

Call 1-877-978-7246



# BOILER OPERATION MAINTENANCE & SAFETY™

Day 1 - Fundamentals, Operation & Safety

Day 2 - Maintenance, Inspection, Testing & Efficiency

Specifically Designed for Maintenance Personnel  
in Plants, Facilities and Commercial Buildings



“Awesome ... I will be attending  
more training for sure!

— Eugene A., Facilities Manager

- Reserve your space now either online or by calling us at 1-877-978-7246!
- Check us out online at [live.tpctraining.com](http://live.tpctraining.com) for a complete list of all virtual and in-person seminars.
- This seminar is also available for Virtual or In-Person Private Group Training

## Learning Objectives:

- Boiler Types and Configurations
- Fundamentals of Combustion and Heat transfer
- Burner Operation and Control
- Boiler Operation and Testing/Standard Operating Procedures
- Boiler Room Safety
- Cause and Effect Case Study
- Operation Standards
- Controls and Safety Devices for Automatically Fired Boilers
- Inspection and Maintenance of Commercial and Industrial Boilers
- Boiler and Burner Efficiency
- Troubleshooting



## SEMINAR OVERVIEW

In most facilities, the boiler is the device with the most potential for disaster. This two-day Boiler Operation, Maintenance & Safety course provides students with the practices and procedures to eliminate that potential. It offers a great overview for maintenance technicians, multi-craft tradespeople, building managers, stationary engineers, or anyone seeking to improve their boiler maintenance and operation skills.

The goal of this course is to ensure the student gains a comprehensive understanding of commercial, industrial and utility boiler systems. Boiler inspections, operating controls testing and general troubleshooting tips will all be discussed. Overall, this program is designed to help maximize safety, dependability, and efficiency, thus extending boiler life, improving boiler efficiency, saving energy costs for the employer, and establishing a culture of safe work practices among the employees.

## WHAT YOU WILL TAKE HOME

- A laminated, full-color TPC Training Reference Guide detailing all the “must-know” information covered in the class. Keep this with you while on the job for immediate knowledge recall.
- Comprehensive classroom materials
- A Personalized Training Certificate with 0.8 TPC Training Continuing Education Units for each day attended, 1.6 for both days.
- All the information you need from asking our instructors specific questions about your own unique equipment or facility.

## CONTINUING EDUCATION

Upon completion of this seminar, the student will receive a Certification of Completion and .8 TPC Training CEUs per day attended. Most employers and many government agencies accept TPC Training CEUs to fulfill their continuing education requirements. If the student needs CEUs to renew a state license, please contact us at 303-867-5039 to ensure the state licensing board has approved the seminar. If we are currently not approved by your state licensing board, we are happy to begin the process as long as we receive your request at least one month before the training date.

## DISCUSSION TOPICS

Boiler Types and Configurations

- Firetube Boilers
- Watertube Boilers
- Cast Iron Boilers
- High Pressure Boilers
- Low Pressure Boilers
- Steam Boilers
- Hydronic Boilers

Fundamentals of Combustion and Heat transfer

- Theory of Combustion
- Thermodynamics
- Steam Tables

Burner Operation and Control

- Gas and Oil Train
- Standard and High Turndown Burner
- Burner Controls

Boiler Operation and Testing / Standard Operating Procedures

- Start-Up and Shut-Down
- Normal Operation
- Boiler Blowdowns
- Water Quality Analysis and Treatment
- Valve Types
- Low Water Cutoff Controls

Boiler Room Safety

- Boiler Accidents
- Cause and Effect

Cause and Effect Case Study

- Safety Valves
- Confined Spaces
- Lockout/Tagout

Operation Standards

- ASME Codes
- NFPA Codes
- NBIC Code

Controls and Safety Devices for Automatically Fired Boilers

- Water Level Control
- Temperature Control
- Pressure Control
- Fuel Trains

Inspection and Maintenance of Commercial and Industrial Boilers

- Fireside
- Waterside
- Burner
- Auxiliary Equipment

Boiler and Burner Efficiency

- Heat Exchanger and Combustion Efficiency
- Efficiency Tests
- Condensate Return
- Steam Traps

Troubleshooting

- Burner
- Controls

## JOIN OUR CLASSROOM SEMINARS FROM VIRTUALLY ANYWHERE

Our virtual instructor-led training option allows students to connect to a live classroom seminar via a web link, with the ability to participate full in the classroom dialogue, exercises, and Q&A. Online participants get all the benefits of the full classroom experience, plus the convenience of remote access.

Features include

- Two full days of live, interactive instruction from a TPC Training instructor
- All classroom materials in PDF format
- Certificate of completion for 16 hours of live training
- Full technical support to ensure your online experience is a rewarding one

## SEMINAR FEE & AGENDA

This 2-day course is just \$1195 (Earn 1.6 CEUs)

7:30 am	Registration
8:00 am	Class Begins
12:00 - 1:00 pm	Lunch (on your own)
4:30 pm	Class Ends

## NO RISK REGISTRATION & MONEY-BACK GUARANTEE

You can reserve your space in the class at any time and cancel without penalty. Cancellations made more than 14 days prior to the seminar may be refunded or rescheduled. Cancellations made within 14 days may be rescheduled for any future topic and/or date. If you're not satisfied with the course, we'll promptly refund your payment.

## BRING THE TRAINING TO YOUR FACILITY VIRTUALLY OR IN-PERSON

Every public seminar class in our Course Catalog can be conducted virtually or on-site at your facility, with the same expert instructors. To arrange an in-person private group training, call or email us at [virtual@tpctraining.com](mailto:virtual@tpctraining.com).

Some Advantages of In-Person Private Group Training

- Cost Savings — Save time and travel costs by keeping workers on-site
- Customized Content — Tailor the seminar to your facility and equipment
- Flexibility — Accommodate multiple shifts and different start and end times



“Learned a lot in the class and enjoyed attending it. The instructor was great!”

— Derek N., Engineering Technician