

STRUCTURES INSPECTION, TESTING AND REPAIR & MANAGEMENT

Large / mass housing complexes, township management. ROB, FOB, bridges on water bodies, flyovers, elevated roads, etc. Factories, Paper and pulp, Oil and Petroleum, Chemicals, Drugs and Parma, Cement plants, Storage tanks and Silos, office complex. Power plants: Thermal, Nuclear, Hydro Irrigation: Dams, Spillways, Canals Transport: Tunnels, Marine, Road, Rail & Aviation structures.

NON DESTRUCTIVE TESTING:

NON DESTRUCTIVE TESTING FOR STEEL & CONCRETE STRUTURES: The main activities include visual survey of any type of structure and carrying out various nondestructive tests based on findings of visual survey. This testing includes

CONCRETE TESTING: Ultra Pulse velocity, Rebound hammer, Corrosion and carbonation testing, Core test, Chemical analysis.

STEEL TESTING: Ultrasonic Thickness Gauge, Ultrasonic Test, Liquid Penetration Test and Magnetic Particle Test

1. Client: HPCL – Visakh Refinery.



Detailed inspection, distress mapping of all elements of the structure, analysis of the same and conducted Ultrasonic Thickness Gauge & Dye Penetration Test, analysis of the test results, prepare the repair, rehabilitation and strengthening system for FCCU-1 including the repair specifications and methodologies.

2. Client: Mantena infrasol Pvt.Ltd.

Consultancy for carrying out visual inspection, Non-destructive testing of Vishal mart at Vizianagaram. The tests are included Rebound Hammer Test, Ultrasonic Pulse Velocity Test.



3. Client: Novopor Advanced Science Private Limited



Detailed inspection, distress mapping of all elements of the structure shall be inspected for cracks, spalls, crazing, water seepage, corrosion, scouring, settlements, deflection, tilt, warping deformities etc. These defects will be noted on the observation sheets, analyze the same and conducted the Rebound Hammer Test & Ultrasonic Pulse Velocity Test, analysis of the test results and submission of report.

4. Client: Assistant Garrison Engineer (B&R-II)

Carrying out visual inspection, Non-destructive testing for additional two classrooms at first floor in kendriya vidyalaya 2 School, Visakhapatnam. Submission of report for repair and rehabilitation.



5. Client: Dr. Reddy's Bachupally

Detailed Inspection and Non-Destructive Testing of Ware House structure in Dr. Reddy's, Bachupally Village, Hyderabad. Design adequacy check to verify the existing columns, beams and footing sizes and sufficiency of reinforcement to withstand the existing loads using Staad Pro analysis and submission of report with repair and rehabilitation methods, remedial measures for floor settlement.



6. Client: Andhra Paper Mills

Visual Inspection, Non-destructive Testing, Design Check & Recommendation of Repairs/Rehabilitation/Strengthening for Waste Paper Plant building. Visual inspection of all elements of the structure and take up testing after approval of the same from department/client, analysis of the test results, design check and then recommendation of repair/ rehabilitation/strengthening system for the structure including the repair methodologies.



7. Client: Torrent Pharmaceuticals

Visual inspection, Non destructive testing and structural stability certification and report submission for security block in Ground floor and ETP tanks on First floor at Torrent Pharmaceuticals LTD

8. Client: Toyotsu Rare Earth India Ltd.



Detailed Inspection and Distress Plotting for admin building, substation building, Storage Tanks are WWTP Treatment Tanks, Filter Feed Tank-1, Sludge Thickener, Equalization Tank, ZLD Guard Ponds, Treated Water Tank, ZLD-Mee Structure, RO-plant-1, RO-plant-2, Cooling Tower-1, 2 & 3, Boiler shed. Detailed Inspection, Non-Destructive Tests, Vibration Analysis and Design Adequacy check for ZLD-mee structure.

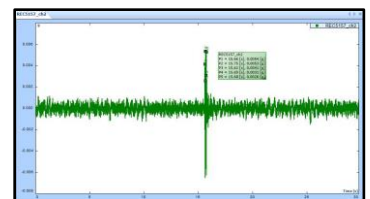
9. Client: Vishnu Chemicals

Visual Inspection, Non-destructive testing for the supporting structures of the silo's. At first, 4 silo's are planned with the supporting structure. In phase I, Initially placed 2 silo's which are resting on the supporting column structure and the remaining two silo's supporting structures is abundant. Integrity of the abundant silo's columns were checked.



