

# PROCESS CONTROL LABORATORY

(DST - FIST SPONSORED LAB)



**Faculty Incharge**

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# PROCESS CONTROL LABORATORY



**Reactor with  
Smart Field  
Devices**

The Department of Instrumentation Engineering, MIT Campus has a well-equipped Process control laboratory which is equipped with state of art facilities to understand the concept of modeling, optimization and control of processes which mimic the industrial scenario.

The students are trained to design conventional(PID, On-Off), advanced controllers like MPC, IMC and the designed controllers will be implemented on the real time test rigs and the performance of different controllers are analyzed for their optimal performance.

The test rigs are equipped with field devices which are enabled with HART and Foundation field bus protocols which are popularly used in process industries.

The students are also explored to understand different process symbols, Plot plans, Process flow Diagrams, Piping and Instrumentation Diagrams and loop diagrams with industrial standards.

The procedure for designing complex control schemes like cascade, Feed forward and adaptive controllers will be taught and they will be implemented on real time non-linear process test rigs.

# PROCESS CONTROL LABORATORY



**Distillation  
Column**



**Process Control  
Training Plant**



**Flow and Level  
Control Process**



**Pressure Control  
Process**



**Four Tank System**



**Bio- Reactor**



**PH Control Test  
Rig**



**Conical Tank System**



**Three Tank System**



**Two Tank System**



**Temperature Control  
Process with  
Transportation Lag**

**PROCESS CONTROL LABORATORY**



**Distillation Column**

Date of Purchase :  
14.12.2015  
Amount :  
Rs. 50,64,430  
Funding Agency :  
DST- FIST



**Compact Flow Unit**

Date of Purchase :  
27.07.1989  
Amount :  
Rs. 57,901  
Funding Agency :  
GTZ, Germany



**pH Meter & Bio - Reactor**

Date of Purchase :  
20.08.2015 &  
26.02.2013  
Amount :  
Rs.14,98,000 & Rs.  
1,77,450  
Funding Agency :  
DST-FIST & CPDE



**Four tank System**

Date of Purchase :  
11.12.2006  
Amount :  
Rs. 3, 96,732  
Funding Agency :  
DST – Fast Track  
Scheme



