



C&I SYSTEMS, KOTA

CIVIL TESTING SERVICES

NABL Accredited & ISO 9001 Certified
Testing Laboratory



MECHANICAL TESTING:

FOR METALLIC MATERIAL (As per IS: 1786 & 2062):

- Tensile Strength, Yield Strength, % Elongation, Bend, Rebend, Mass, Total Elongation
- Tensile (Round & Flat Angle Channel, T & I Section, Pipe, Bolt etc.)
- Bend Test
- Flattening and Flaring Test
- Macro & Micro Examination
- Nick Break Test

CIVIL TESTING:

COMPRESSIVE STRENGTH OF CUBES (IS:516)

- Compressive Strength of Concrete Cubes/Mortar Cubes

CEMENT- OPC, PPC, FLYASH :

Physical Testing (IS:4031):

- Consistency, IST, FST, Compressive Strength, Fineness by Dry and by Blain Air Method, Specific Gravity, Soundness by Autoclave & Le-Chatelier Method

AGGREGATE TESTING (IS:2386)

- **Coarse Aggregate:** Sieve Analysis, Bulk Density, Los Angles Abrasion Value, Impact Value, Crushing Value, Water Absorption, Specific Gravity, Flakiness Index, Elongation Index, 10% Fine Value, Soundness with Na_2SO_4 / MgSO_4 , Stripping Value, Sand Equivalent Value, Deleterious Materials.
- **Fine Aggregate :** Sieve Analysis, Bulk Density, Los Angles Abrasion Value, Impact Value, Crushing Value, Water Absorption, Specific Gravity, Flakiness Index, Elongation Index, 10% Fine Value, Soundness with Na_2SO_4 / MgSO_4 , Stripping Value, Sand Equivalent Value, Deleterious Materials.

MIX DESIGN (IS: 10262 & SP-23):

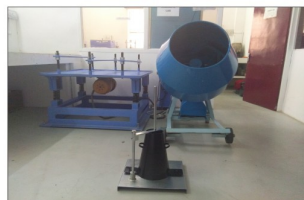
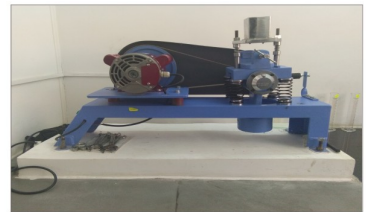
- Mix Design of Cement Concrete
- Slump Test ,Mix Design with Accelerated Curing

CONCRETE CORE (SOLID & HOLLOW) IS:2185

- Water Absorption, Block Density, Compressive Strength

CONCRETE CORE (IS 516):

- Sampling at Site
- Testing Compressive Strength, Density, Water Absorption



BRICKS (IS: 3425):

- Compressive Strength, Water Absorption, Efflorescence, Dimension, Bulk Density

PAVER BLOCK (IS:15628)

- Compressive Strength, Water Absorption

C.C. TILE (IS:1237,10646)

- Flexural Strength
- Water Absorption

BITUMEN & BITUMEN EMULSION (IS: 1201 TO 1220)

- Softening Point, Flash Point, Penetration Test, Ductility Test, Marshall Stability, Solubility in Trichloroethylene, Loss on Heating. Elastic Recovery at 15°C, Specific Gravity, Thin Film Oven Test.
- Residue on 600 micron, Viscosity by Saybolt Furol Viscometer at 25 & 50 °C, Coagulation of Emulsion, Storage Stability, Coating Ability and Water Resistance, Miscibility with Water, Stability with Mixing with Cement, Tests on Residue.

SOIL (IS: 2720) :

- Grain Size, L.L., P.L., Water Content, Specific Gravity, Shrinkage Limit, Compaction test by (Light & Heavy Method), FSI, **Swelling Pressure, CBR, Direct Shear, Consolidation**, Permeability and CNS Mix Design

ROCK (IS: 9143, 13030) :

- Unconfined Compressive Strength, Relative Density, Water Content, Point Load Index

SOIL AT SITE

- **Plate Load Test, Cyclic Plate Load Test**
- Standard Penetration Test, Field CBR Test
- **IN Situ Density:** 1) Sand replacement 2) Core Cutter Method

CHEMICAL TESTING :

(By Wet Method)

SOIL:

- pH Value, Water Soluble Sulphate, Water Soluble Chloride, Organic Matter, Soluble Solids, Calcium Carbonate

METAL:

- Carbon, Sulphur, Phosphorus, Nickel, Manganese, Chromium, Silicon, Molybdenum

WATER (Construction Purpose Water)

- pH, Suspended Matter, Chloride, Sulphate, Organic, Inorganic, Acidity & Alkalinity.



C&I SYSTEMS

(NABL Accredited Laboratory)

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