

**ADVANCE NDT &
DURABILITY TESTS**

BROCHURE

TESTING | CALIBRATION | PT SERVICES

Accredited as per:

ISO/IEC:17025-2017 for Testing & Calibration services by NABL.

ISO/IEC:17043-2023 for Proficiency Testing for Calibration services by NABL.

ABOUT GLOBAL LAB





Your Trusted Partner in Material Testing, Calibration & PT Services

Motto: Authenticity. Accuracy. Transparency. Reliability.

Global Lab is a leading provider of Construction Material Testing, Calibration and Proficiency Testing services, Specializing in testing of Building Materials, Industrial products and infrastructure monitoring. With precision-driven methodologies and state-of-the-art laboratories, we empower industries to ensure the quality, durability and performance of their materials.

With a strong presence in the construction, manufacturing and allied sectors, we deliver accurate test results that enable businesses to make informed decisions, enhance product integrity and meet industry benchmarks. Our team of experts, combined with cutting-edge technology, ensures that every test & calibration produces reliable, data-driven insights that inspire confidence and excellence.

At Global Lab, we are committed to setting the standard for material testing—helping businesses build with certainty, innovate with assurance and operate with trust.

	CIVIL TESTING
CALIBRATION SERVICES	
	PROFICIENCY TESTING
INSPECTION	



20000+
PROJECTS SERVED



20000+
SATISFIED CUSTOMERS



50+
PROFICIENCY TESTING PROGRAM



1000+
TESTS



175+
CALIBRATIONS



200+
EXPERT WORKFORCE

Our Areas of Expertise

We specialise in a wide range of Material Testing, Calibration, and PT services, including:

- Pile Testing
- Concrete Durability
- Concrete Mix Design
- Concrete NDT Testing
- Building Material Testing (Mechanical and Chemical)
- Metallic Material Testing (Mechanical and Chemical)
- Soil & Rock Testing
- Bridge Load Testing
- Structural Health Monitoring
- Structural Health Assessment
- Mass Concrete Temperature Monitoring
- Calibration Services
- Proficiency Testing Services



COMMITMENT TO GLOBAL STANDARDS

At Global Lab, we take pride in our commitment to internationally recognized quality and competency standards. Our laboratory is accredited with:

- ✓ ISO/IEC 17025:2017 – Ensuring competence in Testing & Calibration Services
- ✓ ISO/IEC 17043:2023 – Accreditation for Proficiency Testing Services

These accreditations have been awarded by the National Accreditation Board for Testing and Calibration Laboratories (NABL).

Accreditation & Compliance

NABL accreditation signifies that our testing and calibration services meet the highest levels of technical competence, reliability and impartiality. This globally recognized certification assures our clients that:

- Our laboratory operates with precision, accuracy and consistency.
- Every test and calibration process follows strict quality control protocols.
- We adhere to National & International best practices in testing and calibration.
- Our results are credible, reproducible and widely accepted across industries.

By maintaining stringent compliance with national and international benchmarks, Global Lab continues to deliver trustworthy and validated results — reinforcing our position as a leader in the testing and calibration industry.

OUR HISTORY

A Legacy of Excellence & Commitment

Established on Independence Day 2009, Global Lab began its journey in Mumbai, India, with a vision to redefine the standards of construction materials testing, calibration and proficiency testing services. Over the years, we have grown into an industry leader, serving thousands of satisfied clients with unmatched expertise, precision and ethical practices.

Our extensive portfolio includes collaborations with central and state government organizations, multi-national corporations and global industrial giants. These partnerships are a testament to our unwavering dedication to quality, compliance and technical excellence.



TC - 5713

Testing
Mumbai



TC - 8522

Testing
Kolkata



TC - 14645

Testing
Navi Mumbai



TC - 16301

Testing
Bhubneswar



TC - 12677

Testing
Guwahati



CC - 2245

Calibration
Mumbai



PC - 1097

Proficiency Testing
Mumbai

OUR VISION

- At Global Lab, we envision becoming the most trusted, reliable and competent testing and calibration partner for industries worldwide. Our goal is to set the benchmark for excellence, precision and integrity, ensuring that businesses across the construction and allied sectors achieve the highest standards of quality and compliance.
- We strongly believe that every organisation—from large enterprises to independent consultants and emerging firms—plays a vital role in shaping a better future. By prioritising their needs and delivering unparalleled services, we uphold our commitment to social and corporate responsibility, contributing to a stronger and more resilient industry landscape.

OUR MISSION

- To be a global leader in Testing, Calibration & PT services, recognized for excellence, reliability and innovation.
- To be the preferred choice for our clients by consistently delivering trustworthy, high-quality and value-added services with precision and efficiency.
- To continuously innovate and adopt cutting-edge technologies that enhance productivity, sustainability and cost-effectiveness.
- To foster a culture of excellence and expertise, empowering our professionals with continuous learning, development and pride in their work.

INDUSTRIES WE WORK IN



DIGITIZED OPERATIONS

Global Lab has significantly advanced its operations by implementing a cutting-edge digitized reporting system for all testing, calibration, and Proficiency Testing processes. This innovative solution leverages state-of-the-art technology to ensure accurate, real-time documentation and secure data management.

