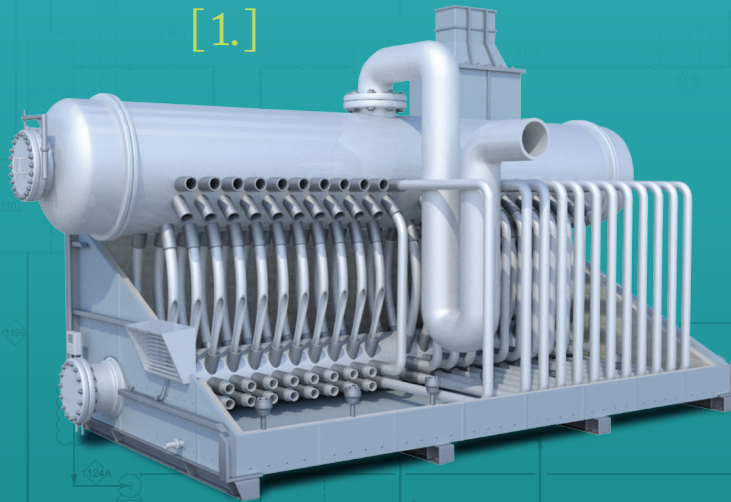


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[1.]

EXPAND YOUR KNOWLEDGE.

IMPROVE YOUR TEAM'S TROUBLESHOOTING SKILLS WITH OUR SIMULATOR-BASED BOILER OPERATIONS COURSE.

Because boilers play a crucial role within your facility, your operators need the knowledge and skills to keep them running safely and reliably. Our team of experienced process operators and instructional design professionals created this course to teach console operations and troubleshooting skills to boiler operators.

This course targets experienced field operators making the transition to the console and experienced console operators needing to improve their process knowledge and troubleshooting skills. The one-day course covers both theoretical learning and practical, hands-on, simulator-based training. Learners begin by reviewing principles of operation and controls before working on challenging scenarios and troubleshooting exercises. This course teaches operators to identify, analyze and solve typical boiler issues in a realistic operating environment.

Course attendees will:

- Increase boiler process knowledge
- Improve troubleshooting skills
- Practice resolving typical operating issues

This course is offered onsite and taught by a professional instructor with process operations experience. Looking for something tailored to your site? Ask how this course can be customized to meet your specific requirements.

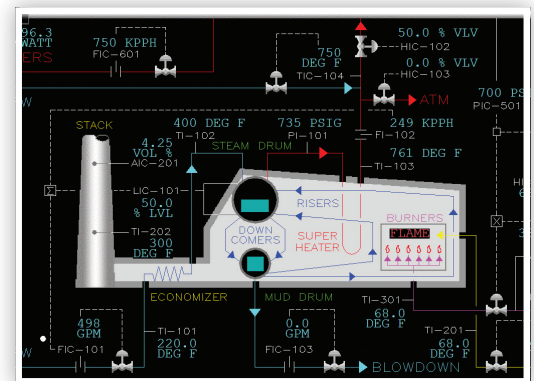


Image from boiler simulator.

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READY TO ENROLL?

Visit systraninc.com for more information, or contact us at 281.480.8004.



IMPROVE YOUR SKILLS

Upon completion of this course, the learner will understand the operating cause-and-effect relationships of boiler operations.

The learner will experience and become familiar with the effects of:

- Decreasing feed flow
- Increasing/decreasing steam header pressures
- Increasing/decreasing fuel gas flow
- Changes in BTU levels

TARGETED OPERATOR COMPETENCIES

The learner will enhance the following critical operator competencies:

- Selective attention
- Problem sensitivity
- Deductive reasoning
- Resistance to premature judgment
- Speed of closure
- Response orientation

The learner will enhance their ability to recognize and solve boiler process upsets by practicing their skills on a simulator that is representative of the real operating environment.

The learner will gain confidence in boiler operations by experiencing and practicing their problem solving and troubleshooting skills in a simulated process upset condition.

The learner will gain confidence in their troubleshooting capability and use of a systematic troubleshooting methodology.

TERMINAL OBJECTIVE

Given: A dynamic steam boiler process simulator and technical documentation

You Will: Apply troubleshooting techniques to resolve steam boiler upsets

How Well: Complete the exercises and knowledge assessment with 85% accuracy

OBJECTIVES

- [1.] Explain boiler operation principles
- [2.] Identify and describe the purpose of boiler components
- [3.] Relate boiler process variables to operational safety
- [4.] Define boiler operating terms
- [5.] Explain the purpose and function of boiler control system process variables
- [6.] Demonstrate safe and effective boiler operations
- [7.] Troubleshoot and resolve selected boiler upsets

COURSE OUTLINE

- I. Introduction
- II. Pre-Test
- III. Review Boiler Operating Components
- IV. Review Operating Terms
- V. Review Process Variables and Operational Safety
 - a. Flow
 - b. Level
 - c. Pressure
 - d. Temperature
- VI. Simulator and Model Orientation
- VII. Boiler Control System
 - a. Process Inlet Flows
 - b. Process Outlet Flows
 - c. Design Operating Values; Flow, Level, Pressure, Temperature
- VIII. Boiler Control System Process Variables
 - a. Boiler Master
 - i. Steam Header Pressure
 - ii. Firing Bias
 - iii. Air Control Loop
 - b. Fuel to Air Ratio
 - i. Excess Air
 - ii. Analyzer Control
 - iii. Feed Forward Control Loop
 - c. Level
 - i. Boiler Feed Water
 - ii. Steam Flow
- IX. Troubleshooting
 - a. Methodology
 - b. Scenarios
- X. Post-Test