

Boiler Controller Technology and Burner Management System Course

Training Date: 18 – 22 February, 2024
Training Venue: Kuala Lumpur, Malaysia

Training Time: 8.30 am – 2.30 pm
Training Fee: USD4,500 per participant

COURSE OBJECTIVES

The course is designed to give the participants with a working knowledge on concepts of process control system, common types of control equipment's including their working principle and tuning techniques. The participants will be exposed on basic boiler operation, boiler equipments, and how to control the boiler from the basic to the advance control system. The format is to comprises of short lectures and extensive practical workshop session using boiler simulation system.

Participants will be tough on a single element, two elements and three elements control system. They will learn how to use lead lag parallel metering systems. Basic cascade, split range, selector, ratio, feedforward, supervisory control and strategies control application for various categories plant processes will be covered too.

WHO SHOULD ATTEND?

- Process/ utility Engineer
- Instrument Engineer
- Operator and Instrument Technician

TRAINING OUTCOMES?

By the end of the session, the participants should be able to :

- ⊕ Apply basic PID control system.
- ⊕ Tune a single loop and multiple loops.
- ⊕ Identify and recognize various control loops.
- ⊕ Identified elements used for boiler control system
- ⊕ Apply single elements, dual elements and three elements control system.
- ⊕ Tune Enhance PID controller.
- ⊕ Apply low and high selector for burner system.
- ⊕ Trim for boiler efficiency
- ⊕ Recognize feedback and feed forward control loops.
- ⊕ Perform supervisory control system.
- ⊕ Apply control strategies for relevant boiler operation.

SELECTED CUSTOMERS

MALAKOFF
(24816-M)

HUNTSMAN

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TENAGA NASIONAL BERHAD
(20096-AV)

قطر للبترول
Qatar Petroleum



BASF PETRONAS
CHEMICALS

DOLPHIN ENERGY

دولفين للطاقة
DOLPHIN ENERGY

QAPCO
QATAR PETROCHEMICAL COMPANY



MALAYSIA LNG SDN. BHD.



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ALSTOM



COURSE PROGRAM

Overview the course and definition of PID control

- What is PID controller
- What is process dynamics
- The elements of control loops
- Negative feedback and stability.

Boiler elements and operation.

- Mud drum
- Steam drum
- Feed water
- Fuel
- Furnace
- Economizer
- Wind box and soon

Tune PID single loop controller

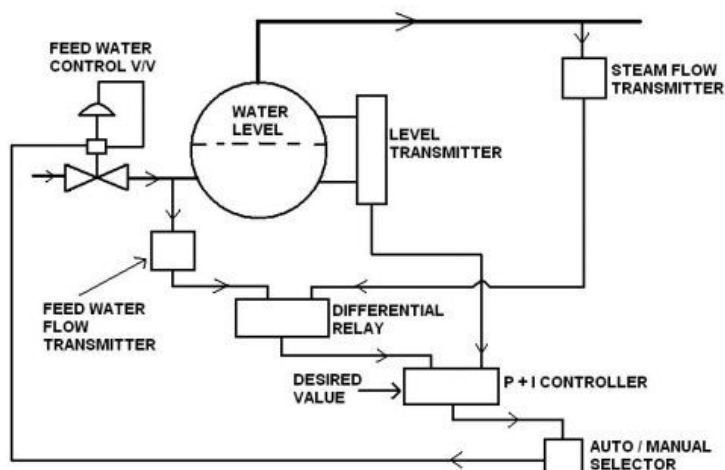
- Try and error method
- Step test method
- Ultimate sensitivity method.
- Shortcut methods

Cascade control

- Principle operation
- Tuning
- Application.

Selector control

- High and low selector.
- Tuning and override control.



Boiler control overview

- Why boiler control
- Reduce flue gas emissions
- Maintain boiler safety
- Control operating cost

Boiler controller

- Plant master control
- Boiler master control
- Combustion control
- Furnace pressure control
- Drum level control
- Single/dual/three elements control.
- Drum level compensation.

Basic firing and Parallel Metering system.

- High and low selector
- Lead lag system

Feed forward control, operation and application.

AFR calculation and stoichiometric value

Boiler efficiency and combustion.

