

Name of the laboratory: Fluid mechanics

Objectives of the lab: A basic knowledge of Fluid mechanics and machinery is essential for all the scientists and engineers because they frequently come across a variety of problems involving flow of fluids such as in aerodynamics, force of fluid on structural surfaces, fluid transport. This fluid mechanics lab helps to understand these physical processes more closely. Various apparatus are available in the laboratory like, Verification of Bernoulli's theorem apparatus, venturi & Orifice meters, orifice & mouth piece apparatus, Flow over notches apparatus, vortex flow apparatus etc.

List of the equipment:

1. A constant steady water supply tank (Notch tank) with baffles wall.
2. Pointer gauge.
3. Collecting tank.
4. Trapezoidal –notch.
5. A constant steady water supply tank (Notch tank) with baffles wall.
6. Collecting tank, and models.
7. A constant steady water supply tank (Notch tank) with baffles wall.
8. Collecting tank.
9. Trapezoidal -notch.
10. Venturimeter.

List of experiments:

1. Determination of Coefficient of discharge for a small orifice.
2. Determination of Coefficient of discharge for a mouthpiece by constant head method.
3. Calibration of contracted Rectangular Notch / Triangular Notch/Trapezoidal Notch.
4. Determination of friction factor of a pipe
5. Calibration of Venturimeter
6. Calibration of Orifice meter
7. Determination of Coefficient for minor losses - Sudden Expansion
8. Determination of Coefficient for minor losses- Sudden Contraction
9. Verification of Bernoulli's equation.
10. Study of Water Hammer due to sudden Closure of valve.