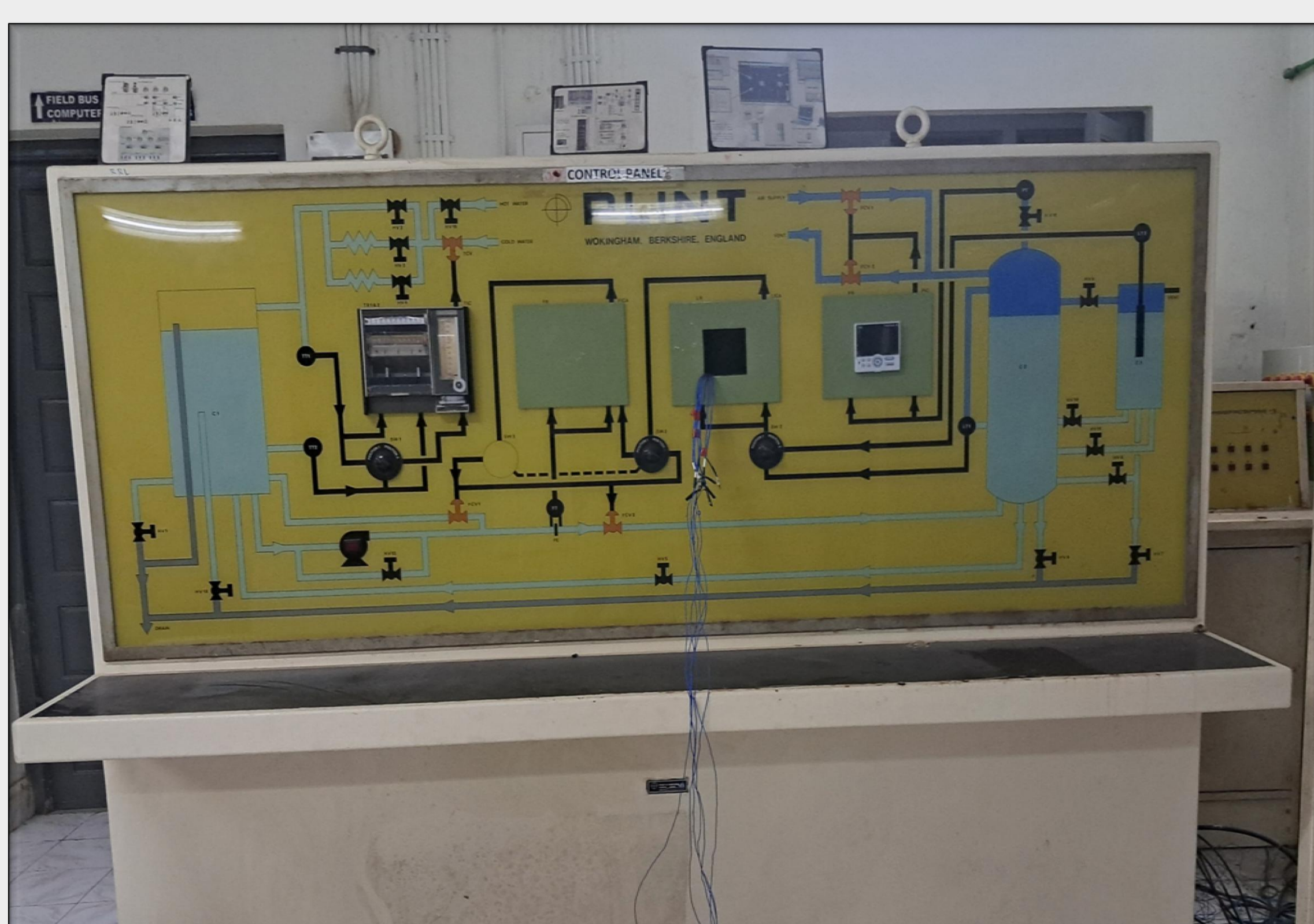
**Process Control Training Plant**

Date of Purchase :  
14.08.1984  
Amount :  
Rs.10,53,351  
Funding Agency :  
GTZ, Germany



**Temperature Control System**

Date of Purchase :  
25.07.2016  
Amount :  
Rs.8,10,000  
Funding Agency :  
Anna University



**Training Plant - Control Panel**

Date of Purchase :  
14.08.1984  
Amount :  
Rs. 9,85,842  
Funding Agency :  
GTZ, Germany



**Conical Tank System**

Date of Purchase :  
01.02.2006  
Amount :  
Rs. 1,56,613  
Funding Agency :  
Anna University  
(CPDE)