Key Benefits of the Digitized Reporting System:

Enhanced Accuracy and Precision: The system eliminates the potential for human error associated with manual reporting, guaranteeing precise and reliable data.

Real-Time Access to Reports: Customers can conveniently access comprehensive reports at their fingertips, reducing delays and improving decision-making.

Streamlined Workflow: The seamless integration of the system into Global Lab's processes optimizes efficiency and accelerates turnaround times.

Enhanced Transparency: Standardized reporting formats and secure online access provide clients with a clear and detailed overview of their test, calibration, and proficiency testing results.

Industry Compliance: The system adheres to stringent industry regulations, ensuring that all reports meet the highest quality standards.

By prioritizing user convenience, Global Lab has designed the digitized platform to offer a hassle-free experience. Clients can easily track their reports and access them securely online. This innovative solution not only elevates Global Lab's service standards but also empowers industries to achieve faster turnaround times and improved operational efficiency.



ACCESS REPORTS FROM ANYWHERE, ANYTIME

Global Lab stands at the forefront of Testing, Calibration, Proficiency Testing, and Inspection services for the construction industry. We know that timely insights into material performance are critical. With our advanced digital reporting platform, you can access accurate and dependable results whenever you need them, keeping your projects on track and quality-assured.



At Global Lab, we believe in staying ahead of the game by leveraging the latest technology and innovative solutions. In line with the Government of India's "Digital India" program, our laboratories have implemented a state-of-the-art SaaS-based QLMS software called 'Autovity' across all our facilities.

This software has helped us control, monitor, and optimize our laboratory operations, ultimately leading to enhanced productivity, cost-effectiveness, and transparency in reporting.



Cut & Pull Out Test

01

This test is performed to determine the *in-situ* compressive strength of hardened concrete in existing structures such as bridges, decks, or buildings.

Process: A small hole (18.4 mm) is drilled, and an expandable steel ring is inserted in a recess. The ring is pulled out using a hydraulic jack, and the pullout force is correlated to compressive strength.



Advantages:

- Reliable on-site strength estimation.
- Minimal surface damage, easily repairable
- Provide Quick Compressive strength result.
- Suitable for Heavily reinforced structure & Prestress structure

Concrete Resistivity Test

02

This test is performed to evaluate the *potential for corrosion* in reinforced concrete by measuring its ability to resist electrical current flow.

A four-probe method applies a small electrical voltage across the concrete surface; the resistivity is calculated in ohm-meters.



Advantages:

- Quick and non-destructive
- Useful predictor of durability and chloride ingress potential
- Helps classify structures for corrosion risk zones

Corrosion Rate by means of the polarisation resistance method (Galva Pulse)

03

This test is performed to measure *corrosion rate* ($\mu\text{m}/\text{year}$) and *activity* of reinforcing steel embedded in concrete.

A small polarization current is applied through a reference electrode on the concrete surface, and the resulting potential shift indicates corrosion rate.



Advantages:

- Quantitative assessment of corrosion activity
- Non-destructive and reproducible
- Enables maintenance planning and Residual life prediction

Concrete Maturity Test

04

This test is performed to estimate the *early-age compressive strength* of fresh concrete without destructive testing.

Temperature sensors embedded in concrete measure time-temperature history; maturity index correlates to strength development.



Advantages:

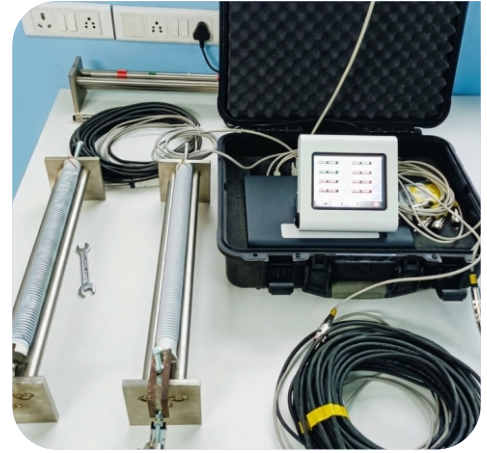
- Determines proper time for formwork removal or post-tensioning
- Reduces need for frequent cube testing
- Ensures real-time quality control in field conditions

Autogenous Shrinkage Strain

05

This test is performed to quantify *volume change* in high-performance or low water-cement ratio concrete due to internal chemical reactions.

In this test fresh concrete is monitored in a sealed corrugated tube, and longitudinal length change over time is measured with a dilatometer.



Advantages:

- Helps control early-age cracking
- Crucial for mass concrete and high-strength mixes
- Supports selection of shrinkage-reducing admixtures
- Identification of suitable mix design

Age of Cracking

06

This test is performed to determine the *tendency and time of cracking* due to restrained shrinkage in concrete mixtures.

A ring specimen is cast around a steel ring with strain gauges. Time to cracking is recorded based on stress buildup in the ring.



Advantages:

- Identifies cracking potential of concrete before field use
- Supports mix optimization for durability
- Useful for comparative evaluation of shrinkage control methods
- Identification of suitable mix design

Concrete Creep Test

07

This test is performed to evaluate the *long-term deformation* of concrete under sustained load, critical for tall or prestressed structures.

