MAWA EVENTS

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

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

POWER GENERATION PLANT HEAT RATE OPTIMIZATION: TESTING, PERFORMANCE ANALYSIS & IMPROVEMENT

"Boost your plant's efficiency, reduce costs, and enhance performance through expert heat rate optimization."

Schedule

Date	Venue	Fees (Face-to-Face)
06 – 10 Jul 2026	Singapore	USD 3495 per delegate

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

Introduction

In today's energy sector, improving the heat rate of power generation plants is essential for reducing fuel costs, increasing output, and minimizing environmental impact. This intensive 5-day course delivers in-depth knowledge and hands-on techniques for measuring, analyzing, and improving heat rate performance in thermal power plants.

Participants will explore proven strategies, industry benchmarks, and advanced diagnostic tools to optimize plant operations and meet sustainability goals.

Objectives

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

- Understand the fundamentals of heat rate and its impact on power plant efficiency.
- Conduct performance tests and accurately interpret data.
- Identify key areas for heat rate improvement.
- Apply best practices for system optimization and maintenance.
- Develop actionable improvement plans aligned with cost and regulatory considerations.

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Why Attend

- Learn cutting-edge techniques for boosting plant efficiency.
- Gain practical experience with performance testing and analysis.
- Reduce fuel and operational costs while improving reliability.
- Understand regulatory requirements related to emissions and efficiency.
- Build confidence in implementing optimization strategies across plant systems.

Target Audience

This program is designed for:

- Power plant engineers and operators.
- Performance and efficiency engineers.
- Maintenance and reliability professionals.
- Energy managers and system analysts.
- Technical leaders and project managers in thermal power generation.

Individual Benefits

Key competencies that will be developed include:

- Deep understanding of heat rate principles and performance metrics.
- Proficiency in conducting detailed plant performance tests.
- Ability to analyze system data and identify improvement opportunities.
- Skills in applying practical solutions for optimized plant operations.
- Knowledge of industry standards and regulatory frameworks.

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Enhanced plant efficiency and reduced heat rate.
- Lower fuel consumption and operating costs.
- Improved system reliability and reduced downtime.
- Stronger compliance with environmental and energy regulations.
- Greater capacity to drive continuous improvement initiatives.

Instructional Methodology

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

- Expert Briefings – Detailed exploration of heat rate fundamentals and system dynamics.
- Case Studies – Real-world examples of successful heat rate improvements.
- Hands-on Workshops – Exercises in testing procedures, data analysis, and system optimization.
- Group Discussions – Collaborative problem-solving on plant performance challenges.
- Tools & Templates – Checklists, diagnostic frameworks, and improvement planning guides.

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Course Outline

Training Hours: 8:30 AM – 4:30 PM **Daily Format**: 3–4 Learning Modules | Coffee Breaks: 10:00 & 3:00 | Lunch Buffet: 12:30 – 1:30

Day 1: Heat Rate Basics & Performance Fundamentals

- Module 1: Heat Rate Concepts (08:30 – 10:30)
- Definition, importance, and influencing factors.
- Module 2: System Overview (10:45 – 12:45)
- Energy flows and key performance indicators.

Day 2: Performance Testing Techniques

- Module 3: Testing Protocols (08:30 – 10:30)
- Setting up accurate performance tests.
- Module 4: Data Collection & Validation (10:45 – 12:45)
- Tools, instrumentation, and best practices.

Day 3: Data Analysis & Diagnostics

- Module 5: Analyzing Test Results (08:30 – 10:30)
- Identifying performance gaps and root causes.
- Module 6: System-Specific Challenges (10:45 – 12:45)
- Boiler, turbine, condenser, and auxiliary systems.

Day 4: Heat Rate Improvement Strategies

- Module 7: Optimization Techniques (08:30 – 10:30)
- Maintenance, tuning, and control upgrades.
- Module 8: Technology Applications (10:45 – 12:45)
- Advanced monitoring tools and retrofit options.

Day 5: Action Planning & Best Practices

- Module 9: Developing Improvement Plans (08:30 – 10:30)
- Prioritizing initiatives and estimating ROI.
- Module 10: Industry Case Studies (10:45 – 12:45)
- Success stories and lessons learned.

Certification

Participants will receive a Certificate of Completion in Power Generation Plant Heat Rate Optimization, recognizing their ability to enhance plant efficiency through rigorous testing, analysis, and improvement strategies.

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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