



Class: 4th Stage

Subject: Control Lab

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### Exp.No.3

Exp.Name:- Flow measurement by orifice meter

#### Training Objective:

To determine flow measurement by orifice meter.

#### - Training Equipment

No.	Name	notes
1.	Pressure gauge(WC)	600 mm
2.	Pressure sensor	
3.	Measuring flow tank	
4.	Sump tank	
5.	Pump	
6.	U tube manometer	
7.	Voltmeter	
8.	Rotameter	
9.	orifice	

#### Theory:-

It is the simplest and cheapest type of differential pressure flow element .orifice can be supplied with Hg U tube manometer due to sufficient differential pressure generates intrinsically lower differential (10to25%) pressure as compared to orifice, Hg manometer may be inadequate to measure it while any oils or glycerin.



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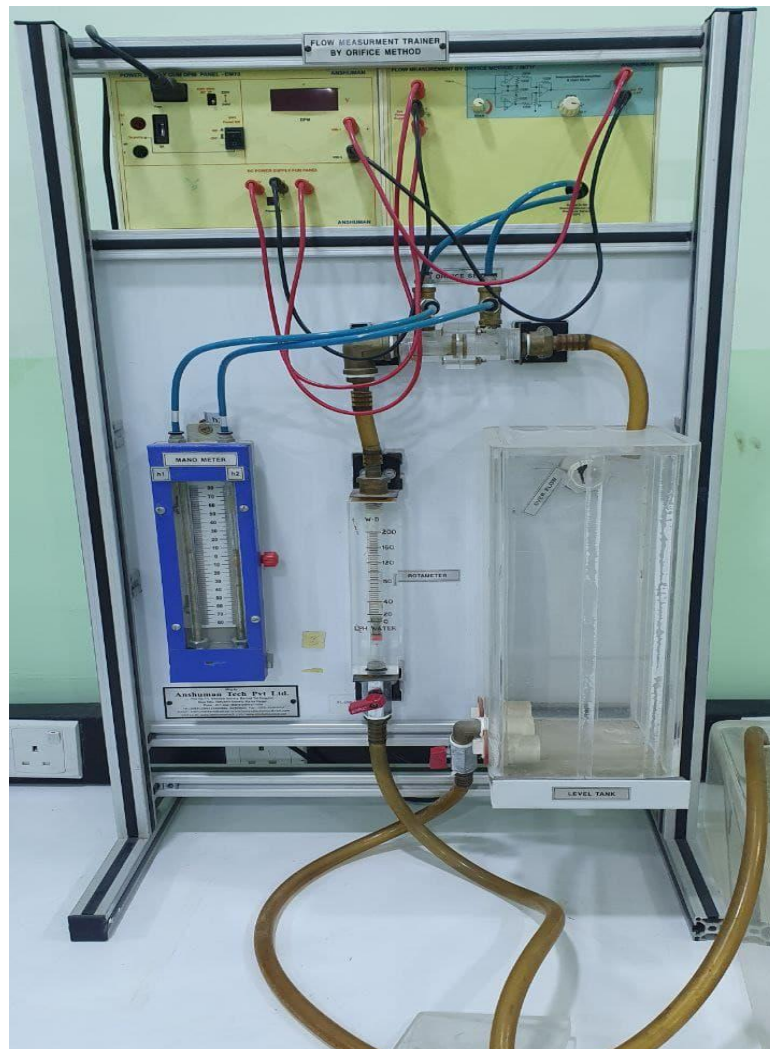
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### Procedure:-

Connect to pressure sensor on MIT panel that this pressure sensor is different than sensor used for pressure (0-5) psi measurement. Observe that the measurement assembly is held vertically. You can increase or decrease the flow by adjusting by pass manual valve. Flow can be measured on Rota meter directly in LPH. The same liquid will flow through the flow meter.

If it is LPH the set o/p to 0 v using zero adjust pot. Now keep the manual valve at open fully position if it is 200 LPH the set 2.5 V at o/p using span adjustment.





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NO.	Rota meter LPH	Output voltage Q	SQRT of voltage
1	0		
2	50		
3	75		
4	100		
5	125		
6	175		
7	200		

**Discussion:-**

- 1- What is orifice plate?
- 2- What is orifice method?
- 3- Explain how does flow measurement device work?
- 4- Draw flow vs orifice o/p plot?