

TEST FLOOR LABORATORY

CIVIL ENGINEERING DEPARTMENT

Test Floor laboratory is one of the oldest laboratory of Civil Engineering Department that has been facilitating extensive research at Undergraduate, Graduate and Postgraduate level. It is well equipped with heavy machinery as well as latest sophisticated research apparatus e.g. Data acquisition system, cyclic loading arrangement, Digital apparatus equipped with LVDTs. All this arrangement makes possible the performance of various experiments i.e. tension and compression tests, measurement of strain in various experiments, testing of various structural elements made up of concrete, steel and other construction materials. In addition to such experiments the reaction frame assembly provides the opportunity to setup and perform different standard and nonstandard tests on different structural parts.

LIST OF MACHINES AND EQUIPMENTS

Reaction Frames:

Strain & Stress Controlled Universal Testing Machine:

Stress Controlled Universal Testing Machine:

Electric Hoist Crane:

Digital Data Acquisition System:

Miscellaneous Testing Equipment:

Reaction Frames:

Capacity: 200 M.Tons & 300 M.Tons

Manufacturer: Locally Manufactured

Purpose:

- a. Testing Precast Reinforced Concrete Girder and Slab Panels
- b. Testing the Brick Wall Panels
- c. Testing Columns of Various Categories and Types
- d. Testing Elastomeric Rubber Bearing Pads
- e. R.C Pipe Testing



Strain & Stress Controlled Universal Testing Machine:

Capacity: 100 M.Tons

Manufacturer: Shimadzu Japan

Purpose:

- a. For sophisticated research work at Graduate and Post Graduate Level
- b. Pull out Testing for high strength concrete using reinforcing fiber & Steel Bars under Static and cyclic loading.
- c. R.C beam and Column Test
- d. Pre-Stressed Beams etc.



Stress Controlled Universal Testing Machine:

Capacity: 200 M.Tons

Manufacturer: Shimadzu Japan

Purpose:

- a. For extensive instructive and commercial testing.
- b. Performance of Tensile Tests
- c. Performance of Compression Tests
- d. Performance of Bend Tests
- e. Calibration of Hydraulic Jacks & Pressure Gauges etc.



f. Calibration of Compression Testing Machines

Electric Hoist Crane:

Capacity: 3.0 Tons

Manufacturer: Japan

Purpose:

- a. The crane is used for shifting heavy test samples and testing equipment etc. within the laboratory premises.



Digital Data Acquisition System:

Capacity:

- a. 20 Channels
- b. LVDTs of range 50 to 100 mm
- c. Digital load cells up to 10 Ton capacity

Manufacturer: Yishey micro-measurement

Purpose:

- a. The apparatus is used for the measurement of change in length and applied load values and calculating strains and stress values via computer software.



Miscellaneous Testing Equipment:

Certain other type of minor testing equipment is available in the laboratory such as strain gauges, LVDTs, Strain Measuring devices (automatic and manual), length and weight measuring devices, test sample modification and manufacturing devices etc.