

Strength of Materials Laboratory

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List of Equipment Available

1. **10 Ton Buckton Universal Testing Machine** ([Click for Details](#))
2. **50 Ton Dannison Universal Testing Machine** ([Click for Details](#))
3. **500 kN Schimadzu Unviersal Testing Machine** ([Click for Details](#))
4. **Avery's Torsion Testing Machine** ([Click for Details](#))
5. **Charpy's Impact Testing Machine** ([Click for Details](#))
6. **100 Ton Buckton Universal Testing Machine** ([Click for Details](#))
7. **Rockwell Hardness Testing Machine** ([Click for Details](#))

1. 10 Ton Buckton Universal Testing Machine



1. Capacity

0 – 10 Ton (1 Ton = 2240 pounds)

2. Measuring Scales

0- 10 Ton

3. Type of Test performed

- a) Tension Test (Bars, Plates etc)
- b) Compression (Bars, Plates etc)
- c) Bending (Bars, Plates, Concrete Beams etc)
- d) Torsion Test (Bars, Nut, Bolts etc)

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2. 50 Ton Dannison Universal Testing Machine



1. Capacity

0 – 50 Ton (1 Ton = 2240 pounds)

2. Measuring Scales

- a. 0- 5 Ton
- b. 0- 10 Ton
- c. 0 - 25 Ton
- d. 0 – 50 Ton

3. Type of Test performed

- a) Tension Test (Bars, Plates etc)
- b) Compression (Bars, Plates etc)
- c) Bending (Bars, Plates, Concrete Beams etc)

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3. 500 kN Schimadzu Universal Testing Machine



1. Capacity

0 – 500 kN (1 Ton = 9.981 kilo Newton)

2. Measuring Scales

- a. 0- 10 kN
- b. 0- 25 kN
- c. 0 - 50 kN
- d. 0 – 100 kN
- e. 0 - 200 kN
- f. 0 – 500 kN

3. Type of Test performed

It is a computerized controlled very sophisticated machine used for very precise testing of materials.

- a) Tension Test (Bars, Plates etc)
- b) Compression (Bars, Plates etc)
- c) Bending (Bars, Plates, Concrete Beams etc)

4. Avery's Torsion Testing Machine



1. Capacity

0 – 15000 lb-inch

2. Measuring Scales

- a. 0- 1500 lb-inch
- b. 0- 3000 lb-inch
- c. 0- 7500 lb-inch
- d. 0- 15000 lb-inch

3. Type of Test performed

In this machine load is applied on specimen in terms of rotation and performs only torsion test on bars. It has four rotation speeds as follows.

- e. 0 – 3.33 degree/minute
- f. 0 – 10 degree/minute
- g. 0 – 30 degree/minute
- h. 0 – 90 degree/minute

5. Charpy's Impact Testing Machine



1. Measuring Scales

0- 180 degrees

4. Type of Test performed

This machine is used to carry out impact test for steel specimens in

- a. Bending
- b. Tension.

6. 100 Ton Buckton Universal Testing Machine



1. Capacity

0 – 200,000 pounds

2. Measuring Scales

- a) 0- 20,000 lbs
- b) 0 – 200,000 lbs

3.Type of Test performed

- a) Tension Test (Bars, Plates etc)
- b) Compression (Bars, Plates etc)
- c) Bending (Bars, Plates, Concrete Beams etc)

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7. Rockwell Hardness Testing Machine



1. Measuring Scales

- a. Scale B(0- 100)
- b. Scale C (0-100)

2. Type of Test performed

This machine is used to determine the material. There are two scales used for the measurement of hardness of softer and harder materials.