

HIGHWAY LAB

Department of Civil Engineering



2012
Knowledge is Power



GOVERNMENT POLYTECHNIC COLLEGE, BUDGAM (J&K)

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S. No	Apparatus Image	Apparatus Name	Quantity
1		<p><u>OVEN - SMALL</u></p> <p>An oven is a tool which is used to expose materials to a hot environment. Ovens contain a hollow chamber and provide a means of heating the chamber in a controlled way. In use since antiquity, they have been used to accomplish a wide variety of tasks requiring controlled heating.</p>	1
2		<p><u>LOS ANGELES ABRASION TEST</u></p> <p>The Los Angeles Abrasion Machine is used for determination of the aggregates resistance to fragmentation.</p>	1

3



INFRA RED MOISTURE TESTER

2

The equipment determines moisture of a sample by heating and drying it with infrared irradiation and displays the moisture content measured from changes in mass due to evaporation.

4



HOT PLATE

2

Hot plates are frequently used in the laboratory to perform chemical reactions, to heat samples, and for numerous other activities. Hot plates are conceptually simple – a flat surface with heating elements. They do not produce open flames and are well suited for oil or sand bath use.

5		<p><u>BULK DENSITY TEST BUCKETS</u> 1</p> <p>Determines Bulk Density or unit weight of aggregates. It consists of a Calibrated Cylindrical Measures of sheet iron with handles.</p>
6		<p><u>DUCTILITY TEST APPARATUS</u> 2</p> <p>Ductility Test Apparatus conducts ductility tests of bituminous materials to measure the elongation of a binder specimen before failure. The ends of a molded specimen are pulled apart in a liquid-filled trough at a specified speed and temperature.</p>
7		<p><u>FLEXURAL TEST APPARATUS</u> 1</p> <p>The Flexure Strength Testing Machines are designed to test flexural strength of concrete beams. The design provide maximum rigidity throughout their working range. The load is applied by the downward movement of the piston. A spacer is provided for testing different size of beams.</p>

8



Compression Testing Machine

1

A compression Testing Machine (CTM) is used to measure the compressive strength of a material. The CTM is designed to apply a compressive load to the sample until it fails. The machine consists of a piston that moves up and down inside a cylinder, applying the load to the sample.

9



PAVEMENT INTENSITY TEST APPARATUS

1

it is a multifunctional testing instrument for the material of road base and pavement. This can be used with many kind of testing accessories to test the compressive strength, indirect intensity test and bearing ratio of soil and pavement material. It can also be used to test the thermal stability and Marshall test of bituminous material.

10



**VISCOMETER
FOR BITUMEN**

2

It comprises one each of Cylindrical Oil Cup, Universal TIP, Furol Tip, Bath fitted with immersion heater mounted on a stand, Dimmerstat for temperature control, stirrer with shield, Complete with insulated handle and thermometer support, receiving flask, withdrawal tube, tube, filter funnel.

11



PENETROMETER

2

Penetrometers, equipped with a plunger and a needle or cone, penetrate food samples through gravitational force for a selected period of time. The distance the test device penetrates into the sample is measured to determine the relative tenderness of the samples such as baked products and gels.