

New Seminar Coming to Your Area!

Boiler Operation Maintenance & Safety™

**Ideal for Workers in
Multi-Craft Environments!**

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

▶ *"One of the best courses I have
attended on boilers over the
last 25 years."*

Gary Danielson – Stationary Engineer
California Department of Corrections



**College Credit & Testing
Available with this course**

This course now carries American Council on Education (ACE)
College Credit Recommendations.

Day 1 - Fundamentals, Operation & Safety

**Day 2 - Maintenance, Inspection,
Testing & Efficiency**

- New Convenient Format - Attend either one or both days!
- This seminar can also be presented at your facility for larger groups
- Reserve Your Space Now! **CALL 1-877-97-TRAIN**
- Check us out online at **www.AmericanTrainco.com**
for a complete listing of all seminars coming to your area

For a schedule
of open enrollment
classes or to bring
this training to your
plant or facility,
contact us @

1-877-97-TRAIN

**www.American
Trainco.com**

▶ **"A great class!"**

David Smigelski – Sr. Maintenance Technician
Cooper Standard

Boiler Operation Maintenance & Safety™

for Building, Plant & Facility Maintenance

PURPOSE OF TRAINING

Being able to service your own boiler is one thing. Being able to do it safely is another. This seminar is designed to teach building and facility maintenance personnel to do both. After attending this seminar you will be able to reduce the need for outside service contractors, while at the same time increase your confidence and comfort level in operating and maintaining your own boilers. And because we know time is money, this seminar is designed to have immediate impact! We approach our students as if they were our own employees. We give them real world, practical knowledge they can use today. And they are expected to go back to their workplace and immediately apply what they have learned. Now that's "Real World" training! *

ABOUT OUR INSTRUCTORS

American Trainco instructors are seasoned veterans with many years of real world work experience. In addition, they are required to have a formal education and need to be true leaders in their field. We don't hire field people without teaching experience, and we don't hire teachers without field experience. As a result, students who attend our seminars often get more from a couple days with our instructors than from years of reading books, watching videos, or even working on the job. How do we know? They tell us.

Anyone can teach theory, but there simply is no substitution for experience. What sets American Trainco apart is our ability to communicate that experience to our students. As one attendee told us at the end of his two-day course, "I think I can go back to work and teach the veterans a thing or two." Mission accomplished.

HIGH QUALITY PRESENTATIONS

From the start we've demanded that all our presentations would be lively attractive, crisp and clear. Our instructors use state-of-the-art computers, projection equipment and software to bring you a high quality visual experience.

* Boiler operating licensing requirements vary by state and locality. While this course is not intended to counter or replace these various requirements, it can help students prepare for licensing exams, meet continuing education requirements, or provide increased maintenance and safety knowledge for already licensed or approved individuals. Please check with your local authorities to understand licensing laws that may affect you.

TRAINING OUTCOMES

(After Day 1)

1. Understand the fundamentals of boiler system heat transfer
2. Identify boiler types: firetube, watertube, sectional, condensing
3. Recognize and understand auxiliary boiler system components
4. Understand safe start-up and shut-down procedures for your boiler
5. Know how to maintain safe operating pressures and temperatures
6. Understand combustion essentials - fuel and air mixture
7. Recognize the major hazards associated with boiler operation and the ways to prevent them!

(After Day 2)

1. Have an understanding of boiler codes and standards as they apply to your boiler and boiler room
2. Know how to prepare for a boiler inspection
3. Be able to develop a preventive maintenance program for your boiler
4. Understand the principles involved in maintaining an efficient boiler
5. Know how to use combustion efficiency equipment and what the readings mean to your cost of operation
6. Have a working knowledge of boiler water treatment programs - the chemicals, the equipment, and the vendors.
7. Be able to troubleshoot basic boiler problems before they become boiler failures

UNAFFILIATED & NON-COMMERCIAL

Unlike some training experiences, you won't get a sales presentation at an American Trainco seminar—all you get is an honest, commercially unbiased education. We do not engage in the sales or promotion of industrial supplier's products, so you know that by attending one of our seminars, your time and money is well spent.

