

MECHANICS OF SOLIDS LABORATORY

LIST OF THE EQUIPMENTS:

1. Universal Testing Machine
2. Hardness Testing Machine
3. Spring Testing Machine
4. Impact testing Machine
5. Torsion testing Machine

Name of the Equipment:

Universal Testing Machine



Specifications:

Maximum capacity : 400KN

Weight :2500kg

Experiments that can be conducted:

- 1) Tensile test on MS rod.
- 2) Compression test on wood.
- 3) Shear test on MS rod

Research work which can be done:

- Different types of Materials Testing can be done.

Name of the Equipment:

Hardness Testing Machine



Specifications:

Maximum Test Height :295mm

Depth of throat: 150mm

Maximum depth of screw below base:280 mm

Experiments that can be conducted:

- 1) Brinell Hardness Test.
- 2) Rockwell Hardness Test.

Name of the Equipment:

Torsion testing Machine




Specifications:

Maximum Torque capacity : 60 N-M
Torsion speed rpm : 1.5 rpm .

Experiments that can be conducted:

- Torsion test on square on rods.

Name of the Equipment:	Spring Testing Machine
	
Specifications:	Maximum Test Height : 300mm Outer scale : 0-500N Middle scale : 0-1000 N Inner scale : 0-2500N
Experiments that can be conducted: 1) Compression test on spring. 2) Elongation test on spring.	



Spring Test
Machine

Name of the Equipment:

Pendulum Impact Testing Machine



Specifications:

Charpy Test:

Maximum impact energy of pendulum: 300 J

Minimum impact energy of pendulum: 2J

IZOD Test:

Maximum impact energy of pendulum: 168 J

Minimum impact energy of pendulum: 2J

Experiments that can be conducted:

- 1) Charpy Test .
- 2) Izod Test .

Research work which can be done if any:

- Design a multi-material impact tester that can test both metals and polymers.