



BECAUSE EVERY
STRUCTURE DESERVES
CERTAINTY

CIBI JACOB

CHIEF CONSULTANT



Mr. Cibi Jacob completed his Bachelor's Degree in Civil Engineering from the renowned College of Engineering, Guindy (Anna University), Chennai, and earned his Master's Degree in Structural Engineering from the prestigious Indian Institute of Technology (IIT), Delhi.

He was awarded the esteemed DAAD Sandwich Model Scholarship, which enabled him to undertake advanced research in Germany.

His research was conducted at the Technical University of Dresden, focusing on Earthquake Engineering, with special interest in Earthquake-Resistant Structures, Seismic Reliability, and Performance-Based Structural Design. Several of his research works have been published in reputed international journals, and he has actively participated in various national and international conferences and technical workshops.

With extensive professional experience across a wide range of projects throughout India, Mr. Cibi Jacob has contributed to the successful execution of numerous large-scale industrial and infrastructure developments.

Mr. Cibi Jacob is a member of the Institution of Engineers (India) and holds several professional accreditations, including:

- Chartered Engineer
- Registered Structural Engineer – Grade I
- Licensed Surveyor

OUR EXPERTISE



Soil Testing



Geotechnical Engineering



Aggregates Testing



Design Mixes



Building Materials Testing



Non-Destructive Tests (NDT)



Chemical Analysis



Steel Testing



Water Testing



Cement Testing



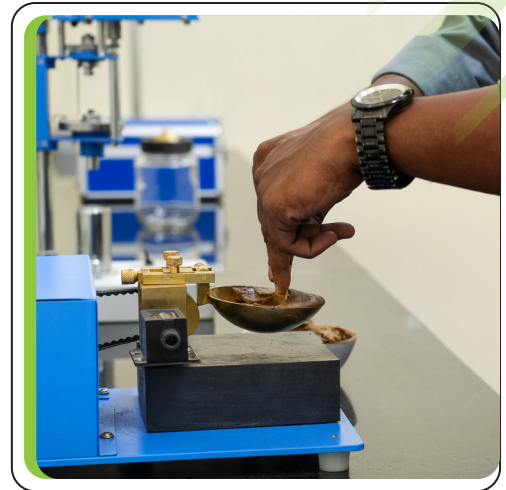
Rock Testing

Soil Testing

Soil testing is crucial for construction projects to determine the physical and engineering properties of soil at a site. This data is essential for designing and constructing stable foundations, retaining walls, and slopes.

Our soil testing services include:

• Triaxial Test • Permeability Test • Direct Shear Test • Standard & Modified Proctor Test • CBR Test • Consolidation Test • Swelling Pressure Test • Grain Size Analysis (Wet, Dry & Hydrometer) • Liquid Limit & Plastic Limit • Free Swell Index • Specific Gravity Test • Field Density by Core Cutter Method • Field Density by Sand Replacement Method • Field CBR • Shrinkage Limit • Vane Shear Test.



Geotechnical Engineering

Our Geotechnical engineering services provide insights into subsurface conditions vital for the safe design and construction of structures.

We offer:

- Soil Sampling and Analysis
- Standard Penetration Test (SPT)
- Borehole Drilling
- Slope Stability Analysis
- Foundation Design Recommendations
- Subsurface Investigation

Aggregate Testing

Testing aggregate is critical for understanding their performance and durability.

Our aggregate testing includes:

- Sieve Analysis
- Specific Gravity
- Impact Value
- Flakiness & Elongation
- Crushing Value
- Abrasion Value



Design Mix

We trial concrete mixes to meet project-specific requirements, ensuring optimal strength, durability, and workability.

Our design mixes include:

- PCC (Plain Cement Concrete)
- RCC (Reinforced Cement Concrete)
- SCC (Self-Compacting Concrete)
- PQC (Pavement Quality Concrete)
- DLC (Dry Lean Concrete)



Building Materials Testing

Ensuring the highest quality in building materials is crucial for the safety and longevity of any construction project.