CERTIFICATES-TESTING-COLLEGE CREDIT

After completion of this seminar students will receive a Certificate of Completion and 1.6 CEUs (Continuing Education Units) approved by the Maintenance Training Association of the Americas. Students may also elect to take the MTAA Certification test associated with this topic. Those seeking college credit recommendations must attend both days of this course and successfully pass the MTAA Certification test. This course is recommended by ACE for 1 college credit hour. Transcripts are available through American Trainco.

Some of the other training topics we can bring to your site include:

- Basic Electricity for the Non-Electrician™
- Electrical Troubleshooting
- Air Conditioning & Refrigeration
- Boiler Operation, Maintenance & Safety™
- Arc Flash Protection & Electrical Safety™
- 2011 National Electrical Code®

And 20+ other courses in the following areas:

- Electrical / Electrical Controls
- HVACR
- Mechanical
- Facility & Plant Management
- Fluid Power
- Pumps / Piping
- Codes / Standards / Safety

▶ **"I came into this training totally blind and I'm leaving with my eyes open. I highly recommend this course to others."**

Jack Robinson - Maintenance Technician II - Smurfit Stone Container

Reserve Your Space Now! **CALL 1-877-97-TRAIN** Or Online at: www.AmericanTrainco.com

C O U R S E O V E R V I E W

Day 1 Fundamentals, Operation, & Safety

Day 1 of this seminar has been designed to give the student a broad introduction to boilers, including every-day operation and important safety practices. This course is a great overview for apprentice technicians, multi-craft trades people, building managers, or anyone who wants to work safely with boiler systems. This seminar will also serve as a valuable safety refresher course for the more experienced technician. **Understanding basic boiler operation and safety is the goal of Day 1.** In addition, students will learn about combustion and heat transfer fundamentals, the different types of boilers, and basic burner control. An overview of operator licensing and certification will also be discussed.

DISCUSSION TOPICS – DAY 1

Fundamentals of Steam and Hot Water Boilers

- Boiler Types and Pressures
- Firetube, Watertube, Cast Iron Sectional
- Condensing and Pulse Boiler Technology
- High and Low Pressure Systems

Steam System Auxiliary Equipment

- Deaerators
- Economizers and Heat Exchangers
- Steam Traps

Hot Water System Auxiliary Equipment

- Expansion and Compression Tanks
- Air Separators and Vents

Thermodynamics

- Heat Transfer Principles
- Sensible and Latent Heat
- Reading The Steam Table

Combustion Fundamentals

- Air and Fuel Mixture
- Perfect, Complete, and Incomplete Combustion
- The "3 T's" of Combustion

Gas and Oil Boiler Burners

- Fuel Trains
- Burner Design and Operation
- Burner Controls

Boiler Operator Responsibilities

- Maintaining the Normal Operating Water Level (NOWL)
- The Importance of Boiler Log Sheets
- Testing Controls and Safety Devices
- Boiler Room Safety

Day 2 Maintenance, Inspection, Testing & Efficiency

Day 2 is designed for people who are scheduled to attend Day 1, or already have a good foundation in boiler operation and safety. In this second day, students will learn about important inspection, maintenance and burner efficiency practices for their commercial, industrial and utility boiler systems. **Increasing boiler life and reducing energy costs is the aim for Day 2.** Construction design standards, boiler inspections, operating control testing and general troubleshooting tips will also be discussed in this important second day. This day is designed to help you get maximum mileage out of your boilers!

DISCUSSION TOPICS – DAY 2

Boiler Codes and Standards

- ASME Pressure Vessel Construction
- National Board Inspection Code
- NFPA Fuel Gas and Fuel Oil Codes
- Controls and Safety Devices for Automatic Boilers

Boiler Operator Licensing Requirements

- Federal, State, and Local Jurisdiction

Boiler Safety Controls

- Low Water Fuel Cut-Off (LWCO)
- Safety Relief Valve
- High-Pressure and High Temperature Cut-Outs

Maintenance Programs for Boilers and Boiler Systems

- Burner Tuning and Routine Maintenance
- Fireside Cleaning

Boiler Water Chemistry

- Basic Water Chemistry for Boiler Systems
- Working With Your Water Treatment Vendor
- Steam Boiler Water Chemicals
- Hot Water Boiler Chemicals
- Troubleshooting Waterside Problems
- New Boiler Boil-Out Procedure
- Wet and Dry Storage (Lay-Up)

