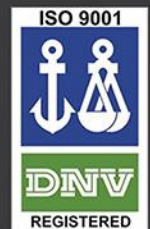


# INSTRUMENTATION & CONTROL

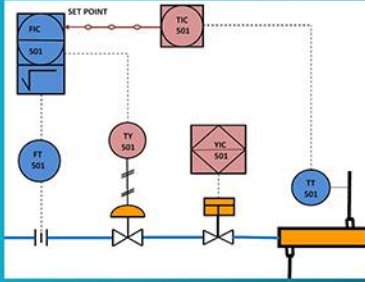
100% JOB ORIENTED TRAINING

*A place to learn, A chance to grow...*

State of the Art Lab Facilities.  
Emphasis on Practical Oriented Training.  
Ongoing project with exposure to live systems.  
Training provided by experienced R&D Engineers  
Regular Aptitude training, Mock Interviews & GD  
Individual attention to each student during training.



## Basics of Process Control Instrumentation



Instrumentation Application  
Transducers And Sensors  
Functional Element Of Instruments  
Types Of Instruments  
Terminology Used In Instrumentation  
Process Variables And Calibration

## Calibration And Familiarization Of Pressure Measuring Instruments



Basics Of Pressure Measuring Instruments,  
Types Of Pressure.  
Pressure Measuring Units.  
Types Of Pressure Measuring Instrument.  
Pressure Switches and air regulator.  
Calibration Of Pressure Measuring Instruments

### Mechanical Type

Bourdon Tube  
Diaphragm  
Capsule  
Bellows

### Electrical Type

Piezo Electric  
Potentiometric  
Strain Gauges  
Capacitance Type

### Manometer

Utube  
Well Type  
Inclined

## Calibration and Familiarization of Level Measuring Instruments



Basics Of Level Measuring Instruments,  
Laws Ruling Level Measurement,  
Level Measuring Units.  
Types Of Level Measuring Instruments

### Direct

Visual level Sensing Devices  
Float Devices

### Indirect

Pressure Operated  
Buoyancy Operated  
Electrical Operated

### Field Documentation

Piping & Instrumentation  
Loop Diagram  
Hookup Diagram



## Familiarization of Flow Measuring Instruments

Basics of Flow Measuring Instruments

Laws Ruling Flow Measurement

Flow Measuring Units.

**Types of Flow Measuring Instrument.**

Differential Type Flow Meters

Variable Head Flow Meters

Variable Area Type

**Mechanical Type**

Displacement Type

Turbine Type

**Electrical Type**

Magnetic Flow Meter

Ultrasonic Flow Meter

Vortex Flow Meter

**Mass Flow Meters**

Thermal Type

Coriolis Type



## Calibration And Familiarization of Transmitters

### Calibration of Temperature measuring Instruments

Basics of Temperature measuring instruments

Calibration of Temperature measuring instruments

Temperature Switches.

Pneumatic

Analog

Digital,

Calibration of Transmitter

Analog

SMART

HART

### Control Valve

Control Valve

Overhauling Of Valves

Stroke Checking

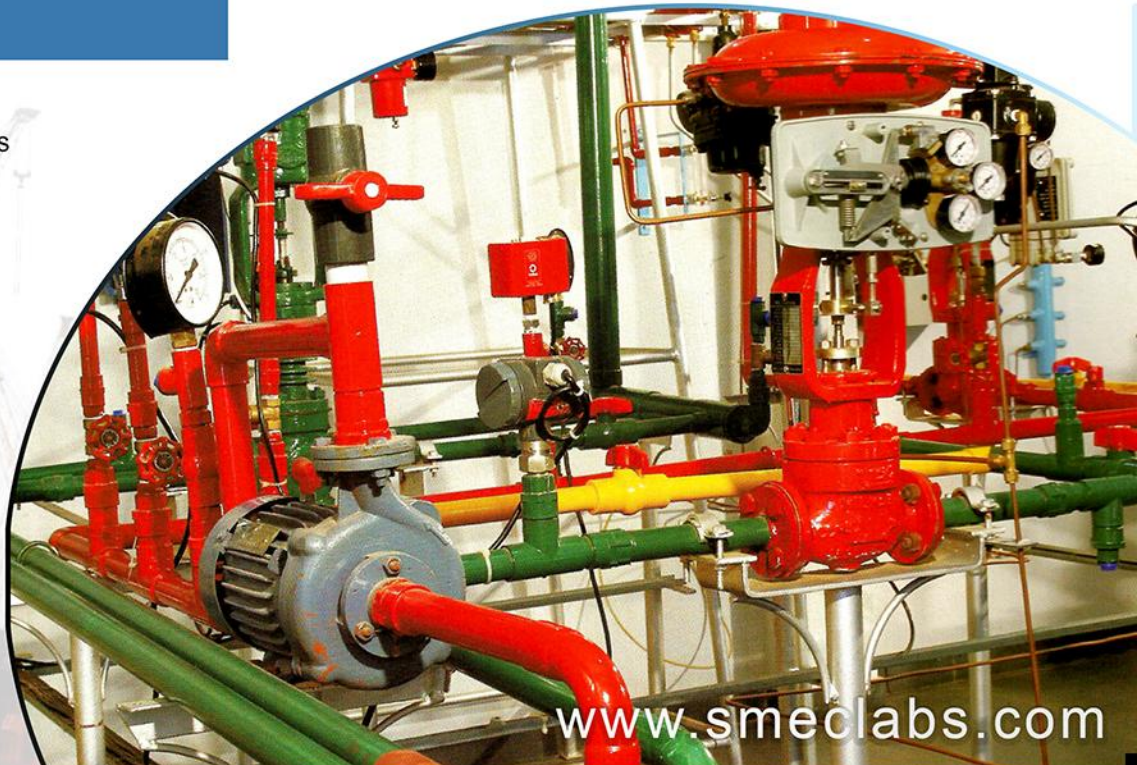
Solenoid Valve,

Butter Fly Valve

Manifold Valve

Ball Valve

Needle Valve



# Training Duration, Timings & Fees Details

## Post Graduate Diploma in Industrial Instrumentation ( PGDII )

Duration (Days)		Timings		Fees in Rs.
NT	FT	NT 2.5 Hrs/Day	FT 5 Hrs/Day	
50	25	08:00 - 10:30 AM 11:00 - 01:30 PM 02:30 - 05:30 PM 05:30 - 08:00 PM	08:00 - 01:30 PM 02:30 - 08:00 PM	40,000

### Certified Instrumentation Engineer (CIE)

Duration (Days)		Timings		Fees in Rs.
NT	FT	NT 2.5 Hrs/Day	FT 5 Hrs/Day	
30	15	08:00 - 10:30 AM 11:00 - 01:30 PM 02:30 - 05:30 PM 05:30 - 08:00 PM	08:00 - 01:30 PM 02:30 - 08:00 PM	30,000

### Calibration & Instrumentation ( C & I )

Duration (Days)		Timings		Fees in Rs.
NT	FT	NT 2.5 Hrs/Day	FT 5 Hrs/Day	
10	5	08:00 - 10:30 AM 11:00 - 01:30 PM 02:30 - 05:30 PM 05:30 - 08:00 PM	08:00 - 01:30 PM 02:30 - 08:00 PM	15,000

[www.smeclabs.com](http://www.smeclabs.com)

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Tel: 0484 - 2340904

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