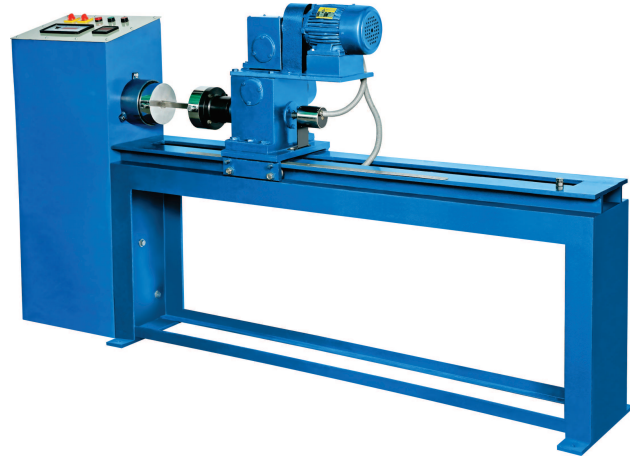


STRENGTH OF MATERIALS LABORATORY

1. IZOD IMPACT TESTING MACHINE
2. TORSION TESTING MACHINE
3. UNIVERSAL TESTING MACHINE
4. BRINELL HARDNESS TESTING MACHINES
5. ROCKWELL HARDNESS TESTING MACHINE
6. MECHANICAL EXTENSOMETER
7. COMPRESSOMETER



Introduction:

A system of loading which causes section of a bar or shaft to rotate about its central longitudinal axis relatively to another such section and which thus produces twist or torsion in the bar, constitutes a torsional load. The load may be composed of forces acting in any direction but the twisting or torsional affect is provided by the couples formed by these forces in planes normal to the central axis. The torsional shearing stresses in circular cross section vary from zero at the axis of the section to a maximum value at the extreme fibres. If no bending is present pure shear exists. Torsion Testing machine Consists of two independent chucks. The twist is communicated through the test piece to the other jaw on which a weighted pendulum is attached. The resistance to deflection of pendulum causes a torque to be applied to the test piece and the angles of deflection of pendulum is the measure of torque. The machine is built for maximum twisting moment at about 50 kgm. It is equipped with jaws for accomo- dating test pieces of 10 mm, 15 mm and 20 mm size either square or circular with square shoulder.

Specification:

- ❖ Capacity : 0 to 50 kgm.
- ❖ Range : ONE.
- ❖ Rod to be tested : 8 to 20 mm.
- ❖ Load of Measurement : Torque and Twist will be read directly
- ❖ Other provisions : Automatic stop in case of failure of specimen..



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