

# **DR. FIXIT INSTITUTE**

**OF STRUCTURAL PROTECTION & REHABILITATION**

**A not-for-profit knowledge centre**



**Information dissemination  
in repair rehabilitation &  
renewal engineering is our focus**

# Birth of DFI-SPR

## Emerging Needs of the Indian Construction Industry

It has been generally reported that buildings worldwide consume about 40% of the planet's material resources and 30% of its energy. It is evident therefore, that building activity contributes significantly to global ecological degradation. If we want to protect our future, there are no other options than to achieve ways that the service the life of the buildings, reduce environment damage, maintain the health of the eco system and cover our natural resources. The requirements listed above are particularly relevant for a country like ours that covers 3.29 million sq. km. of land area and has over 1.3 billion people. This demands unprecedented levels of infrastructure development with diverse types of construction. On top of this, one should recognize the climatic diversity of the country and its vast coastline.

In order to assist professionals to face the challenges above a novel institutional framework appears essential, notwithstanding the existence of a large number of research bodies as well as other industry associations. Perceiving this, the Dr. Fixit Institute of Structural Protection and Rehabilitation (DFI-SPR) was conceived in 2001 under the promotional umbrella of Pidilite Industries Ltd. It was seen not to be in conflict with existing institutions in the country. On the contrary, it was conceived to synergise and be a supplement to these institutions.

DFI-SPR started its activities in 2002, although it was registered as a stand alone not-for-profit company under Section 25 of the Indian Companies Act, 1956 in June 2006.

## DFI-SPR ACTIVITIES

### Capacity Enhancement Services

Networking with National & International Organisations	Development of Database	Formulation of Guidelines for Standardization of Codes of Practices	Compilation of Global Best Practices in the Fields of Relevance
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### Knowledge Dissemination Services

Design of Training Courses for Different Levels and Development of Training Modules			Publications
Refresher Courses for Engineers	Tailor Made Training Programmes for Corporate Bodies	Academic Courses for Educational Institutions	International Journal
Students Awareness Programmes	Seminars and Workshops	Entrepreneurial Training	Technical Newsletter
Workers Skill Development	Technology Demonstration	Distance Education Correspondence Courses	Manuals Guide Books

### Laboratory and Advisory Services

Non Destructive Testing	Partial Destructive Testing	Concrete Petrography
Health Assessment of Buildings	Consultancy for Repair and Restoration	Heritage Conservation

## Vision

To become a premier national knowledge and skill development centre for capacity enhancement in waterproofing and other areas of repair, restoration and renewal engineering based on sustainable and green technologies.

## Mission

To act as a platform for national and international networking for sharing of knowledge and practices in the fields of waterproofing, repair, restoration, and renewal engineering in the context of life cycle assessment of the built environment for adoption of best practices by the country's construction industry.

## Networking with National & International Organisations

### MEMBERSHIP OF NATIONAL AND INTERNATIONAL PROFESSIONAL ORGANISATIONS

- ? International Concrete Repair Institute (ICRI), USA
- ? National Roofing Contractors Association (NRCA), USA
- ? The Concrete Society, UK
- ? The Concrete Institute of Australia
- Indian Green Building Council (IGBC), India

### COLLABORATION WITH NATIONAL ORGANISATIONS

- ? Building Materials and Technology Promotion Council (BMTPC), New Delhi
- ? Construction Industry Development Council (CIDC), New Delhi
- National Institute of Construction Management and Research (NICMAR), Pune
- Indian Concrete Institute (ICI), Pune
- Sardar Patel College of Engineering (SPCE), Mumbai
- Ministry of Micro, Small and Medium Enterprises (MSME), Mumbai
- Khadi and Village Industries Commission (KVIC), Mumbai
- Engineering Staff College of India (ESCI), Hyderabad
- Sahyadri Engineering Academy (SEA), Pune
- North-East Institute for Science & Technology (NEIST), Assam
- MGM College of Engineering, Navi Mumbai
- Nirma University, Ahmedabad
- The Institution of Engineers (IEI), Mumbai & Navi Mumbai

### DEVELOPMENT OF DATABASE AND FORMULATION OF GUIDELINES

DFI-SPR has undertaken an initiative to formulate technical guidelines and systems in the areas of waterproofing, repair practices and materials based on the gathered and developed database with respect to the best practices adopted by the construction industry worldwide.