11. Client: NSTL-NDY Tech Structures

Health assessment of Shock Tank maintenance activity with Conducting Visual Inspection, Non-Destructive Testing along with Vibration analysis. Report includes conclusions and Recommendations with repair methodologies submission at Naval Science & Technological Laboratory (NSTL), Visakhapatnam.



10. Client: Naval Dockyard



Condition assessment and stability certification of building no-19 (forge shop) and material division & fabrication at naval dockyard, Visakhapatnam. Design adequacy check for additional loads.

HEALTH STUDY

Physical observation i.e. visual survey of all elements of the concrete and steel structures and do distress mapping with range of defects such as cracks, spalling, crazing, deformities etc. Submit preliminary report with analysis of the above data indicating the causes of distress, defining the tests required along with method statements of all test procedures and the basis for the tests. On acceptance of the report by client & complete the testing as directed by client. Subsequent to test result analysis suggestion for the repairs & rehabilitation for the distressed portions of the structure based on distress levels.

Client: M.N. Dastur & Company (P) Ltd

Health study of existing civil and steel structures for interconnection of TB-4 & 5 discharge lines with cold blast headers 1&2 at RINL VSP. Physical observation is done i.e. visual survey of all elements of the concrete and steel structures and distress mapping with range of defects such as cracks, spalling, crazing, deformities etc. Preliminary report with analysis of the above data indicating the causes of distress, defining the tests required along with method statements of all test procedures along with possibility of repairs & rehabilitation for the structure based on distress levels are submitted.



STRUCTURAL AUDIT

All the walls, roof, foundation of the structure and trusses were investigated element wise and each element within the section was also observed for a range of defects such as cracks, spalls, seepage, corrosion, settlements etc. These defects are noted on the observation sheets, which formed the bulk of the data collected. Various symbols used in definition of observed defects are as per attached legend sheet.

Client: Vizag steel Plant

VSP required structural audit of their structures and accordingly IDDC was commissioned. Civil health study works & Structural health study works with physical observation and carrying out required Non-Destructive Testing for Sinter Plant 1 & 2. The major parts of structures were steel structures and inspection procedures were accordingly modified.

LIST OF PROJECTS

S.no	Client	Description	Year
1	HPCL	Detailed Inspection and Non-Destructive Testing	2024
2	Porus Laboratories Pvt. Ltd.	Detailed Inspection and Non-Destructive Testing	2024
3	Mantena Infracol Pvt. Ltd.	visual inspection and Non-Destructive Testing	2024
4	Assistant Garrison Engineer B&R-II	visual inspection and Non-Destructive Testing	2024
5	Dr.Reddy's Bachupalli	Detailed Inspection and Non-Destructive Testing	2024
6	Andhra paper mill	Detailed Inspection and Non-Destructive Testing	2024
7	Vishnu Chemicals	Visual inspection and Non-Destructive Testing	2023
8	Naval Dockyard	Structural assessment and Non-Destructive Testing	2023
9	NSTL-NDY Tech Structures	Visual inspection and Non-Destructive Testing	2023
10	Toyotsu Rare Earth India	Detailed Inspection and Non-Destructive Testing	2022
11	Torrents	Visual inspection and Non-Destructive Testing	2022
12	MES Nausenabaugh	NDT for special repairs to bldg No.P135& 136 JCOS block at Nausenabaugh vizag	2020
13	Kakinada Seaports Ltd.	NDT	2020
14	Mantena Constructions Pvt. Ltd.	Bridge span load test & NDT	2020
15	Inderdeep Construction Co.	Conducting NDT & sugesting appropriate repairs & rehabilitation system for ROB Mecheda at NH - 41, West Bengal	2019
16	HPCL	Non Destructive Testing for CDU-III	2019
17	Air India	Structural audit of Annex building of Hanger No.1, in Engineering Premises at Old Airport	2019
18	Kyona Dam	Structural audit of Kyona Dam	2019
19	Canara Bank	Structural audit of canBank House	2019
20	Navbharat Potteries P. Ltd	Strucutural audit of Navbharat Estate	2019
21	Reliance Industrial Infrastructure Ltd	Structural Audit of CP building on JKPL PL Patalganga	2019
22	Reliance Industrial Infrastructure Ltd	Structural Audit of CP station building Patalganga	2019
23	Omkar Apartment	Structural audit	2019
24	Air India	Strucatural audit of Indian Airlines Ideal school at AI (NB) staff housing colony 1, Kanila	2019
25	Reliance Industries Limited Patalganga	Structural audit for school & Audotorium	2018

