



COURSE TITLE

BASIC INSTRUMENTATION FOR PLANT OPERATORS



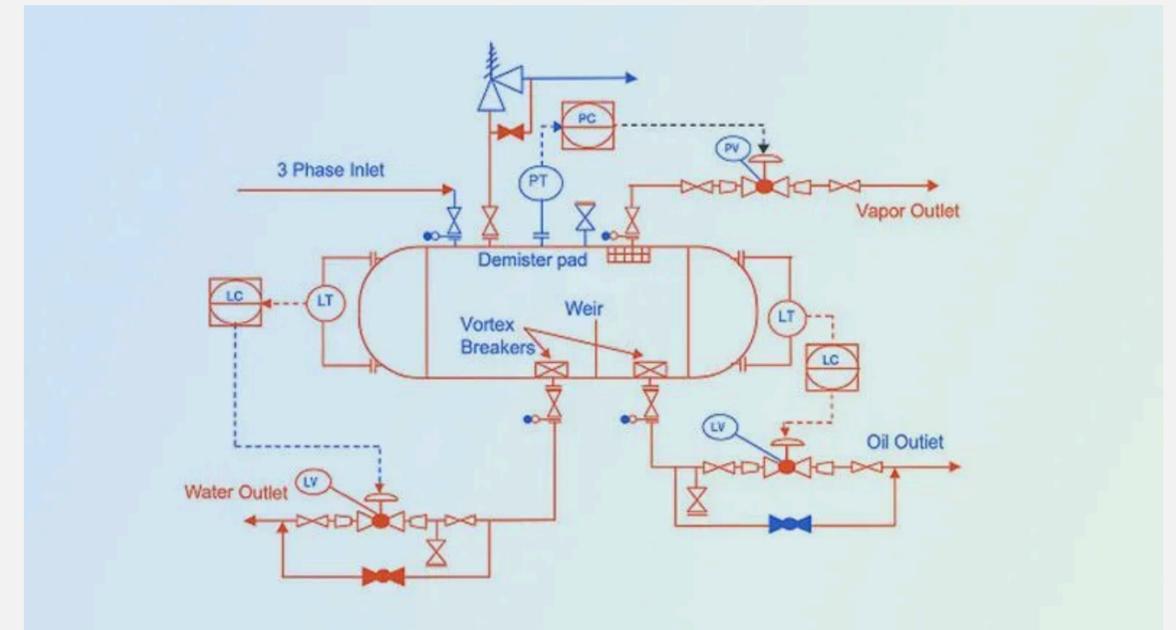
BUILDING COMPETENCE, INSPIRING CONFIDENCE

Course Objectives

- Understand basic P&IDs and instrument identification
- Identify correct tagging, routing, tubing, and cabling practices
- Detect common leaks, faults, and abnormal conditions in field instruments
- Safely isolate and put instruments into service
- Gain basic knowledge of transmitters, gauges, control valves, analyzers, and machine monitoring instruments
- Improve safe operation and coordination with maintenance teams

Target Audience

- Plant / Console Operators
- Shift Supervisors



Day 1

P & I Drawings

Cable Routing

- Tagging
- Cable tray
- Buried cables
- Identification of hanging cables +caps



Tubing

- Tagging
- Routing
- Identification of leaks

Air Header

- Tagging
- Purging
- Use of Taps / Sequence of taps
- Removing handle of valve if ball valve
- Avoid to use bottom side taps
- Isolating and putting in service procedure

Day 1

Junction boxes

- Tagging
- Tagging at cables
- Proper cable gland
- Proper plugging of spare entry points
- Proper protection from Moisture / Water showering, steam and oil

Pressure gauge

- Tagging
- Thorough inspection, causes of hunting and remedy.
- Isolating & putting in service procedure

Transmitters / transducers (Flow, Level, Pressure)

- Tagging
- Cable entry point
- Piping / tubing / fitting / any leak / Isolating & putting in service procedure

Thermocouples / Thermo resistance Detector (RTD)

- Tagging / cable routing

Day 2

Machine monitoring instruments

- Tagging
- Routing
- Oil seepage
- Conduit
- Extension cable near heating / sharp edge area
- Near Walking area

Cable Routing

- Tagging
- Cable tray
- Buried cables
- Identification of hanging cables +caps

Alarm Management, BMS, 3 element control

Analyzers

- Sampling point
- Routing / leakage
- Shelter house (Analyzer Room)

Use of F type key

- Avoid to use F key at control valves

Instructor



Mr. Aftab Ahmed Mazari **Instrumentation Expert**

Mr. Aftab Ahmed Mazari has over 43 years of extensive practical experience as an Instrument Engineer. He completed his science graduation from Punjab University and received industrial instrumentation training from Russia.

He began his professional career at Pakistan Steel, where he served for 10 years. He later joined Fauji Fertilizer Company (FFC) and retired after completing 30 years of service with rich and diverse experience. Following his retirement, he worked as an Instrument and Consultant Engineer with SABIC in Saudi Arabia for one year.

Mr. Aftab Ahmed Mazari possesses wide expertise in instrumentation consultancy, Reliability Centered Maintenance (RCM), reliability engineering, and professional training. He has delivered training programs and courses to both local and international clients, including SABIC in Saudi Arabia and multinational companies such as ENI, Lotte, BHP, Engro, and HUBCO.

He has developed several training aids for instrument engineers and technicians, including simulators and training rigs such as vibration simulators, vibration switch testing rigs, speed simulators, compound gear simulators, and SOV training rigs. In addition, he has designed and produced cutaway models of control valves, pressure safety valves (PSV), rotameters, temperature sensors, pressure regulators, volume boosters, and trip relays.

Mr. Aftab Ahmed Mazari has also authored eight industrial instrumentation books for instrument and operations personnel, which are widely referred to in various industrial facilities across Pakistan.

Logistics

Duration

2 days

Location

Client site or Lahore

Training Instructors

Mr. Aftab Ahmed Mazari

Get in Touch

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Fateh
Trainings & Consultancy