

AQUA LAB ALL BUILDING MATERIAL TESTING PVT. LTD.

(ACCREDITED LABORATORY AS PER ISO/IEC 17025:2017)



Company Profile



About Us

Aqua Lab thrives at the heart of Mumbai – the most advanced and busiest construction industry in India- helping architects, engineers, manufacturers and consultants to test the material of some of the largest and impressive projects in the country. Our construction materials testing and consultancy services brings certainty to material safety, performance and application, giving clients accurate and independent information at every stage of their project. Offering physical and mechanical analysis of a comprehensive range of materials to achieve certification by complying with current guidelines and building regulations. The testing is carried out in accordance with multiple standards and specifications as defined in ASTM, ISO and local building codes and other applicable standards. The testing capacity ranges from material sampling, basic material classification tests to advanced material mechanics testing. For larger projects, on-site testing facilities are provided for faster access to critical test results.



Our Services



Construction Material Testing



Structural Audit



***Project Management Assistance
& On-Site Inspection***



***Chartered Engineering
Certification***



Geotechnical Investigation



***Non-Destructive Testing (NDT),
Restoration & Rehabilitation***



Pile Testing



Education & Training

Construction Material Testing

Laboratory & Field Testing of Building Materials / Components Including Special Tests.

- ▶ Tests on building material such as Cement, Aggregate, Flyash, Micro Silica, GGBS, Admixture, Rebars, Structural Steel, Bricks, Blocks, Stones (viz. Marble, Granite, Quartz, etc), Gypsum Plaster, Readymix Plaster, Tiles, Soil & Rock, Wood etc.
- ▶ Mix Designs for Normal, High Performance, Self Compacting, High Volume Flyash Concretes
- ▶ Concrete Durability Test such as Water Permeability Test (WPT), Rapid Chloride Permeability Test (RCPT), Rapid Chloride Migration Test (RCMT), Initial Surface Absorption Test (ISAT) and Water Absorption.
- ▶ Chemical Tests on Cement, Flyash, Micro Silica, GGBS, Admixture, Water, Steel, Soil & Rock.
- ▶ Tests on Construction Chemicals such as Admixtures, Curing Compounds, Water Proofing Compounds, Sealants, Protective Coatings, Epoxies, Grouts, etc...
- ▶ Evaluation Tests on Water Proofing Systems
- ▶ Load Test on Precast concrete elements such as Manhole Cover, Drain Cover & Building Components
- ▶ Tests on Innovative Construction Materials such as Fibre Wraps, Fibrous Concrete, Laminates etc...
- ▶ Design and carry out appropriate performance tests for specific requirements of materials / components
- ▶ Provide Mobile and Field Testing Laboratory facilities at sites



GEOTECHNICAL INVESTIGATION

Field Investigations

(Offshore & Onshore)

- ▶ Drilling boreholes in soil and rock using Rotary / Hydraulic drilling rig and collection of soil and rock samples based on IS and BS codes
- ▶ Conducting Standard Penetration Test
- ▶ Conducting Plate Load Test
- ▶ Electrical Resistivity Test
- ▶ Conducting Field Survey using Total Station and Differential Global Positioning System (DGPS).
- ▶ Ground Improvement Consultancy

Laboratory Testing

- ▶ On Soil
- ▶ On Rock
- ▶ Physical and Chemical Testing



Structural Audit

Poor structural integrity and insufficient fire safety measures can have disastrous consequences. Aqua Lab offers structural audits to ensure that your suppliers' industrial and commercial premises are safe, up to relevant codes, and present no danger to employee life and health.

Structural audits include a comprehensive check of buildings and premises, including:

- Verification of Load Conditions
- Evaluation of the Structural System of the Building
- Detection of Structural Defects, Damages, Distress, Deformation or Deterioration
- Plan and Alignment Check
- Assessing Maintenance and Exposure to Aggressive Environment
- Other Structural Surveys and Checks •Fire Safety Check (optional)
- Electrical Safety Check (optional)

The findings of all structural audits are presented in a detailed report that includes an assessment of the current condition and suggestions for appropriate repairs and retrofitting measures.

Aqua Lab Structural Auditors

Aqua Lab structural audits are carried out by an experienced and licensed structural civil engineers. A typical Profile Auditor has over 5 years experience in the relevant field, including design and construction supervision.

Our Auditors are associated with Indian Engineering Institute as Chattered Engineer & are Empanelled with various Municipal Corporations like BMC, TMC, PCMC, MBMC, NMMC.

Post Structural Audit

Based on the audit findings and recommendations, appropriate changes may be required. This includes repairs, strengthening of structural elements and replacement of damaged or faulty components.

Aqua Lab can provide follow-up services, such as live load analysis, redesign of fire/electric safety systems, and more, to assist the factory in implementing the necessary corrective actions.

Why Perform a Structural Audit

Based on the audit findings and recommendations, appropriate changes may be required. This includes repairs, strengthening of structural elements and replacement of damaged or faulty components.

- To ensure safe working conditions, preventing injury and loss of life
- To protect your brand's image and reputation
- To comply with statutory requirements (construction and design codes by country)
- To gain an accurate picture of the state of safety in your supply chain
- To prevent supply chain interruptions

Non-Destructive testing (NDT), Restoration & Rehabilitation

NDT, Restoration & Rehabilitation and Structural Health Monitoring (RCC / Steel / Composite Structures)

- Visual Inspection / Preliminary Reconnaissance Survey / Structural Condition Survey / Rapid Visual Screening of Structures
- NDT of Concrete / Steel / Composite Structures
- Condition Assessment / Health Assessment of Structures
- Load test on Slab / Bridges
- Material Specifications / BOQ of repairs / Restoration Scheme
- Feasibility check for additional floors / additional Loading
- Repair Monitoring of structures & Quantification of repairs & Certification of Structures

Remote Inspection using Aerial Drones

- Inspection of tall structures such as Chimney, others
- Aerial survey of bridges, dams, chemical plants
- Thermal imaging of critical areas
- SOLAR farm inspection
- Commercial property survey

Remote Inspection using under Water Drones

- Inspection of submerged structures such as dams, turbine casing, railway bridges, others
- Inspection using validated methods



Project Management Assistance & On-Site Inspection

A project management consultant provides expert project management advice to external businesses. A company may hire a project management consultant if it lacks project management expertise or needs project management advice from an external, impartial party.