26	MCGM Shimpoli Municipal School	Repair & Upgradeion of Simpoli Municipal School	2018
27	Air India	Structural audit of Modern School WB AI	2018
28	Vinay Apartment	Structural audit & PMC	2018
29	Air India	Structural audit of iIndian Airlines ideal school at AI staff housing colony	2018
30	M.N. Dastur & Company (P) Ltd.	Health study of existing civil and steel structures for interconnection of TB-4 & 5 discharge lines with cold blast headers 1&2 at RINL VSP	2018
31	M.N. Dastur	Health study of existing civil and structures for interconnection of TB-4 & 5 discharge lines with cold blast headers 1 & 2 at RINL, VSP	2018
32	Ceinsys Tech Ltd.	NDT test under NHA1 TOT	2018
33	Jasvina Construction	NDT at Gokul Residency Dahisar	2017
34	Air India	Structural audit of Hanger No.2 & Annex bldg.	2017
35	Jawahar Nagar Jethwa Niwas, Plot No.274	Structural Audit	2017
36	Sai Trishul CHS Andheri	Structural Audit	2017
37	Gokul Building	Structural Audit	2017
38	Nitin Niwas JN 243	Structural audit of society	2017
39	M/s. V.R. Techniche Consultants Pvt. Ltd.	Carrying out condition survey and NDT of Bridges in Andhra Pradesh & Gujarat	2017
40	National Housing Bank	Structural audit of NHB Officers staff quarters	2016
41	Padmaganga Residents Association (Shere E Punjab CHS)	Strucutural audit	2016
42	Shriram EPC Ltd.	Health study for conveyors civil & structures and thickness measurement of wind box main at VSP	2016
43	Shriram EPC Limited	Health study works for Civil & structural for VSP-Sinter plant 1&2 project	2015
44	Essar Project (India) Limited	Health study on existing RCC and steel structures of Wagon Tippler structure of Dumper House	2015
45	Power System Operation Limited	Structural audit of building 7, 8, 9	2015
46	Kala Industrial Premises	Structural Audit of society	2015
47	Keshav CHS Jawahar Nagar Plot No.70	Structural audit of soceity building	2015
48	Smt. Bina Balai Chowdhury	Structural Audit of Bharat Lodging	2015
49	Reserve Bank of India	Structural Audit of Incomplete building Topovan, Malad (E)	2015

50	Jawahar Nagar Magan Villa, Plot No.100	Structural Audit	2015
51	Reserve Bank of India	NDT for Central office building	2015
52	Air India	NDT on building No.43	2015
53	Air India	NDT on RCC members & structural audit of building Nos. 13, 25 & 31	2015
54	Shree Cement Ltd.	NDT test on crusher structure at mines	2015
55	Air India	NDT on RCC members & structural audit of building Nos. 5, 23 & 35	2015
56	Air India	NDT on RCC members & structural audit of building Nos. 6, 24 & 226	2015
57	Air India	NDT on RCC members & structural audit of building Nos. 19 & 21	2015
58	Air India	NDT on RCC members & structural audit of building Nos. 2, 10 & 12	2015
59	Air India	NDT on RCC members & structural audit of building Nos. 1, 9 & 11	2015
60	Air India	NDT on RCC members & structural audit of building Nos. 3 & 27	2015
61	Air India	NDT on RCC members & structural audit of building Nos. 4 & 8	2015
62	Air India	NDT on RCC members & structural audit of building Nos. 7 & 15	2015
63	Air India	NDT & Structural Audit of building No.41,23,34,28	2014
64	Atul Kudtarkar & Associates	NDT of Padmashali Society Part - II at Dharavi	2014
65	The New India Assurance	NDT for structural audit of Sachidanand, sungrace & Andheri staff quarters	2014
66	Mazagon Dock Limited	Structural Audit & stability certificate of workshop,building, residential buildings	2014
67	MHADDB	Structural audit of Padmashali Society Part - II at Dharavi	2014
68	Jawahar Nagar Manisha CHS	Structural Audit of building	2014
69	United India Insurance Co. Ltd.	Structural Audit of building Nos.10, 11, 12 Maghathane	2014
70	Jawahar Nagar Plot No.154 A Atul Niwas	Structural Audit of building	2014
71	Jawahar Nagar New Ambika CHS, Plot No. 155,	Structural Audit of building	2014
72	Jawahar Nagar Jivan Sourabh, Plot No. 164,	Structural Audit of building	2014
73	Jawahar Nagar Jethwa Niwas, Plot No.274	Structural Audit of building	2014
74	Dhavalgiri CHS	Structural Audit of building Shere Punjab Andheri	2014