Cylindrical specimens (150 dia & 300 mm length) are loaded at constant stress and measured for strain over several periods over the years.



Advantages:

- Predicts service deflection and prestress losses
- Aids structural safety and serviceability assessment
- Provides input for long-term design models

Oxygen Permeability Test

08

This test is performed to assess concrete's *resistance to gas ingress*, directly linked to carbonation and corrosion potential.

A controlled oxygen flow is forced through a concrete disc; the permeability coefficient is calculated based on pressure and flux.



Advantages:

- Key durability indicator
- Detects micro-crack effects on permeability
- Supports concrete design for severe environments

Sorptivity Test

This test is performed to determine the rate of water absorption in unsaturated concrete. This is a primary indicator of how easily moisture (and dissolved chlorides) can enter the concrete surface.

A concrete disc (diameter ranging from 94 to 106 mm and a length of 47 to 53 mm) is sealed on all sides except the bottom surface, which is placed in contact with water. The weight gain is measured over time to calculate the absorption rate in mm/\sqrt{s} .

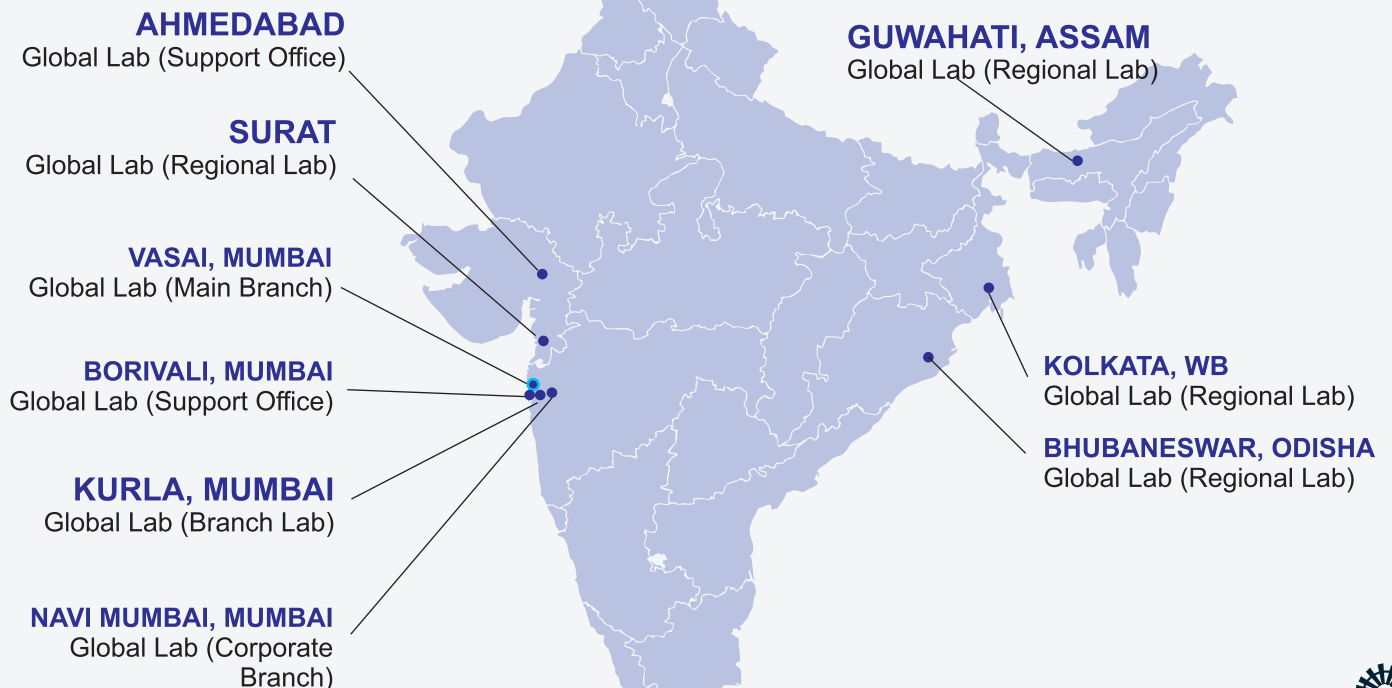


Advantages:

- Provides a precise measure of "surface tightness" and long-term water-resistance, which is critical for preventing reinforcement corrosion.

OUR PRESENCE ON MAP

Growing Company, Increasing Footprints..



OUR OFFICES



CORPORATE OFFICE: VASAI, MUMBAI

Unit No- 31& 32, Sethia Industrial Park, Opp Saiyali Petrol Pump, Near Golden Chariot Hotel, Waliv, Vasai (E), Palghar – 401208

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For calibration: Rupesh | rupesh@globallab.co.in | 8108151752
Dev Sharma | dev.sharma@globallab.co.in | 9820004115



CORPORATE BRANCH: TURBHE, NAVI MUMBAI

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BRANCH LAB: KURLA, MUMBAI

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REGIONAL OFFICE: KOLKATA, WEST BENGAL

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