

Learn About:

- Production and distribution of steam
- Sizing and selecting piping insulation
- Troubleshooting steam valves
- Preventing water hammer
- Pipe sizing and lagging
- Reading steam tables
- Testing and repairing steam traps
- How condensate systems work within steam systems
- Safely and effectively testing steam systems problems
- Efficiency testing in steam systems
- Pressure and temperature applications for steam systems
- Identifying steam leaks
- How water quality affects steam systems

Steam Systems

Maintenance, Safety & Optimization™

Don't Open a Steam Valve in a High Pressure Steam System Until You Have Taken this Course!



"I needed this training 25 years ago..."

Jim C. - Power Plant Manager

A 2-Day Course to Increase the Efficiency of Your Steam System & Prevent Steam Blast

- Reserve your space now! **CALL 1-877-978-7246**
- Check us out online at live.tpctraining.com for a complete listing of all seminars coming to your area
- This seminar is also available as an **Online Simulcast** or can be brought **On-Site** to your facility



SEMINAR OVERVIEW

Steam Systems are not only one of the biggest consumers of energy in most plants or facilities, but they can also be hazardous to work on or around if proper care is not taken. This 2 day seminar on steam systems maintenance will teach you how to keep your steam system working efficiently and how to fix common problems and work safely. Emphasis is given so that a maintenance technician can quickly identify and solve common problems in steam systems and take corrective actions to reduce energy loss.

WHAT YOU WILL TAKE HOME

- 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.

TRAINING PHILOSOPHY

TPC Training's curriculum is designed to provide complete coverage of essential industrial maintenance skills, across a full range of electrical training, HVAC, plant management, and mechanical & industrial topics. Our "see, touch, do" instructional approach allows us to impart practical skills in an intensive format.

The most vital part of our seminar format is the coverage that goes beyond the course outline. Our small class sizes allow each instructor to tailor the course to address students' individual needs, concerns, and experience levels. Our instructors deliver content with hands-on exercises, demonstrations role-playing, visuals, and case study discussions.

 ***"This course went right to the point."***

DISCUSSION TOPICS

Steam Fundamentals

- Boiler and Combustion Process
- Thermodynamics
- Reading Steam Tables
- Steam Distribution and Utilization

Piping and Fittings

- Piping Materials and Construction
- Pipe Sizing and Lagging
- Steam Fittings
- Expansion Joints
- Guides and Anchors
- Support and Labeling Requirements
- Seismic Restraint Requirements

Piping Insulation

- Energy Loss
- Material Selection
- Sizing
- Best Practices for Removal of Insulation

Condensate Systems

- System Designs and Operation
- Return Management
- System Testing and Maintenance

Steam Valve Maintenance

- Leakage
- Valve Testing and Maintenance

Safety Relief Valves

- Codes
- Setting
- Maintenance and Adjustments

Steam Leaks

- Checking for Steam Leaks
- System Operability

Steam System Management and Maintenance

- Steam Effects on Mechanical Components
- Cutting
- Corrosion
- Thermal and Mechanical Shock
- Steam System Troubleshooting

Water Management in Steam Systems

- Water Quality and Steam
- Water Hammer

Steam Traps

- Design and Operation
- Sizing and Selection
- Testing
- Repair

Steam Pressure and Temperature Control

- Pressure and Temperature with Steam
- Pressure Reduction
- Pneumatic Rotary Control
- Steam Isolation Valves

Steam System Energy Management

- Cost of Steam
- Heat Exchanger and Combustion Efficiency
- Efficiency Tests
- Flash Recovery Systems

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.

JOIN OUR CLASSROOM SEMINARS FROM VIRTUALLY ANYWHERE

live.tpctraining.com/simulcast

Our simulcast option allows students to connect to a live classroom seminar via a web link, with the ability to participate fully 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

BRING THE TRAINING ON-SITE TO YOUR FACILITY

live.tpctraining.com/on-site

Every public seminar class in our Course Catalog can be conducted on-site, with the same expert instructors. To arrange an on-site training, call or email us at onsite@tpctraining.com.

Some Advantages of On-Site 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

