



**INDIAN CONSULTING ENGINEERS**

# **ENGINEERING SERVICES**

**FOR BUILT ENVIRONMENT**

## **OUR SERVICES:**

- Non - Destructive Testing and Evaluation
- Structural Condition Assessment
- Structure Safety Audits
- Pre-purchase Inspection
- Bridge Inspection & Condition Survey
- Evaluation of Fire Damaged buildings
- Forensic Investigation
- Built-up Quality check
- Structural Repair & Rehabilitation
- Drone Visual Inspection
- Construction Quality Assurance

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# SOLUTIONS FOR STRUCTURAL INVESTIGATION, EVALUATION AND RESTORATION



## Structural Assessment of buildings, Restoration Solutions & Stability Certification

- Visual inspection to ascertain visible deterioration and distress
- Detailed In-situ concrete quality test for compressive strength and uniformity
- In-situ reinforcement condition evaluations for corrosion
- Identification and mapping of structural cracks
- Identification of weak zones in the structures
- Detecting seepage/leakage and dampness using Thermal Imaging Technique
- Analysis of test data and strengthening requirement in the structure
- Restoration / strengthening scheme

## Bridge Inspection

- Condition assessment of distressed bridges
- Structural and durability performance assessment of existing bridges, viaducts, flyovers and foot over bridges ( FOB)
- Detecting distressed component & deteriorated area by visual inspection
- Detailed nondestructive testing
- Assessment of in situ condition of concrete and reinforcement
- Condition assessment of structural steel components, welded and riveted connections by NDT , Load testing and deflection measurements

## Durability Assessment of RCC Structures

- Crack analysis by crackoscope and UPV equipment
- Determination of extent of corrosion in steel rebars
- Detecting location and extent of delamination
- Measurement of concrete cover by covermeters
- Carbonation depth measurement in concrete
- Chlorides & sulphates content and PH value determination
- Surface defects such as detecting the location and extent of honeycombing
- Assessment of mechanical properties of damaged concrete

## Drone Visual Inspection

- Visual inspection of Buildings & Bridge Structures
- Visual inspection of Silos and Towers
- Drone Visual inspection of large facilities

# ENGINEERING SERVICES FOR ASSET MANAGEMENT

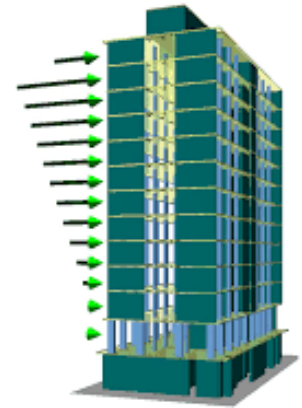
## Inspection and Audit

- Structural Safety Audit
- Assessment of Fire Damaged Structures
- Structure Adequacy Assessment
- Creation of as built structural drawings
- Electrical Safety Audit



## Seismic Evaluation of Buildings

- Rapid Visual Screening of buildings to assess seismic damageability
- Rehabilitation needs and identifying the requirement for detailed evaluation
- Structural evaluation by seismic analysis, listing out deficiencies, design and methodology for remedial action
- To identify simplified retrofitting requirements



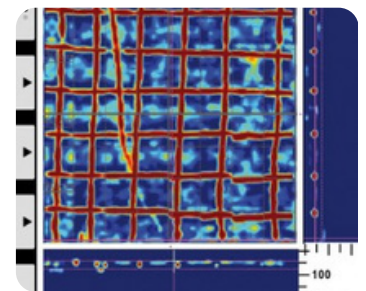
## Corrosion Monitoring

- Assessment of corrosion probability in RCC by measuring Half-cell potential Test
- Concrete Surface electrical resistivity Test
- Recommendations for corrosion management in the structures



## Reinforcement Steel Scanning

- Rebar Mapping in RCC
- Planning of major drilling or cutting in RCC structure



## Non Destructive Testing (NDT)

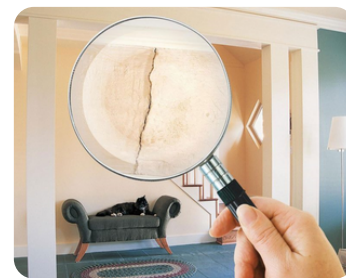
- |                                   |                                   |                                |
|-----------------------------------|-----------------------------------|--------------------------------|
| • Rebound Hammer Test             | • Crack Mapping                   | • Dye Penetration Test ( DPT)  |
| • Ultrasonic Pulse Velocity (UPV) | • Thermal Imaging                 | • Magnetic particle Test       |
| • Rebar Scanning                  | • Carbonation Test                | • Ultrasonic thickness gauging |
| • Impact Echo Test                | • Concrete Resistivity            | • Pile Integrity Test          |
| • Ground Penetrating Radar (GPR)  | • Chlorides, Sulphates & PH Tests | • Pile Load Test               |
| • Concrete Core Cutting           | • Half Cell Potential Test        | • Slab Load Test               |
| • Cut And Pull Out ( CAPO)        |                                   | • Boroscopy                    |



# QUALITY ASSURANCE IN CONSTRUCTION

## Pre-Purchase Inspection & Evaluation

- Evaluation of construction materials used
- Strength and Durability of 'As Built structure' through Forensic Investigations
- Listing out the Structural Deficiencies in the property
- Detecting seepage/leakage and dampness using Thermal Imaging Technique



## Construction Management Services for buildings

- Pre-construction planning
- Detailed construction planning of resources
- Onsite supervision of work and Quality Control
- Durable construction by precise detailing and workmanship
- Quality Assurance in Concrete Construction
- Qualitative & Quantitative evaluation of built structures



## Type of Customers and Area we work for

- Civil Construction contractors
- Structural Repair and Retrofitting
- Modifications / Extensions of old structures
- Industrial establishments
- Architects & design consultants
- Facility managers of commercial buildings
- Infrastructure maintenance
- Restoration of Fire Damaged Buildings
- House & Commercial Complex owners & buyers
- Hospitality Industry
- Institutions like schools, hospitals

## About the CEO - Er Vikram Kumar Jangra

Er. Vikram Kumar Jangra, brings 25 years of extensive experience in civil engineering. He graduated with honors in Civil Engineering from Regional Engineering College (now NIT), Kurukshetra, in 1999. Furthering his specialization, he holds postgraduate degrees in Structural Engineering and Construction Management from NICMAR.

A Chartered Engineer, he is also a member of professional bodies such as the Indian Society of Structural Engineers, Institution of Engineers (India), Indian Concrete Institute, and Indian Society for Non-Destructive Testing. He is also an NRMCA certified Concrete Technologist and a registered Engineer with the Municipal Corporation of Delhi (MCD) and Haryana Urban Development Authority (HUDA).

Vikram's distinguished career includes key positions at renowned companies like Larsen & Toubro (L&T), Gammon India, Ultratech Cement, and ACC Ltd. His tenure at these companies involved working on a variety of civil engineering infrastructure projects, where he gained extensive experience in Project execution, Concrete Technology, Quality Assurance/Control (QA/QC). His extensive expertise spans Concrete Technology, Structural Assessment, Non-destructive Testing, Specialized Repair methods and materials.

Vikram's portfolio includes hundreds of projects focused on structural assessment, audits, and non-destructive evaluation across diverse structures. His work has been instrumental in enhancing the safety and reliability of numerous buildings and infrastructure projects

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