- ▶ **Power:**
Thermal, Hydro, Nuclear, Renewable, Transmission and Distribution
- ▶ **Infrastructure:**
Water, Environment, Urban Development, Buildings, Manufacturing Facilities, Ports and Harbors, Transportation
- ▶ **Resources – Hydrocarbons and Chemicals:**
Oil, Gas and Refineries, Chemicals, Petrochemicals, Fertilizers, Specialty Chemicals, Pulp and Paper, Cement, Food, Pharmaceuticals and Beverages, Tyre, Glasspolymer modified mortar.
- ▶ **Resources – Mining and Metallurgy:** Mining, Geology, Beneficiation, Steel, Non-ferrous
PMC is a disruptive offering from Aqua Lab providing the much-needed transparency, ethics and values bundled with structure and professionalism, the market requires.

We have the expertise ranging from architectural engineering, basic engineering, detailed engineering, project management and construction management. We take our holistic solutions a step further by extending our services through the entire asset life-cycle by offering open services management.

Our diverse capabilities endorsed with high ethical practices and international standards in safety and quality make Aqua Lab a must-have partner for your next project.



Pile Testing

Testing of piles is routinely carried out in order to verify that the design and construction of the piles are in line with expectations or to assist in the design of piles ahead of the main piling construction works.

Pile testing is often a requirement of national standards or can be specified as part of the construction specifications.

Testing is carried out by a number of ways including:

Pile Integrity Test, (also known as low-strain dynamic test, sonic echo test, and low-strain integrity test) is one of the methods for assessing the condition of piles or shafts. It is cost-effective and time-efficient.

Dynamic load testing, where the pile is loaded over a very short duration by the application of a dynamic load. This test requires more details interpretation of the results, and as a result of the dynamic load application cannot be directly compared to static loading. The test is normally carried out using a pile driving hammer. For driven piles the hammer is commonly the same as the hammer used for installation. Where testing is carried on bored piles careful selection of an appropriate hammer is required, taking into consideration the size of the pile and the target load application.

Static load testing, where the pile is loaded gradually via a load cell from either reaction piles, kentledge or surface footings. This method of testing is generally considered the most reliable method of testing piles and most closely resembles the working loading conditions on the piles.



Chartered Engineering Certification

Aqua Lab has an independent Third-Party Inspection Services (TPI) division providing services locally and worldwide to ensure and verify quality and compliance to the clients' requirements as well as to international standards. Our TPI service has various approvals and registrations from internationally recognized entities which include Oil & Gas sector, EPC & construction companies. Quality management system for TPI Division of Aqua Lab is certified in accordance with ISO 9001:2008.

Aqua Lab provides inspection services to all of the main sectors and industries including Oil & Gas, Power generation and distribution, Chemicals & Petrochemical, Utilities, Manufactures, Mining, Pipelines, Refineries, Fertilizers and Pharmaceuticals. We also undertake Project Management services for Civil, Mechanical, Electrical and Instrumentation, Project HSE and QA/QC activities.

Aqua Lab offers inspection services in the following fields:

Inspection during new fabrication

- Pressure equipment, Piping & Pipelines
- Storage Tanks
- Compressors
- Valves and Fittings
- Pumps & Blowers
- Turbines
- Instrumentation and Control Systems
- Generators
- UPS & Transformers

In service Inspection

- Re-qualification of Plant Equipment, Piping
- Maintenance Inspection

Manpower deployment

- Supply of Technical Resources & Manpower
- Witnessing Performance Test
- Qualification of Welding Procedures and Welders
- NDE Crew
- NDT Personnel Qualification
- Project Management
- Expediting Services



Education & Training

ASNT / ISNT Certification:

- Ultrasonic Testing (UT)
- Magnetic Particle
- Eddy Current
- Dry Penetration Test/ Dry Penetration Test
- Welding Technique Course
- Visual Test
- Quality Assurance & Quality Control
- General NDT
- NDT Level III

Scope & Objectives:

- To provide professional training in NDT Techniques in a systematic manner as per personal certification codes.
- To provide specialized training in specific NDT techniques and proficient handling of equipment.
- To impart knowledge of latest trends, techniques and technology in NDT.

Training offered to meet requirements of the Industry.

- Backed by applications knowledge accumulated over the years.
- Personal attention of faculty and adequate instruments for students to get extensive hands-on practice.
- We have a modern well-equipped classroom for training. Also, it is well equipped with a range of all machines & accessories, a variety of test specimens, and reference blocks collected over the years from the industry. This enables our students to get practical experience on almost all testing requirements.


The course meets or exceeds the desired requirements of ISNT, ASNT (American Society for Nondestructive Testing) Level I & II. Timings are from 9.30 a.m. to 6.00 p.m. Exhaustive course material giving detailed information on the specific technique is also given which will be a valuable future reference guide. Course completion certificate will be issued to qualifying candidates. Seats are limited and are allocated on first – come – first served basis.


Civil NDT Certification.


- Ultrasonic Pulse Velocity
- Rebound Hammer
- Half Cell Potentiometer
- Carbonation
- Profometer/ Rebar Locator
- Core Cutting & Testing






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