

# INSTRUMENTATION & ELECTRONIC COURSES

## BOILER LEVEL CONTROL (IE34A)

**OBJECTIVE:**

This course is designed to provide knowledge of the instrumentation and control system of boilers.

**WHO SHOULD ATTEND?**

This course is intended for control system designers, instrumentation, control staff and operation staff.

**COURSE CONTENT:**

- Control Considerations
- Instrumentation Display
- Response to a Steam Demand Increase
- Two-Element (2-e) Feed Water Control
- Two Element Biasing Considerations
- Feed Water Control
- Programmed Boiler Drum Level
- Ramped Drum Level by Computed Setpoint
- Boiler Level Control Valves
- Feed Water CV Swap

**PRACTICAL TASK:**

- Review all Stages of Control of Boiler and Explanation.

**Duration: 5 Days**

Date:	Venue:	Cost:
<b>Feb 21-25</b>	<b>Dammam</b>	<b>SR 7,000</b>
<b>Jul 19-23</b>	<b>Qatar</b>	<b>SR 9,000</b>
<b>Nov 28-Dec 2</b>	<b>Dammam</b>	<b>SR 7,000</b>

## CALIBRATION MAINTENANCE OF METERS (IE2A)

**OBJECTIVES:**

This course is designed to provide knowledge in the construction, operating characteristics, calibration and maintenance of meters.

**WHO SHOULD ATTEND?**

This course is recommended for engineers and technicians involved in calibrations, installation, maintenance and troubleshooting of meters.

**COURSE CONTENTS:**

- Moving Coil Instruments
- Moving Ion Instruments
- Converting Moving Coil to Ammeter, Voltmeter, and Ohmmeter
- Moving Coil AC, DC Measurements
- Dynamometer Instruments Measurements
- Whattmeter, Whathour Meter
- Var Meter, Amperhour Meters
- Capacitance Meter
- Insulation Meter (Megger)
- Testing Calibration, and Maintenance

**PRACTICAL TASKS:**

- Assembly for moving coil meters
- Changing ranges modifications
- Calibrations for instruments meters

**Duration: 5 Days**

Date:	Venue:	Cost:
<b>Mar 21-25</b>	<b>Dammam</b>	<b>SR 7,000</b>
<b>Jul 25-29</b>	<b>Abha</b>	<b>SR 8,000</b>
<b>Oct 17-21</b>	<b>Dammam</b>	<b>SR 7,000</b>