CfPE Technology Solutions

Leading Edge's Knowledge Transfer Provider

Basic Instrumentation for Non-Instrument Personnel Course

Training Date: 15th – 19th April, 2012 **Training Time:** 0730 – 1430 hours
Training Venue: Holiday Villa Hotel Doha, Qatar **Training Fee:** USD3,500 per participant

COURSE OBJECTIVES

The quality or performance of a plant control and plant safety is dependent on the quality of measurement and final control elements. The program was design for five days and will covers the working knowledge of basic instrumentation, basic control valve, fundamental of process control, plant safety , equipment operation , selection and installation and also their effect on process control. The participants will be exposed on how to control the processes using process simulator.

WHO SHOULD ATTEND?

This Intensive five-day instructional program covering the educational needs of Instrumentation and Control Engineers and Technicians, Plant Operators, Operation Engineers, Process and Utility Supervisors, and Technical Supervisory personnel involved in Industrial Process Measurement and Control. No specific prerequisite training or experience required for registration.

TRAINING OUTCOMES?

At the end of the course, the participants should be able to:

- Interpret basic Industrial instrumentation.
- Read and locate PFD, P&ID, and loop drawing.
- Interpret measurement terminology
- Identify the instrumentation used in process control.
- Compare the methods and devices used in temperature, pressure, level, flow measurement
- Select which types of final control elements used in process control.
- Understand the operational of Control Valves.
- Understand the Process measurement and their affect on stability system.
- Understand why a systematic approach to troubleshooting is most effective
- Understand the basic process control.
- Tune a simple single loop and multiple loops.
- Identify the common causes of sensor, transmitter, controller, and final control element problems
- Understand the operation of pneumatic and electronic loops
- Understand the Process safety and instrumentation
- Introduction to Distributed Control System

SELECTED CUSTOMERS

PETRONAS GAS, ORYX GTL, GRACE (Enriching Lives, Everywhere.), MALAKOFF (24816-M), HUNTSMAN (Enriching lives through innovation), ALSTOM, TASNEE التصنيع, MALAYSIA LNG SDN. BHD., قطر للبترول Qatar Petroleum, BASF PETRONAS CHEMICALS, DOLPHIN ENERGY دولفين للطاقة, QAPCO شركة قطر للبتروكيماويات QATAR PETROCHEMICAL COMPANY, UNIVERSITI TEKNOLOGI PETRONAS

COURSE PROGRAM

- Purpose of Instrumentation
- Instrumentation Documents
  - Process Flow Diagram
  - Piping & Instrumentation Drawing
  - Instrumentation Drawing
- Industrial Measurement Systems:
  - Overview,
  - Sensor Selection and Characteristics,
  - Transmitters,
  - Smart Transmitters
  - Aux. Instrumentation
- Control Valve
  - Overview
  - Types
  - Operational
  - Basic maintenance
- Pressure Measurements:
  - Concepts,
  - Various pressure reading
  - Differential Pressure Measurement
- Level Measurement:
  - Concepts,
  - Hydrostatic Head Level Measurement,
  - Capacitance Level Measurement,
  - Ultrasonic Level Measurement,
  - By Weight
- Flow Measurement:
  - Fluid Fundamentals,
  - Methods and Concepts,
  - Differential Head Flow Measurement,
  - Velocity Flow Measurement Devices,
  - Mass Flowmeters
- Temperature Measurement:
  - Concepts,
  - Thermometers,
  - Thermocouples,
  - RTDs & Thermistors,
  - Temperature Transmitters
- Approaches to Troubleshooting:
  - Purpose of Troubleshooting,
  - Reasons for Troubleshooting Equipment History,
  - Logical Analysis
- PID process control.
  - Process and controller characteristics.
  - Feedback and stability
  - PID tuning
  - Enhance PID control.
- Process safety and instrumentation
  - Basic ISA
  - Classified areas and electrical safety
- Others
  - DCS system components
  - DCS supervision vs. Control
  - DCS systems concepts
  - Human Machine Interface
  - DCS architecture
  - Trends in SCADA / DCS

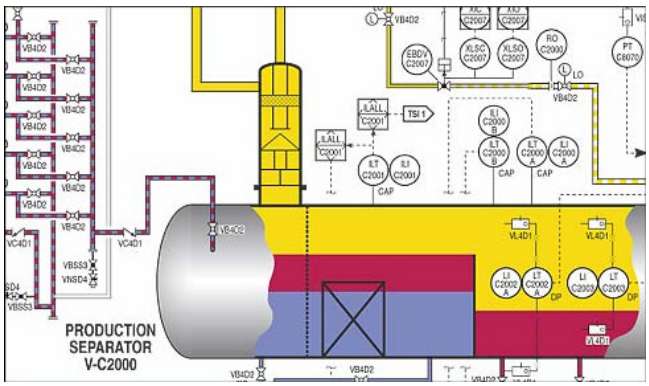
ABOUT THE COURSE INSTRUCTOR

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 (CIAST). 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

Course Details

Course Name:	Basic Instrumentation for Non-Instrument Personnel Course	**Course Date:**	15th – 19th April, 2012
Venue:	Holiday Villa Hotel Doha, State of Qatar	**Fee:**	USD3,500.00

Company Information

Organization	
Address	

	HR / Training Manager	Invoice to be sent to
Name :		
Tel no.:		
Fax no.:		
E-mail :		

Participant Information

	Participant # 1	Participant # 2	Participant # 3
Full Name :			
Job Title :			
Department :			
Telephone No. :			
Mobile No. :			
Fax No. :			
E-mail Address :			

Please Pay by Telegraphic Transfer to:

Account Name :	CFPE TECHNOLOGY SOLUTIONS
Account No. :	563064120047
Bank Name :	Maybank Islamic Berhad
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