Our testing includes materials such as:

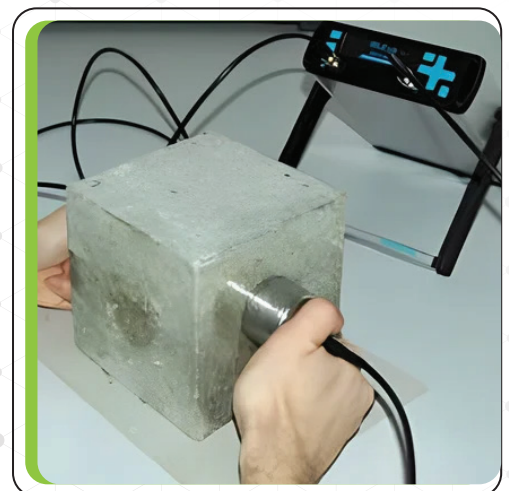
- Bricks
- Hollow & Solid Blocks
- Paver Blocks
- AAC Blocks
- Porotherm Bricks



Non-Destructive Tests (NDT)

Non-Destructive Testing (NDT) helps inspectors evaluate a product or structure without causing damage. It checks properties like strength, quality, durability, conductivity, and corrosion resistance using methods such as:

- Pile Integrity Test
- Rebound Hammer
- Ultrasonic Pulse Velocity (UPV)
- Cover Meter
- Carbonation Test
- Half Cell Potential
- Concrete Core Cutter



Chemical Analysis

Our chemical analysis services help reduce the environmental impact of construction and ensure the highest quality materials are used.

We analyze:

- Aggregates
- Soil
- Cement



Steel Testing

Steel is a foundational element in construction, and understanding its physical properties is essential for structural integrity.

We test:

- Tensile Strength
- 0.2% Proof Strength
- Elongation
- Mass of Steel
- Bend & Rebend

Water Testing

Ensuring the quality of water is essential for meeting safety and regulatory standards in construction and environmental projects.

Our water testing includes:

- Contamination Levels
- Chemical Composition
- Physical Properties

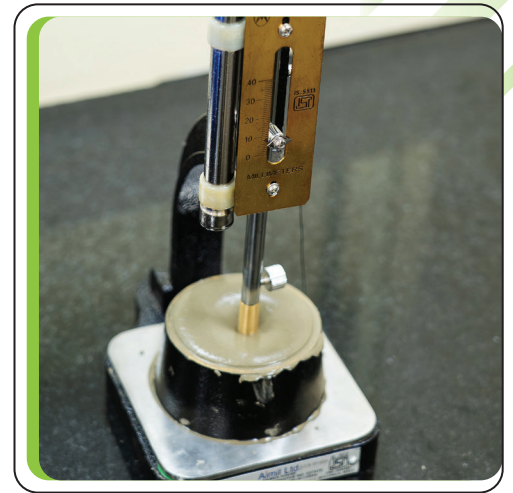


Cement Testing

We test cement to check its quality and suitability for construction work. Our testing ensures the cement meets required standards and performs well in structures.

Our cement testing includes:

- Strength
- Setting Time
- Quality & Durability
- Overall Performance



Rock Testing

Rock testing optimizes excavation, tunneling, and foundation design.

We evaluate rock strength through:

- Unconfined Compressive test
- Density
- Point Load Index
- Specific Gravity
- Porosity



We ensure all testing procedures meet the highest standards of accuracy and reliability. Using Laboratory Information and Management Software (LIMS), test data is recorded in real-time, and reports are generated automatically, reducing errors and ensuring traceability. All reports are securely stored for easy access and future reference. Our processes are regularly reviewed and refined to consistently exceed client expectations and industry standards.

