



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

DEPARTMENT OF MECHANICAL ENGINEERING

FLUID MECHANICS AND HYDRAULICS MACHINES LABORATORY

This laboratory introduces students practical knowledge of behavior of fluids which they are earlier studied by using mathematical equations. It involves study of various properties of the fluid, such as velocity, pressure, density and temperature as functions of space and time. Fluid mechanics is the branch of physics which deals with the properties of fluids, namely liquids and gases, and their interaction with forces. The lab is equipped with different flow measuring set-ups such as venturimeter, orifice-meter, mouth piece, rotometer, flow through pipes, centrifugal pumps, turbines. where students can visualize the basic theory of working of the flow meter.

List of Equipment

S. No	Item	Make	Quantity	Cost per Unit (Rs.)	Total Cost (Rs.)
1	Venturi meter Apparatus	CES	1	23,814	23,814
2	Friction through a Pipe Apparatus	CES	1	22,113	22,113
3	Bernoulli's Apparatus	CES	1	18,711	18,711
4	Impacts of jet on vanes	CES	1	24,570	24,570
5	Pelton Wheel Test Rig	CES	1	1,26,000	1,26,000
6	Francis Turbine Test Rig	CES	1	1,19,385	1,19,385
7	Kaplan Turbine Test Rig	CES	1	1,36,500	1,36,500
8	Single-stage centrifugal pump	CES	1	28,917	28,917
9	Multi-stage centrifugal pump	CES	1	28,917	28,917
10	Reciprocating Pump Test Rig	CES	1	22,113	22,113
11	Flow through wires and Notches	Mechtrix Engineers	1	32,130	32,130
12	Flow through external mouth pieces	Mechtrix Engineers	1	55,945	55,945
13	Stop watches	Racer	4	1,000	4,000
14	Tachometers- Model HTM 590 TO5DZV0003	HTM	4	1,506	6,024
Total Cost (Rs.)					6,49,139
(In words: Rupees Six lakhs forty nine thousand one hundred and thirty nine only)					

Date:07-04-2022

Principal