**PROCESS CONTROL LABORATORY**



**Pressure Control Station**

**Date of Purchase :**  
20.06.2016  
**Amount :**  
Rs.6,94,938  
**Funding Agency :**  
Anna University



**Three Tank level Measurement System**

**Date of Purchase :**  
05.10.2005  
**Amount :**  
Rs. 1, 99,803  
**Funding Agency :**  
UGC grant



**Level and Flow Control Station**

**Date of Purchase :**  
04.08.2016  
**Amount :**  
Rs. 8,29,953  
**Funding Agency :**  
Anna University



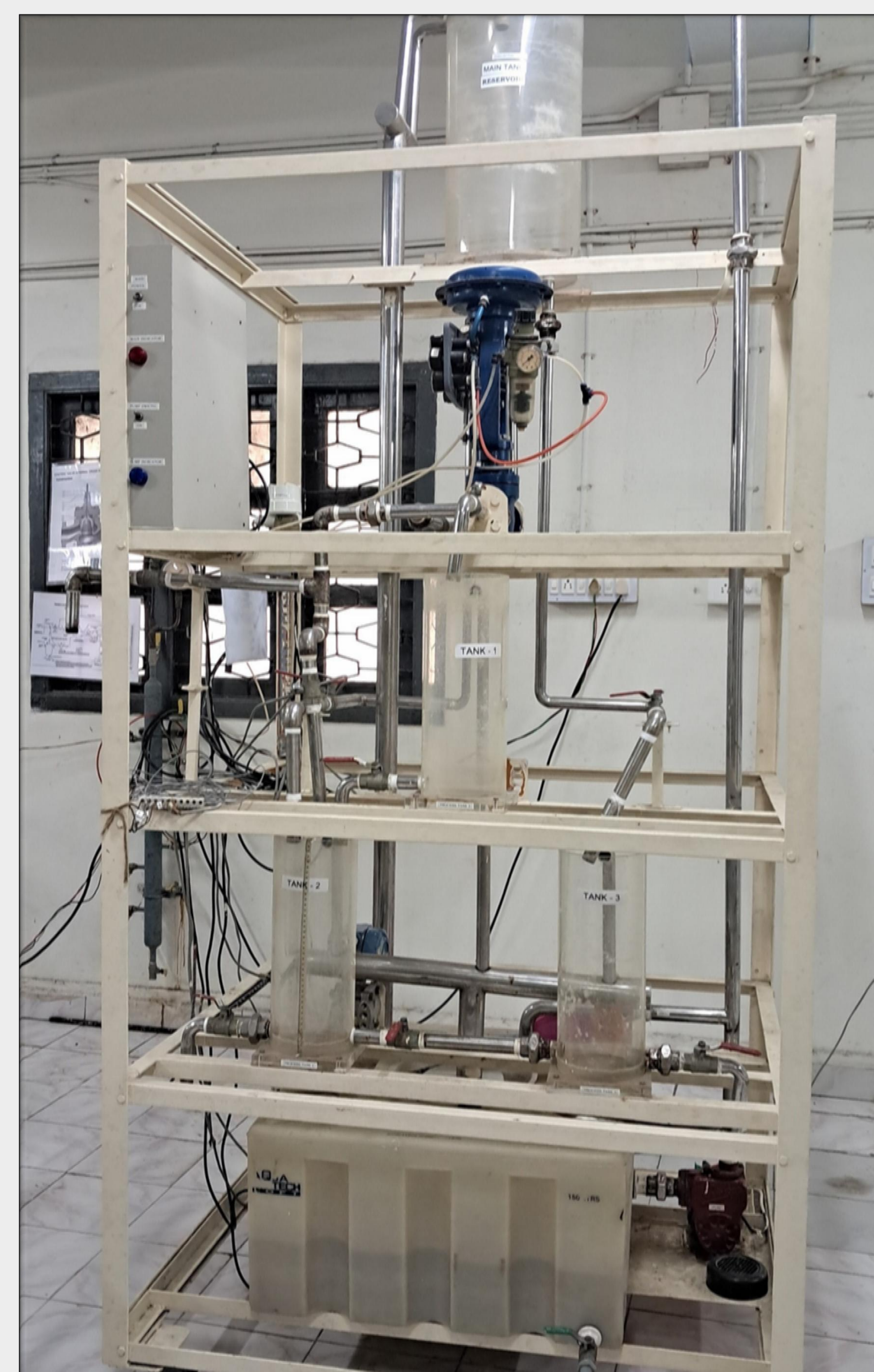
**Spherical Tank**

**Date of Purchase :**  
06.10.2008  
**Amount :**  
Rs. 1,53,400  
**Funding Agency :**  
DST – FAST TRACK



**Test Set-up with Smart Field Devices**

**Date of Purchase :**  
16.03.2006  
**Amount :**  
Rs. 5,62,831  
**Funding Agency :**  
DST- FIST



**Three Tank Hybrid System**

**Date of Purchase :**  
09.03.2010  
**Amount :**  
Rs. 7,49,595  
**Funding Agency :**  
UGC-MRP



**pH Control Test Rig**

**Date of Purchase :**  
16.03.2006  
**Amount :**  
Rs. 5,62,831  
**Funding Agency :**  
DST- FIST