CONCRETE CORE COMPRESSIVE STRENGTH AND CARBONATION TEST



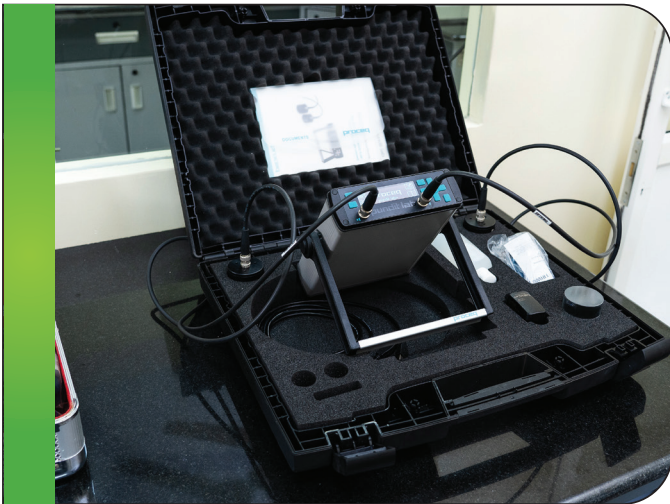
HALF-CELL POTENTIAL TEST



REBOUND HAMMER TEST



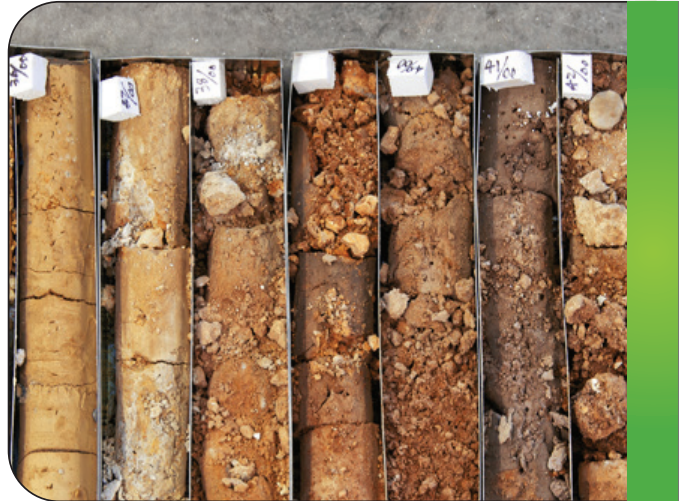
ULTRASONIC PULSE VELOCITY TEST



LOW STRAIN NON DESTRUCTIVE TEST (PIT)



GEO-TECHNICAL INVESTIGATION (SPT)



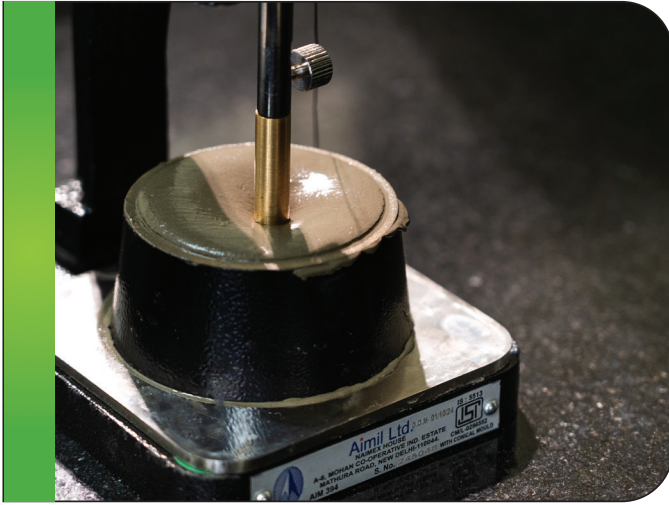
FIELD DENSITY TEST (CORE CUTTER METHOD)



REINFORCEMENT STEEL



CEMENTITIOUS MATERIALS



BUILDING MATERIAL TEST



CONSULTANCY SERVICES

- ✓ Condition Assessment of existing RCC & Steel structures
- ✓ Structural Stability Analysis to determine the residual life of structures
- ✓ Feasibility study for construction of additional floor over the existing building
- ✓ Vibration analysis of Machine foundation
- ✓ Suggesting schemes for Restoration and Rehabilitation of Structures

OUR ESTEEMED CLIENTS





JACOB
ENGINEERS

STRUCTURAL AND MATERIAL TESTING DIVISION

JACOB ENGINEERS PRIVATE LIMITED



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