Boiler and Burner Efficiency & Troubleshooting

- Combustion Analysis Basics
- Optimizing Heat Transfer In Your Boiler Room
- Minimizing Losses
- Troubleshooting Problem Areas
- Operator Responsibilities

SEMINAR AGENDA

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

SEMINAR FEE

\$495 Each Day
\$990 Both Days

NO RISK REGISTRATION and MONEY-BACK GUARANTEE

If you're not yet sure you'll be able to attend this seminar, you can still make a reservation to hold your space in class. While payment is due prior to the start of the seminar, you may choose a full refund or credit for cancellations made at least 24 hours in advance. Student substitutions can also be freely made at any time prior to the start of the seminar. Refunds will not be issued for registered attendees who fail to show up and have not given a notice of cancellation. In the rare event that you do not receive the expected value after attending our seminar, simply notify us in writing of your reasons and your money will be promptly refunded.

IN-HOUSE TRAINING

You can bring this or any other maintenance training program directly to your plant or facility. Simply call us and tell us what you're looking for. In addition to our own American Trainco seminars and instructors, we have established relationships with literally hundreds of other expert instructors and consultants who conduct training in virtually all areas of maintenance; and our custom training staff is among the most experienced in the industry. Chances are good we will be able to meet your needs.

Call **1-877-97-TRAIN** and ask for Dan or Adam, or email **AdamC@AmericanTrainco.com**.

You may also visit us on the web at: **www.AmericanTrainco.com** to view a listing of courses and to request a quote.

Reserve Your Space Now!

CALL 1-877-97-TRAIN

Or Online at: www.AmericanTrainco.com

▶ **"... knowledgeable and entertaining."**

Gail Hochhalter - Project Manager - Multnomah County

▶ **"...not a minute was wasted!"**

Michelle LeMoine - Sr Marketing Rep. - United Illuminating

▶ **"...a true learning experience."**

Marty King - Engineer / Boiler Op. - St. Anthony Medical Center

"Excellent and accommodating... a wealth of new knowledge"

Richard D. Phillips – Facility Electrician - Delphi Delco

▶ **"Outstanding presentation"**

Tom Onuschak – Eastwood Printing

Real World Training...for Real World Needs™

AT AMERICAN TRAINCO

REGISTRATION

Boiler Operation Maintenance & Safety™ for Building, Plant and Facility Maintenance

For a schedule of open enrollment classes or to bring this training to your plant or facility, contact us @

1-877-97-TRAIN

www.AmericanTrainco.com

“Learned more in 2 days than I thought possible - great stuff!”

Glen Robey – Sr. Facilities Analyst
Verizon Wireless

SEMINAR FEE: \$495 Each Day \$990 Both Days

FIVE EASY WAYS TO REGISTER:

- 1) **Internet** www.AmericanTrainco.com
- 2) **Fax** (303) 531-4565
- 3) **Phone** Toll Free 1-877-97-TRAIN 1-877-978-7246 or (303) 531-4560
- 4) **Mail** this form to: American Trainco, Inc. P.O. Box 3397 Englewood, CO 80155
- 5) **E-mail** the information requested on this form to: Sales@AmericanTrainco.com

Primary Contact/Authorizing Supervisor: Name _____
 Title _____ Company Name _____
 Address _____
 City _____ State _____ Zip _____
 Phone _____ Fax _____ Email _____

Seminar Attendees: Name	E-Mail	Seminar City	ATTEND		
			Day 1 Only	Day 2 Only	Days 1 & 2
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Billing Information: (Please fill out this section only if the "Bill To" name and address is different than the Authorizing Person's name and address above.)

Individual's Name _____ Title _____ Company Name _____
 Address _____ City _____ State _____ Zip _____
 Phone _____ Fax _____ Email _____

Payment Method:

Visa MasterCard Discover American Express

Card Number: _____
 Expiration Date: _____
 Name on Card: _____
 Signature: _____

Check Enclosed (Make payable to: American Trainco, Inc.)
 Bill Purchase Order #: _____

GOT A LARGE GROUP?

BLOCK PURCHASING PROGRAM

Buy your training in bulk and save up to 25%! This program can be used to register any person for any seminar, at any location and for any date.

ON-SITE TRAINING

Bring any of our seminars directly to your site. The more people you have, the greater the savings!

Call

1-877-97-TRAIN



PO Box 3397
Englewood, CO 80155



PROMOTION CODE

X05