



बेसिक यान्त्रिक अभियांत्रिकी प्रयोगशाला

Basic Mechanical Engineering Lab

Major Equipments:

- Demonstration Model of Locomotive boilers.
- Demonstration Model of Lancashire, Cornish and Cochran boilers
- Demonstration Model of Babcock and Wilcox boilers.
- Demonstration Model of boiler mounting and accessories.
- Demonstration Model of 2 stroke diesel and petrol engines.
- Demonstration Model of 4 stroke diesel and petrol engines.
- Demonstration Model of simple steam engines.
- Lathe machine.
- Water Gauge Model
- Steam Injector



Measuring Instruments:

Vernier Caliper and Micrometer,
Dial Gauge, Slip gauge, Sine bar



In Charge

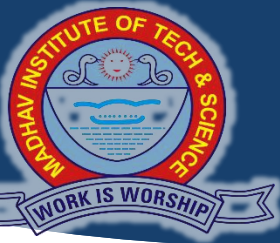
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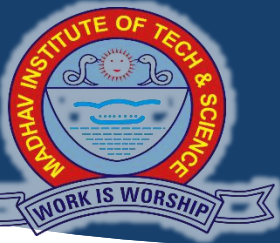


SAFETY AND SECURITY RULES TO BE FOLLOWED IN LABORATORY:

1. Always wear shoes before entering in the lab.
2. Do not touch anything without the permission of instructor/ lab assistant.
3. Read carefully the lab manual before performing experiments.
4. Do not tamper measuring instruments.
5. Do not open the casing of the equipment.
6. Switch off the power supply to the experimental setup on completion of the experiment.
7. Maintain clean and orderly laboratories and work area.
8. Be aware of the various experiment controls (start button, stop button, speed control) for each experiments.
9. Do not leave experiments running unattended.
10. Any injuries should be reported immediately for proper care.

GENERAL INSTRUCTIONS

1. Enter lab with closed footwear.
2. Boys should tuck in the shirts.
3. Long hair should be protected, let it not be loose specially near rotating machineries.
4. Any other machines/ equipments should not be operated other than the prescribed one for that day.
5. Power supply to your test table should be obtained only through the lab technician/ instructor.
6. Read carefully the lab manual before performing experiments.
7. Do not lean and do not be close to the rotating components.
8. Tools, apparatus and gauge sets are to be returned before leaving the laboratory.
9. Headings and detail should be neatly written:
 - (i) Aim of the Experiment.
 - (ii) Apparatus/Tools/Instruments Required.
 - (iii) Procedure / Theory / Algorithm/ Program.
 - (iv) Model Calculations.
 - (v) Neat Diagram/ Flowcharts.
 - (vi) Specification / Design Details.
 - (vii) Tabulation.
 - (viii) Graph.
 - (ix) Result / Discussions.
10. Before doing the experiment, the student should get the circuit/ program approval by the faculty in charge.
11. Experiment date should be written in the appropriate place.
12. After completing the experiments the answer to the viva voice questions should be neatly written in the workbook.



List of Experiment:

1. Study of simple vertical boilers.
2. Study of Locomotive boilers.
3. Study of Babcock and Wilcox boilers.
4. Study of Lancashire, Cornish and Cochran boilers.
5. Study of boiler mounting and accessories.
6. Study of 2 stroke diesel and petrol engines.
7. Study of 4 stroke diesel and petrol engines.
8. Study of simple steam engines.
9. Study of Lathe machine.
10. Study of Vernier caliper and Micrometer.