75	Jawahar Nagar Samrath Niwas Plot No. 315,	Structural Audit of building	2014
76	Jawahar Nagar Nitin Zaverchand Kuruwa, Plot No. 243,	Structural Audit of building	2014
77	Jawahar Nagar, Plot No. 190 Manas Building	Structural audit	2014
78	United India Insurance Co. Ltd.	Structural audit for stability check of GIC staff quarters building No. 7,8 & 9 at Magathane Borivali east.	2013
79	The New India Assurance	Structural audit of CTC at Andheri Staff quarters.	2013
80	Reliance Industries Limited Patalganga	checking foundation adequacy, carry out NDT i.e. UPV, RHT, Rebar locator and checking verticality by Theodolite of water tank no. 1501.	2013
81	Shree Cement Ltd	NDT tests & remedial measures of Fly Ash Silo Shree Power Beawar	2013
82	BDS project Pvt Ltd	Sub contract for NDT testing at ESIC , Colaba works.	2013
83	The New India Assurance	NDT testing of new india centre	2013
84	Utkal Alumina International Ltd	NDT test of Chimney raft	2013
85	Reilance Industries, Ghansoli	Structurat audit for hypermart at Udhana, Surat	2012
86	Reliance - nagothane	NDT of Ethylene Tank Foundation	2010
87	PWD, Pune (E) Div	Visual, NDT, RM for bridge on river Bhima at Pargaon, Taluka Shirur, Dist. Pune	2008
88	RIL, Nagothane	Survey, NDT for pipe rack at LLDPE plant and Chiyoda godown	2008
89	RIL, Nagothane	Survey, NDT, D/s check for LLD reactor	2008
90	ICI India Ltd.	Survey & NDT of R & T center building	2008
91	PWD, MCD-V, Mumbai	Survey & NDT for PNB at Charkop	2008
92	Reliance Energy Ltd., Dahanu	Visual survey & NDT for trestle and tower	-
93	DGNP	Visual survey and NDT at Surya dock, Vizag	-

The inspection of jetty and related structures is a very critical in nature as they have to withstand impact of atmosphere along with the impact of sea water and tidal movements. Visual observation of all components is carried out in the beginning. Various types of Non Destructive Testing (NDT) are carried out based on the findings of the visual observations. The report is prepared mentioning findings of visual observations, results of NDT, photographic evidence of the distress and recommendations & methodology for repair works along with the detailed estimates.

We have inspected many jetties.

Some of the jetties inspected are

1. 2 Nos. of Jetties in District Sindhudurg.
2. 4 Nos. of jetties in District Ratnagiri.
3. 3 Nos. of jetties in District Raigad.
4. Jetties at Mazagon Dock Limited Mumbai.

INVESTIGATION OF CHIMNEY STRUCTURES

The investigation of chimney structures requires special type of skill sets. To start with the investigation, visual observation of entire structure is carried out. Then on the basis of the findings of visual observation; type, location and quantity of Non Destructive Testing (NDT) is decided and conducted accordingly. The report is prepared mentioning findings of visual observations, results of NDT, photographic evidence of the distress and recommendations & methodology for repair works along with the detailed estimates.

We have completed chimney projects all over India including the tallest chimney in the country.