# Knowledge Dissemination Services

## 1. TRAINING PROGRAMMES

- Construction Chemicals Applications
- Waterproofing Materials, Systems and Technologies
- Sustainable Building Construction Practices and Materials
- New Generation Concrete Admixtures
- Corrosion and Protective Coatings
- Structural Diagnosis and Condition Analysis of RC Structures
- Cracks In Concrete and Crack Repair
- Repair and Rehabilitation of Concrete Structures
- Building Maintenance - Waterproofing and General Repair
- Heritage Conservation

### 1.1 Refresher Courses for Engineers (Open Programmes)

Open training programmes at the institute's premises in Andheri and also at premises of partnering institutes, all over India.



The programmes are attended by engineers from various organizations all over India like:

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| ? Adani Power Limited  | ? Larsen & Toubro Ltd. (ECC Division)                          |
| ? Bharat Petroleum Corporation Ltd. (BPCL)                         | ? Mott MacDonald Pvt. Ltd.                                     |
| ? Bhubaneswar Development Authority.                               | ? Mumbai Port Trust  |
| ? Brihanmumbai Municipal Corporation (BMC)                         | ? M. N. Dasture & Co.  |
| ? City and Industrial Development Corporation (CIDCO), Navi Mumbai | ? National Bank for Agriculture and Rural Development (NABARD) |
| ? Gherzi Eastern Ltd.  | ? Nuclear Power Corporation of India Ltd (NPCIL)               |
| ? Godrej Industries Ltd.   | ? Orbit Corporation Ltd.                                       |
| ? Grasim Industries Ltd.   | ? Painterior (India)   |
| ? Heavy Water Board (HWB)  | ? Public Works Department (PWD)                                |
| ? Hindustan Petroleum Corporation Ltd. (HPCL)                      | ? Reliance Engineering Associates Pvt. Ltd.                    |
| ? Indian Oil Corporation Ltd. (IOCL)                               | ? Rourkela Steel Plant   |
| ? Indian Institute of Technology (IIT), Chennai.                   | ? Simplex Infrastructure Ltd.                                  |
| ? ITD Cementation India Ltd.                                       | ? Stup Consultants Pvt Ltd.                                    |
| ? JMC Projects India Ltd.  | ? Tata Consulting Engineers (TCE) Ltd.                         |
| ? Life Insurance Corporation of India (LIC)                        | ? Ultra Tech Cement Works Ltd.                                 |

### 1.2 Tailor-Made Training Programmes for Corporate Bodies

Tailor-made programmes are designed as per requirements of corporate bodies to upgrade the knowledge base of engineering executives from different departments. Such programmes have already been conducted with:

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| ? Evaluate serve at Gurgaon  | ? Rashtriya Chemical Fertilizers Ltd. (RCF)              |
| ? Indian Institute of Technology (IIT) in Powai, Mumbai                  | ? Pride Purple Group in Pune                             |
| ? Ispat Industries Limited in Pen, Maharashtra                           | ? Lodha Developers in Mumbai                             |
| ? Life Insurance Corporation (LIC) in Delhi, Mumbai, Lucknow and Chennai | ? Public Works Department (PWD) in Nasik and Navi Mumbai |
| ? Hindustan Construction Company (HCC) in Mumbai and New Delhi           | ? Marathon Group in Mumbai                               |
|  | • Lokhandwala Construction Industries Pvt. Ltd.          |

### 1.3 Students Awareness Programmes and Workshops

Workshops on the latest engineering practices in waterproofing, repair and other focus areas are organised for students in various engineering colleges and institutions. These include:

- ? AISSMS College of Engineering, Pune
- ? Acharya Institute of Technology, Bangalore
- ? B. D. College of Engineering, Wardha
- ? BVM College of Engineering, Anand
- ? Datta Meghe College of Engineering (DMC), Airoli and Navi Mumbai
- ? Dr. S & S S Ghandhy College of Engineering and Technology, Surat
- ? D. Y. Patil College of Engineering in Akurdi, Pune
- ? Jharsuguda Engg. School, Jharsuguda
- ? Kalinga Institute of Industrial Technology University, Bhubaneswar
- ? M. H. Saboo Siddik C.O.E. in Byculla, Mumbai
- ? M. S. University, Polytechnic College, Baroda
- ? The National Institute of Engineering, Mysore
- ? Vishwakarma Institute of Information Technology (VIIT) in Kondhwa, Pune
- ? VSS University of Technology in Burla, Orissa
- ? Walchand College of Engineering, Vishrambag, Sangli.

### 1.4 Workers Skill Developments

In association with CIDC, we organise regular training on waterproofing and repair to masons and general working supervisors (GWS) at selected CIDC training centres at various places in India.

## 2. SEMINARS

We organise technical seminars as "Healthy Construction Lecture Series" in and around India with speakers of National & International repute. Programs have already been conducted in cities like Bangalore, Mumbai, Kolkata, New Delhi, Ahmedabad and Chennai.



## 3. ACADEMIC COURSES

### 3.1 Elective Courses under Mumbai University (UG - Civil)

Introduced two elective courses in the under graduate course of Civil Engineering of Mumbai University from the year 2010.

- ? Repair and Rehabilitation of Concrete Structure- Seventh Semester
- ? Advanced Repair and Retrofitting of Concrete Structures- Eighth Semester

### 3.2 Elective Course at NICMAR (ACM Course)

DFI-SPR has been conducting an elective course on "Renovation of Building and Maintenance Management" for students in their fifth trimester of Post Graduate Advanced Construction Management Curriculum in the National Institute of Construction Management and Research (NICMAR) at Pune since 2007.

This course is designed to inculcate management & technical appreciation of the modern ways of repair & waterproofing of concrete structures in post graduate students.

### 3.3 Certificate Courses on Entrepreneurship

For Professionals / Contractors

- ? 10 Days certificate course on "Entrepreneurship in Waterproofing, Structural Protection & Repair of Concrete Structures".
- ? Certificate course on "Construction Chemicals in Waterproofing Applications & Repairs" in association with the Ministry of Micro, Small and Medium Enterprises (MSME), Mumbai.
- ? Special Lecture sessions on "Waterproofing and Repair" with the Khadi and Village Industries Commission (KVIC)

For Students (10+2/ITI Level)

- ? 6 month certificate course on "Entrepreneurship Development in Waterproofing & Repair Materials & Practices for Concrete Structures" (approved under a joint Training scheme of The Construction Industry Development Council, CIDC).

## 4. DISTANCE EDUCATION CORRESPONDENCE COURSES THROUGH NICMAR

### 4.1 One Year Graduate Certificate Programme

#### Concrete Technology Waterproofing & Repair Management

For details, visit : [www.nicmar.ac.in](http://www.nicmar.ac.in) / [www.drfixitinstitute.com](http://www.drfixitinstitute.com)

## 5. PUBLICATIONS

### 5.1 International Journal

A quarterly international journal "International Journal of 3 R's (Repair, Restoration and Renewal of Built Environment)", is devoted to recent advances and innovations in materials, systems, technologies, equipment and engineering.

Authors can submit their papers online: <http://www.drfixitinstitute.com/articles/index.php>

For subscription to the Journal mentioned above and purchase of the Manual, please send Demand Draft / Cheque in favour of "Dr. Fixit Institute of Structural Protection & Rehabilitation" in the address given on the overleaf or contact our Editorial office on 022-28357149.



### 5.2 Technical Newsletter

'Rebuild' is a quarterly newsletter with an emphasis on the latest practices & advances in repairs, waterproofing and construction methodologies. 'Rebuild' is well circulated to renowned organizations, practising engineers, consultants, contractors, engineering colleges all over the country and is appreciated to a high extent.



