



# SRI RAAJA RAAJAN

## COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to Anna University)

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### **Turbine Calibration with Master meter for Multi viscous fluid using Lab VIEW.**

To observe the K factor of the turbine flow meter with various viscous fluid under various condition. The components involved in the system are two Turbine flow meter, 2 control valves, one motor, over head tank and sump. A separate temperature sensor is placed to analyse about K factor in various ambient condition.

Turbine flow meter is one form of displacement type flow meter. Fluid pass across the meter make it to rotate. The rotation of the turbine emits pulse as output. Counted value of the pulse denote about the amount of fluid passes meter. K factor describe about number of pulses produced per litre.

Master meter counted pulse and the test meter counted pulse to be compared. The process information is about the accuracy of the test meter.

As per international standard API and AGA the system designed. The information signals gathered from the flow meter and processed using the computer. Finally the control signal is given to the actuators. Salt water, Normal water and some additives concentrated fluids are used for analysis.

Transmitter placed upon the turbine which converts the pulses caused by impact force into electrical signal. Amount of flow is proportional to the number of pulses induced. The signal value is converted into numeric value for both the turbines. The data flow and the structure in the lab VIEW program helps to find out the accuracy of the secondary flow meter.

Analytical data describes about the performance of the turbine flow meter. It continuously insists that the generated pulse for particular viscous under various ambient conditions doesn't change.



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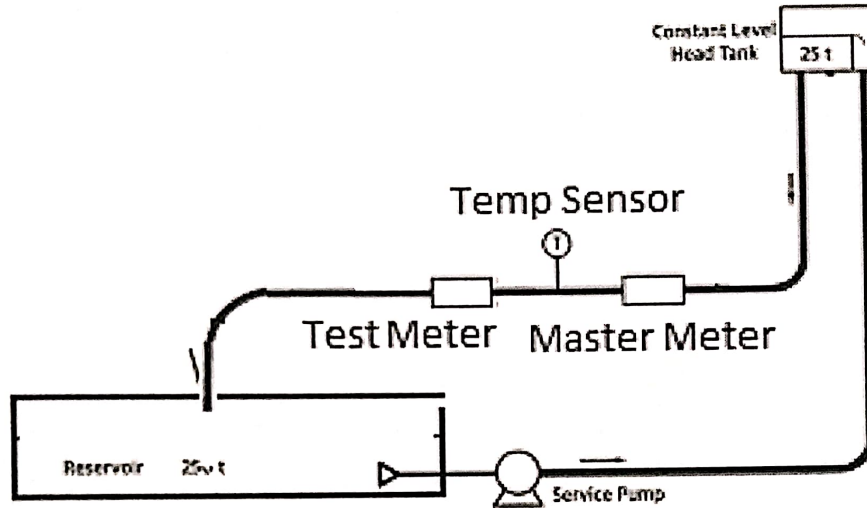
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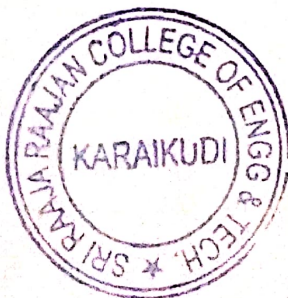
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## Calibration Circuit Diagram



## Quotation

Sl.No	Items	Price
	<b>Front Wheel Assembly Work</b>	
1.	1" 2 Turbine flow meter	15000
2.	1" 2 Solenoid valve	3000
3.	sensors	3500
4.	500 liter tank 2	5000
5.	1" GA Pipe 2 length	1500
6.	1" bend 10	1000
7.	Threading	300
8.	1 HP motor	2500
9.	Lab VIEW interfacing module	10000
	<b>TOTAL</b>	<b>41800</b>



  
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