilize advanced diagnostic tools and techniques
- Develop maintenance schedules tailored to specific turbo machinery systems

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Why Attend

- Stay ahead of industry trends and best practices in turbo machinery maintenance
- Gain hands-on experience with modern diagnostic tools and techniques
- Learn from experienced professionals with real-world knowledge and examples
- Improve your ability to reduce downtime and increase operational efficiency
- Enhance your troubleshooting skills, enabling quicker and more effective problem resolution

Target Audience

This program is designed for:

- Maintenance engineers and technicians responsible for turbo machinery
- Operations and maintenance managers seeking to optimize equipment performance
- Reliability and asset management professionals
- Professionals working in industries with a reliance on turbo machinery, such as power generation, oil & gas, and manufacturing

Individual Benefits

Key competencies that will be developed include:

- Expertise in maintaining and troubleshooting turbo machinery
- Advanced diagnostic skills to identify root causes of machinery failure
- Knowledge of maintenance best practices to increase equipment reliability
- Ability to optimize operational efficiency by minimizing downtime
- Hands-on experience with the latest maintenance tools and technology

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved reliability and performance of turbo machinery systems
- A reduced risk of operational downtime and costly repairs
- Enhanced ability to implement preventive and predictive maintenance strategies
- A more skilled and efficient maintenance team
- Increased equipment lifespan and return on investment (ROI)

Instructional Methodology

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

- Strategy Briefings – In-depth exploration of turbo machinery, its maintenance, and troubleshooting strategies
- Case Studies – Real-world examples of successful troubleshooting and maintenance interventions
- Workshops – Hands-on exercises for troubleshooting and diagnostics of turbo machinery
- Peer Exchange – Group discussions on best practices and challenges faced in turbo machinery maintenance
- Tools – Advanced diagnostic tools and maintenance checklists for effective turbo machinery management

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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: Introduction to Turbo Machinery Maintenance

- Module 1: Overview of Turbo Machinery Systems – 07:30–09:30
- Introduction to the different types of turbo machinery (turbines, compressors, pumps)
- Key operating principles and components of turbo machinery
- Understanding system performance and failure modes
- Module 2: Maintenance Strategies for Turbo Machinery – 09:45–11:15
- Preventive and predictive maintenance approaches for turbo machinery
- Importance of vibration monitoring and condition-based maintenance
- Identifying key performance indicators (KPIs) for monitoring machinery health
- Module 3: Troubleshooting Methodologies – 11:30–01:00
- Techniques for diagnosing mechanical, electrical, and control system failures
- Root cause analysis for turbo machinery failures
- Troubleshooting case studies and best practices
- Module 4: Workshop – Basic Troubleshooting Techniques – 02:00–03:30Hands-on session on using diagnostic tools for basic troubleshooting

Day 2: Advanced Diagnostics for Turbo Machinery

- Module 1: Vibration Analysis and Monitoring – 07:30–09:30
- Understanding vibration patterns in turbo machinery
- Techniques for vibration monitoring and analysis
- Using vibration data to predict failures and optimize performance
- Module 2: Thermography and Other Diagnostic Tools – 09:45–11:15
- Using thermography to identify mechanical and electrical problems
- Other advanced diagnostic tools for turbo machinery
- Case studies of successful diagnostic interventions using thermography
- Module 3: Troubleshooting Electrical and Control Systems – 11:30–01:00
- Diagnosing electrical issues in turbo machinery
- Understanding control systems and PLC troubleshooting
- Repair and replacement of electrical components
- Module 4: Workshop – Vibration and Thermography Diagnostics – 02:00–03:30
- Hands-on session using vibration and thermography tools for diagnostics

Day 3: Preventive and Predictive Maintenance Practices

- Module 1: Creating Preventive Maintenance Schedules – 07:30–09:30
- Developing a comprehensive preventive maintenance program for turbo machinery
- Best practices for scheduling and tracking maintenance tasks
- Aligning maintenance schedules with machinery manufacturer recommendations
- Module 2: Implementing Predictive Maintenance Techniques – 09:45–11:15 ● Introduction to predictive maintenance and condition monitoring tools ● Using sensors and IoT for data-driven maintenance decisions ● Benefits and challenges of predictive maintenance in turbo machinery
- Module 3: Key Performance Indicators (KPIs) for Monitoring – 11:30–01:00
- Identifying and tracking KPIs for turbo machinery performance
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Using KPIs to improve maintenance decision-making

- Data analysis for performance optimization
- Module 4: Workshop – Building a Preventive Maintenance Program – 02:00–03:30
- Hands-on session on creating a preventive maintenance program

Day 4: Troubleshooting Complex Turbo Machinery Failures

- Module 1: Case Studies of Major Failures – 07:30–09:30
- Review of real-world turbo machinery failures and their causes
- Lessons learned from major failure events in industry
- Identifying key failure modes and preventive measures
- Module 2: Repairing Mechanical Failures – 09:45–11:15
- Understanding common mechanical issues in turbo machinery
- Repair techniques for blades, rotors, and bearings
- Reconditioning and refurbishment of worn-out components
- Module 3: Repairing Electrical and Control Failures – 11:30–01:00
- Electrical troubleshooting and repair of control systems
- Techniques for repairing and replacing electrical components
- Commissioning and testing repaired equipment
- Module 4: Workshop – Troubleshooting and Repair Techniques – 02:00–03:30
- Hands-on session focusing on advanced troubleshooting and repair techniques

Day 5: Future Trends and Course Review

- Module 1: Innovations in Turbo Machinery Maintenance – 07:30–09:30
- Future trends and technological innovations in turbo machinery maintenance
- The role of AI and machine learning in predictive maintenance
- The impact of digital twins on turbo machinery performance
- Module 2: Review and Q&A – 09:45–11:15
- Recap of key concepts covered throughout the course
- Addressing participant questions and discussing best practices
- Module 3: Certification Ceremony – 11:30–01:00
- Distribution of course completion certificates
- Closing remarks
- Module 4: Networking and Next Steps – 01:00–03:30
- Networking session with instructors and peers
- Discussing next steps for career development and further training

Certification

Participants will receive a Certificate of Completion in Turbo Machinery Maintenance & Troubleshooting, demonstrating their expertise in maintaining and troubleshooting turbo machinery systems.

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**