

Training & Certification Program in Process Instrumentation & Automation

Overview:

- Overview of Industry and Scope.
- Role of Instrumentation Engineer in various types of Industry.
- Knowing Client requirements and collection of specific data for projects.
- Relevant Codes & Standards.
- Basic Design requirement based on the type of plant e.g. Chemical, Petrochemical, Pharmaceutical Industrial, power plant etc...
- Preliminary Project design requirements.
- Selection of Instruments for Controlling Flow, Temperature, level and Pressure.
- Preparation of hookup drawings
- The various Process Conditions.
- Vendor's details and specification for all Instruments used to control Flow, Level, Temperature and Pressure.
- Installation and maintenance Tips of all Instruments.
- Selection, Installation and Troubleshooting of PLC, DCS and SCADA for various processes.
- PLC vendor's details and specification of PLC, DCS and SCADA.
- Preparation Ladder Diagram.
- Detailed Design of Instrumentation systems including Layouts.
- Procurement Requirements.
- Inspection of Equipments/system.

Module Details

Introduction to Instrumentation Design

- Introduction
- Overview of an Engineering Organization
- Role of a Process Engineer
- Project Documentation

Basic Engineering Package:

- Overview of Basic Engineering Package.
- Relevant Codes & Standards.
- Basic Design requirement based on the type of plant e.g. chemical, Petrochemical, Pharmaceutical Industrial and power plant etc.
- Selection of Instruments for Controlling Flow, Temperature, level and Pressure.
- Sizing and Selection of Control Valve
- Introduction to DCS

Detail Engineering:

- Instrument Index
- Instrument Location Plan
- Process Data sheets and Specifications
- Instrument Wiring Layout
- Instrument Air Routing Layout
- Loop Drawing
- JB Layout
- Cable Schedule
- Cable Tray Layout
- Hook-Up

Control & Automation:

- Introduction to PLC
- PLC logic, PLC architecture.
- I/O configuration & Memory Mapping
- Programms & Ladder diagrams
- Instruction Set
- Communications & fault finding

HMI

- Introduction to HMI and its need
- Pperation details and fundamentals of HMI,
- Fault display in HMI
- Timer counter setting from HMI.
- Interfacing with PLC.

SCADA

- Introduction to SCADA
- Configuration of different drivers gateway.
- Database of tags and its use.
- Interfacing with PLC and simulation of PLC application in SCADA.

AC Drive

- Fundamentals of AC Drive
- Block diagram of AC drive
- Configuration of different drives.
- Control of drive with and without PLC.
- Various applications of AC Drive.

Application Procedure

Submit Dully filled attached Admission Query Form, along with your updated CV at our office or mail it to “info@smartbrains.in”.

Admission would be given only to shortlisted candidates. Please confirm your admission on allotted dates.

Documents Required

- 2 PP Size Photograph.
- 1Photo ID Proof, 1 Address Proof.
- 1 Photo stat of qualifying exam certificate
- 1 hard copy of your CV.

For further Information and Admissions Contact:

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