Concrete Technology Laboratory

All quality control tests on cement, aggregates, and concrete can be performed in the concrete technology laboratory facilities (Fresh and hardened). The standard method for evaluating the quality of construction materials in accordance with the relevant IS regulations is taught to students. In order to check concrete's quality after construction, the lab is equipped to perform non-destructive tests on it. The laboratory's tools are extensively used for projects by UG and PG students as well as by professors for their research work, in addition to serving the needs of the curriculum and consulting.

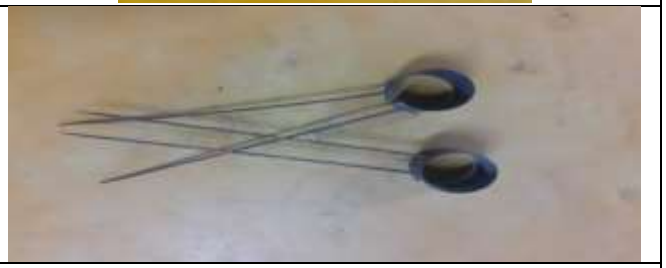
S.No	Name of the Equipment	Description	Image
1	Compression testing Machine (CTM)	Compression testing machine (CTM) is used to measure the compressive strength of the material. The compressive strength is measured by breaking the concrete test specimen in a CTM. Compression tests are conducted by loading the test specimen between two platens and applying a force to the test specimen by moving crosshead together	
2	Motor cube vibrator	Mortar cube vibrator to find out the compressive strength of the cement	

S.No	Name of the Equipment	Description	Image
3	Compaction factor test	Workability of concrete the relative consistency of freshly mixed concrete by the use of Compacting FactorTest	
4	Accelerating curing Tank	It is used for curing concrete and to get early compressive strength in concrete	

S.No	Name of the Equipment	Description	Image
5	Rebound Hammer	A Schmidt hammer, also known as a Swiss hammer or a rebound hammer or concrete hammer test, is a device to measure the elastic properties or strength of concrete or rock, mainly surface hardness and penetration resistance.	
6	Concrete Drum Mixer	Used to Mix the fresh concrete Uniformly and quickly.	

S.No	Name of the Equipment	Description	Image
7	Normal Consistency	To determine the Normal consistency, initial and final setting time of a given sample of cement.	
8	Slump cone	To measure the consistency of concrete by using slump cone.	

S.No	Name of the Equipment	Description	Image
9	IS Sieve Sets for grading fine Aggregates	Sieve analysis of fine aggregate is done to determine the particle size distribution of fine aggregate so that we can decide whether it is suitable for concrete mixing or not	
10	IS Sieve Sets for gradation of Coarse Aggregates	The sieve analysis determines the gradation (the distribution of aggregate particles, by size, within a given sample) in order to determine compliance with design, production control requirements, and verification specifications.	

S.No	Name of the Equipment	Description	Image
11	Pycnometer	Used for determination of specific gravity of soil particles of both fine grained and coarse-grained soils. The determination of specific gravity of soil will help in the calculation of void ratio, degree of saturation and other different soil properties.	
12	Le-Chatelier	indicates the stability of any cement during the volume change in the process of setting and hardening.	
13	Wire basket	Specific Gravity is defined as the ratio of Weight of Aggregate to the Weight of equal Volume of water. The specific gravity of an aggregate is considered to be a measure of strength or quality of the material. Aggregates having low specific gravity are generally weaker than those with high specific gravity. This property helps in a general identification of aggregates.