



S.A.P.D. Jain Pathashala

Walchand Institute of Technology, Solapur

An Autonomous Institute

P.B.No.634, Walchand Hirachand Marg, Ashok Chowk, Solapur - 413006 (Maharashtra)

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Department of Civil Engineering Lab Details

Lab Name	Fluid Mechanics Lab.
Lab Description	Major tests conducted in the laboratory: <ol style="list-style-type: none">1. Study of fluid pressure and its measurement2. Calibration of orifice, mouthpiece and Venturimeter calibration3. Study of flow through pipes and open channels4. Working of Pelton Wheel and Francis turbines and pumps.5. Study of Bernoulli's theorem, Reynolds experiment. Study and measurement of discharge through Notches and weirs. Study of Impact of jets. Study of Venturiflumes etc.
Lab Equipment	<ol style="list-style-type: none">1. Reynolds Apparatus2. Losses in Pipe Apparatus3. Orifice and Mouth Piece Apparatus4. Notch Apparatus5. Adjustable Channel (Tilting flume apparatus)6. Adjustable Channel7. Water Current Meter8. Performance Test on Pelton Wheel Turbine test rig9. Performance test rig on Francis turbine test rig10. Francis turbine.11. Pelton wheel turbine12. Channel 0.45m wide and 80m length13. Adjustable channel and accessories14. R.C.C. constant head tank (12m)15. Impact of jet apparatus and accessories.16. Losses in pipelines apparatus and accessories.17. Notch Tank apparatus and accessories18. Orifice and mouthpiece apparatus and accessories19. Pumps and valves apparatus dismantling and refitting20. Bernoulli's Apparatus
Lab Floor Area in square meters	174
Practicals Engaged in Lab	For semester I <ol style="list-style-type: none">1. Study of manometers2. Measurement of pressure and discharge



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	<ol style="list-style-type: none">3. Determination of Metacentric height4. Verification of Bernoulli's theorem5. Calibration of Venturi meter6. Calibration of Orifices7. Calibration of Mouthpieces8. Study of losses in pipes9. Determination of Darcy's factor10. Verification of streamlines and flow nets11. Study of Moody's charts and Nomographs <p>For semester II</p> <ol style="list-style-type: none">1. Calibration of Broad crested weir2. Calibration of Sharp crested weir3. Determination of coefficient of discharge of Ogee spillway4. Determination of coefficient of discharge of Venturi flume5. To calculate critical velocity by Reynold's apparatus6. Study of Hydraulic jump7. Study of the Impact of jets8. Study of Pelton wheel9. Study of Francis turbine10. Study of properties of fluids11. 11. Classification and silent features of Turbo-machines
Name of Lab Incharge	Dr. Deshmukh Sachin Chandrakant
Associated Faculty with the lab	Dr. Satishkumar Shahajirao Kashid
Name of Lab Assistant	Mr. G. V. Potdar
Name/s of Menial Staff	Mr. Ashok Dhotre