Some of the prestigious projects are -

1. Chimney inspection at Beawar, Rajasthan for Shree Cement Ltd. - Chimney of 105 mt height
2. Chimney inspection at Beawar, Rajasthan for Shree Cement Ltd. - Chimney of 92 mt height
3. Chimney inspection at Dahanu, Maharashtra for Reliance Infrastructure Ltd. - Chimney of 275 mt height
4. Chimney inspection at Nagothane, Maharashtra for Reliance Industries Ltd. - Chimney of 100 mt height.

Previous Projects:

S.NO	Name of client	Name of Project	Description	Year
	Reliance Industries Ltd. Patalganga, Nagothane, Airoli	Inspection & Audit of Plant and allied structure	Ministry of Industries in all states mandates the inspection and audit of all industrial structures by a qualified and certified Structural engineering consultant every five years. Reliance plants in Patalganga, Nagothane, Airoli were all inspected by IDDC under various contracts between 2006 to 2014. Each of the plant was visually inspected and then based on the observation; a complete plan to test various structures using Non Destructive techniques was undertaken. Structures which showed any signs of distressed were immediately rehabilitated and certified as safe based on re-inspection post rehabilitation. Similar industrial inspections were undertaken for various types of industries in Paper and Pulp, Pharma, Heavy industries, Petroleum, cement plant.	2006-14
	Mazgaon Dock Limited		MDL has ship building structures of various types in Mumbai and Nhava. All these structures were inspected for structural adequacy as per requirements of Ministry of Industries. Each of the structure was visually inspected and then based on the observation; a complete plan to test various structures using Non Destructive techniques was undertaken. Structures which showed any signs of distressed were informed and rehabilitation plan was provided.	2014-15

	Vizag Steel Plant	Audit of Civil and Structural for VSP – Sinter Plant 1 & 2 project	VSP required structural audit of their structures and accordingly IDDC was commissioned. Civil health study works & Structural health study works with physical observation and carrying out required Non-Destructive Testing for Sinter Plant 1 & 2. The major parts of structures were steel structures and inspection procedures were accordingly modified.	2015-16
	Reliance Power and Department of Atomic Energy	Audit of structures for Power plant at Dahanu and Tarapur	IDDC is a pioneer in power plant inspection of all types including Atomic power stations, Hydro power plants, and Thermal Power Plants. Each power plant has a unique process and based on the process the structures are different. Like in Thermal power plant we have the coal process where coal is delivered to the power plant and then transferred to storage area, then transported to power plant for crushing and finally used. All structures handling Coal fall under Coal process of thermal plant, similar process for water and Steam also exist and structures related to them are to be inspected accordingly. Chimney inspection is an art and the most difficult procedure. IDDC has inspected chimneys of various plants varying heights upto 275 meters. Atomic plants inspection is a very special job and IDDC is a pioneer in this activity.	2002-14
	Reliance Power and Department of Atomic Energy	Audit of structures for Power plant at Dahanu and Tarapur	IDDC is a pioneer in power plant inspection of all types including Atomic power stations, Hydro power plants, and Thermal Power Plants. Each power plant has a unique process and based on the process the structures are different. Like in Thermal power plant we have the coal process where coal is delivered to the power plant and then transferred to storage area, then transported to power plant for crushing and finally used. All structures handling Coal fall under Coal process of thermal plant, similar process for water and Steam also exist and structures related to them are to be inspected accordingly. Chimney inspection is an art and the most difficult procedure. IDDC has inspected chimneys of various plants varying heights upto 275 meters. Atomic plants inspection is a very special job and IDDC is a pioneer in this activity.	2002-14
	Reliance Infrastructure Ltd.	Audit of structures for Power plant at Dahanu	IDDC was commissioned to do the second round of inspection due to structures inspected by us in 2002- 2010 to define the status of structures of Dahanu Thermal Power plant. This was focused on main plant area and housing structures in the colony of the plant.	2017
	SKF Inda Ltd.	Structural stability of factory building	Carrying out Structural stability and NDT of factory building for SKF India Ltd. at Chichwad, Pune.	2016
	Shree Cement Ltd.	Inspection of chimneys	Carrying Inspection and NDT of 2 nos. of chimney structures (105 m & 92 m) & remedial measures along with power plant & cement plant, Fly Ash Silo, NDT test on crusher structure at mines, Testing, inspection, analysis & for RGD RCC tank structures.	2016