

# PRACTICAL BOILER CONTROL AND INSTRUMENTATION FOR ENGINEERS AND TECHNICIANS

*“Enhance your skills in boiler operations, control systems, and instrumentation for safe and efficient plant performance”*

## Schedule

Date	Venue	Fees (Online)
18 - 19 Nov 2025	Online	USD 700 per delegate

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

## Introduction

Boiler systems are vital to energy generation and industrial operations, and efficient control and instrumentation are key to safety, reliability, and performance. This 2-day online training equips engineers and technicians with practical knowledge of boiler control systems, instrumentation, and operational best practices. Participants will gain hands-on understanding of boiler monitoring, control loops, and troubleshooting techniques.

The program combines theory with practical exercises, real-world examples, and interactive discussions. Attendees will learn to optimize boiler performance, ensure safe operation, and maintain compliance with operational and safety standards, empowering them to make informed decisions in their daily work.

## Objectives

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

- Understand the fundamentals of boiler operations and instrumentation.
- Operate and monitor boiler control systems effectively.
- Analyze and troubleshoot common boiler instrumentation issues.
- Ensure compliance with safety and operational standards.
- Optimize boiler performance for efficiency and reliability.

## Why Attend

- Gain practical knowledge of boiler instrumentation and control systems.
- Learn to troubleshoot operational issues effectively.
- Improve safety, efficiency, and reliability in boiler operations.
- Network with professionals in power and industrial sectors.
- Apply best practices in real-world operational environments.

## Target Audience

This program is designed for:

- Engineers and technicians working with boiler systems.
- Maintenance and operations personnel in industrial plants.
- Safety and process control engineers.
- Plant managers responsible for energy and steam systems.

## Individual Benefits

Key competencies that will be developed include:

- Understanding boiler control loops and instrumentation.
- Skills in monitoring and troubleshooting boiler operations.
- Knowledge of safety and regulatory compliance requirements.
- Ability to optimize boiler efficiency and reliability.

## Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved operational efficiency and safety of boiler systems.
- Reduced downtime and risk of equipment failure.
- Enhanced compliance with industry standards and regulations.
- Increased competency of technical and operational teams.

## Instructional Methodology

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

- Strategy Briefings - Fundamentals of boiler control, instrumentation, and operational principles.
- Case Studies - Real-world examples of boiler system performance and troubleshooting.
- Workshops - Hands-on exercises on control loops, monitoring, and instrumentation troubleshooting.
- Peer Exchange - Group discussions on challenges, best practices, and lessons learned.
- Tools - Checklists, templates, and guidelines for boiler control and instrumentation.

## Course Outline

Detailed 2-Day Course Outline

Training Hours: 9:00 AM – 5:00 PM Daily Format: 3–4 Learning Modules | Coffee Breaks & Lunch Break included

Day 1: Boiler Operations and Control Fundamentals (09:00 – 04:00)

Module 1: Introduction to Boiler Systems (09:00 – 11:00)

- Overview of boiler types and applications.
- Basic operational principles and safety considerations.

Module 2: Boiler Control Systems (11:15 – 01:00)

- Fundamentals of control loops and instrumentation.
- Monitoring parameters and system performance.

Module 3: Troubleshooting Boiler Systems (02:00 – 04:00)

- Common instrumentation and operational issues.
- Practical solutions and preventive measures.

Day 2: Advanced Instrumentation and Performance Optimization (09:00 – 04:00)

Module 4: Instrumentation Calibration and Maintenance (09:00 – 11:00)

- Calibration procedures and techniques.
- Preventive maintenance for reliable operation.

Module 5: Optimizing Boiler Performance (11:15 – 01:00)

- Efficiency improvement strategies.
- Safety and compliance considerations.

Module 6: Case Studies and Action Planning (02:00 – 04:00)

- Real-world examples of operational excellence.
- Developing actionable plans for plant operations and monitoring.

## Certification

Participants will receive a Certificate of Completion in Practical Boiler Control and Instrumentation, validating their expertise in boiler operations, control systems, instrumentation, and performance optimization.

## 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:

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