Training & Certification Program in

Instrumentation Design Engineering

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.
- 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 Instrumentation 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

Instruments Index and Control Loops

- Instrument Index Supporting Tables ➢

Loops with their Tags

- Duplicating a Loop with its Tag Numbers ➢

Creating Plant Loops in Batch Mode

Process Data, Sizing and Specifications

- Defining Process Data
- Performing Calculations and Sizing of Control Valve ➢

Selection of Control Valve

- Viewing and Editing Specification Sheets ➢

Specification Sheet Revisions

Wiring Operations

- Creating Reference Panels
- Creating Terminal Strips with a Marshaling Rack ➢

Creating a Reference DCS Panel

- Copying the Reference Panels to the Domain Manager ➢

Creating Reference Cables

- Copying Reference Cables to the Plant ➢

DCS Management

- Cross-Wiring the Signals in the Marshaling Rack
- Adding a New Instrument to the Existing Wiring

Loop Drawings

- Generating Enhanced Smart Loop Reports ➢

Enhanced Report Layout Properties

- Annotations of Enhanced Smart Loop Report ➢

Generating CAD Loop Drawings

- Setting Preferences
- Block Types and Drawing Blocks
- Assigning Blocks

Hook-Up Drawings

- Setting Preferences
- Creating Hook-Up Items
- Creating Hook-Ups
- Generating Bill of Material

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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