- Boiler efficiency
- Heat exported in steam
- Heat provided by the fuel



About CfPE Technology Solutions

The Center for Professional Enhancement Technology Solutions (known as CfPE Technology Solutions) is incorporated in July 2001 and began as a training and consulting company for power plant, oil & gas and petrochemical sectors in Malaysia. With a small team of experienced and dedicated engineers and multi skilled technical staff we have come a long way. From those humble beginnings, we have successfully grown and today we have achieved reorganization as a premier in organizing short training in Malaysia.

Our professional experience and excellent consulting strengths provide insights and understanding of the challenges facing the industries we serve. CfPE Technology Solutions aims to make a difference. The need for leading-edge training has intensified and is advancing beyond all expectation; it is the basis upon which performance can be measured in an increasingly competitive marketplace.

In the world of today, it is not simply a case of having the necessary professional skills; people must develop interpersonal skills alongside their ability to handle the changes brought about by technological progress. We expect the people who attend our training courses to make an immediate impact, both back at the workplace and in their career and personal development.

CfPE Technology Solutions is a training and consulting company dedicated to increasing our client's competitive edge through the improved performance of their human and capital assets. We aspire to make significant and lasting improvements in our clients' strategic focus and business performance.

CfPE Technology Solutions's mission is to assist and enable world-class companies to increase productivity and performance through their most vital assets - the workforce.

About the Course Instructor

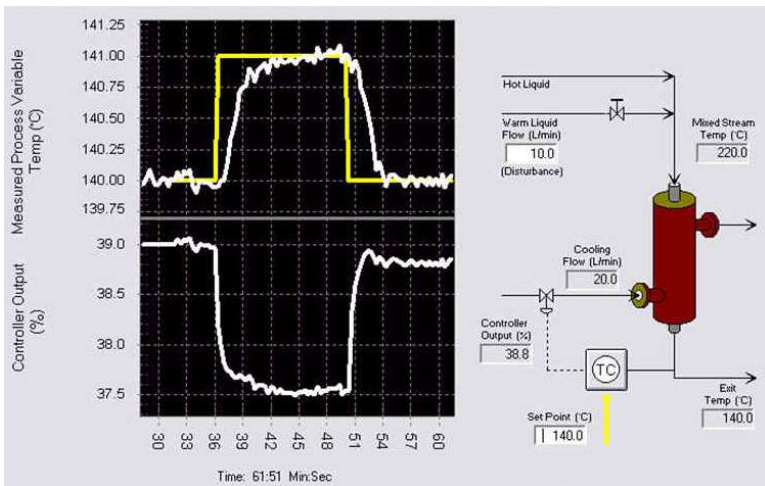
Engr. Azahar bin Mat Noor, graduated with Bachelor of Engineering (Honors) in Electrical Engineering and major in control system from the University of Technology Malaysia.

He is a Registered Professional Engineer (Mechanical) with Board of Engineer, Malaysia and a Member, The Institution of Engineers, Malaysia. He also holds an Instrumentation and Control System certificate from YEW Mitaka, Tokyo.

He had working experiences with several companies such as the Institute Technology Petroleum Petronas (INSTEP) and Centre for Instructor and Advanced Skill Training (CIASST).

Since the past 20 years in teaching, he had delivered for several courses such as;

- ✦ Process Design and Process and Instrumentation for process engineer.
- ✦ Process control technology for Instrument Engineer.
- ✦ Process control technology and application.
- ✦ Control valves service and repair.
- ✦ Instrumentation and measurement Engineering.
- ✦ Basic Instrumentation and Fundamental of Process Control.



Registration Form

Please Send Your Registration To:

Tel:	006.013.208.2143	Fax:	006.09.617.8443	E-mail	info@cfpets.com
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Course Details

Course Name:	Boiler Controller Technology and Burner Management System
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Venue:	Kuala Lumpur, Malaysia
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Course Date:	18 – 22 February, 2024
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Fee:	USD 4,500.00
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Company Information

Organization	
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Address	
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HR / Training Manager

Name :	
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Tel no.:	
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Fax no.:	
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E-mail :	
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Invoice to be sent to

Participant Information

Participant # 1

Participant # 2

Participant # 3

Full Name :			
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Job Title :			
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Department :			
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Telephone No. :			
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Mobile No. :			
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Fax No. :			
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E-mail Address :			
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