MAWA EVENTS

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

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PROCESS PLANT TROUBLESHOOTING & ENGINEERING PROBLEM SOLVING

"Diagnosing Operational Problems, Improving Process Reliability, and Solving Engineering Challenges Effectively"

Schedule

Date	Venue	Fees (Face-to-Face)
02 – 03 Dec 2026	Doha, Qatar	USD 1995 per delegate

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

Introduction

Process plants are complex systems where unplanned downtime and inefficiencies can significantly impact safety, productivity, and profitability. Troubleshooting and problem solving are essential skills for plant engineers and technical staff to resolve operational issues swiftly and prevent recurrence.

This hands-on 2-day course equips participants with proven methodologies and tools to systematically diagnose, analyze, and resolve process and engineering problems. It combines real-life case studies, structured techniques, and practical exercises to develop problem-solving confidence and enhance plant reliability.

Objectives

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

- Identify and isolate root causes of process problems using structured troubleshooting techniques
- Apply engineering reasoning to resolve mechanical, process, and instrumentation issues
- Use tools such as logic trees, Pareto analysis, and root cause diagrams
- Improve plant reliability through effective failure analysis and documentation
- Reduce downtime and production losses with proactive troubleshooting skills

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Why Attend

- Master a structured approach to process troubleshooting and problem solving
- Enhance your ability to quickly identify and resolve plant performance issues
- Reduce repeat failures through robust root cause analysis
- Strengthen your decision-making and diagnostic capabilities
- Learn from real-world case studies and interactive exercises

Target Audience

This program is designed for:

- Process, mechanical, and instrumentation engineers
- Operations and production supervisors
- Maintenance and reliability engineers
- Technical support and troubleshooting teams
- Anyone responsible for diagnosing or preventing plant problems

Individual Benefits

Key competencies that will be developed include:

- Troubleshooting logic and structured problem-solving
- Root cause analysis and fault isolation
- Failure mode recognition and engineering judgment
- Team-based troubleshooting coordination
- Preventive and corrective action planning

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Faster diagnosis and resolution of plant disruptions
- Reduced downtime, quality issues, and safety risks
- Improved documentation and knowledge retention of past failures
- Enhanced team collaboration and technical performance
- Lower maintenance and production losses

Instructional Methodology

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

- Strategy Briefings – Core concepts of engineering troubleshooting and failure analysis
- Case Studies – Real plant scenarios involving process, mechanical, and control failures
- Workshops – Team-based troubleshooting and root cause identification
- Peer Exchange – Lessons learned from participant experience
- Tools – Troubleshooting checklists, RCA templates, and logic tree diagrams

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Course Outline

Detailed 2-Day 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: Foundations of Troubleshooting and Process Diagnostics

- Module 1: Introduction to Troubleshooting Methodologies (07:30 – 09:30) • Types of plant failures and structured thinking methods
- Module 2: Troubleshooting Tools and Techniques (09:45 – 11:15) • Logic trees, cause-effect diagrams, Pareto charts
- Module 3: Workshop – Creating a Troubleshooting Tree (11:30 – 01:00) • Apply tools to a simulated equipment issue
- Module 4: Case Study – Process Flow Disruption (02:00 – 03:30) • Diagnosing a real-world plant incident

Day 2: Root Cause Analysis and Engineering Solutions

- Module 5: Engineering Root Cause Analysis Techniques (07:30 – 09:30) • 5 Whys, FMEA, fault isolation
- Module 6: Process & Equipment Troubleshooting (09:45 – 11:15) • Pumps, compressors, heat exchangers, control loops
- Module 7: Workshop – Team-Based RCA Simulation (11:30 – 01:00) • Group activity on failure scenario resolution
- Module 8: Wrap-Up – Lessons Learned and Preventive Action Planning (02:00 – 03:30) • Review, final Q&A, and course conclusion

Certification

Participants will receive a Certificate of Completion in Process Plant Troubleshooting & Engineering Problem Solving, validating their competency in diagnosing and resolving operational and technical issues in industrial process environments.

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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