### 5.3 Healthy Construction Manuals

Manuals on specially selected practical topics:

- Joints and Sealants
- Protective Coatings



Available on request (On payment basis)

For detailed information on publications, visit our website.



## Laboratory and Advisory Services

### DIAGNOSTIC SERVICES OFFERED

The institute offers advanced diagnostic services using non-destructive testing facilities for concrete structures with Ultrasonic Pulse Velocity meter, Digital Schmidt Hammer, Profometer, Crack detection on concrete structures by a microscope, a Corrosion analyzer and an Infra Red Thermography, Core extraction, Petrography, Rapid Chloride Penetration Test, etc.

Also, ADL is equipped with all the concrete testing facilities along with chemical analysis for chloride and sulphate contents in the concrete.

### CONSULTANCY SERVICES OFFERED

- Structural audit (Buildings/Infrastructure)
- Periodic health check of buildings and structures
- Diagnosis of structural defects and recommendation for suitable repair and rehabilitation
- Service life determination of Civil Engineering structures
- Consultancy on water proofing systems
- Specific training programs on NDT for engineers and practicing specialists

# The Management

The Governing Council, comprising eminent individuals from the fields of construction engineering, research and management, oversees the development of the Institute while the administration is conducted by an independent internal management team. The overall execution and responsibility rests with the Director-in-Charge.

## Composition of the Governing Council

Mr. Sanjay Bahadur	CEO - Construction Chemicals Division, Pidilite Industries Ltd.
Dr. P. C. Basu	Director, Civil & Structural Engineering Division, Atomic Energy Regulatory Board, Mumbai
Dr. Bishwajit Bhattacharjee	Professor, Indian Institute of Technology, (IIT) Civil Engineering Department, New Delhi
Mr. P. L. Bongirwar	Senior Consultant, Larsen & Toubro Ltd. (ECC) and Formerly Jt. Managing Director, MSRDC
Dr. A. K. Chatterjee	Managing Director, Conmat Technologies Pvt. Ltd. Kolkata & Former Whole-time Director, ACC.
Prof. Tarun Kant	Institute Chair Professor in the Department of Civil Engineering Institute of Technology, Bombay
Dr. M. G. Korgaonkar	Director General, National Institute of Construction Management & Research, (NICMAR), Pune
Mr. M. B. Parekh	Managing Director, Pidilite Industries Ltd., Mumbai and Chairman of the Governing Council
Mr. M. S. Sudarshan	Vice - Chairman, Civil - AID Technoclinic (P) Ltd., Bengaluru
Dr. P. R. Swarup	Director General, Construction Industry Development Council, (CIDC), New Delhi
Dr. C. S. Viswanatha	Chief Executive, Torsteel Research Foundation, Bengaluru

## Promoter

Pidilite Industries Limited, the promoter of DFI-SPR, has been a pioneer and market leader in the field of consumer and speciality chemicals in India and abroad. The company offers a basket of versatile product ranges that include Adhesives and Sealants, Art Materials and Stationery, Maintenance Chemicals, Fabric Care Products, Speciality Industrial Chemicals, Pigments, Construction Chemicals and Paints.

For over 50 years Pidilite, with its guiding theme of Building Bonds, has established a cluster of leading brands like Fevicol, Dr. Fixit, Fevikwik, Fevicryl, M-Seal, Acron, Steelgrip, Ranipal, etc. Pidilite Industries Limited's products have also found good acceptance in international markets with exports to more than 50 countries. Together, the company enjoys a group turnover of more than ₹ 26,000 million.

Pidilite products are manufactured in 18 factories across India and in processing units in Thailand, Singapore, Dubai, Brazil and the US. Most of these units have been awarded ISO 9000 certification.

Constant product development, innovation and consistent quality have always been the hallmark of the company since its inception. Six R&D laboratories across the nation and the Innovation Centre in Singapore put consistent efforts to benchmark the development and application quality of the products.



Outreaching the structural protection knowledge is one of our missions

Exploring excellence in built construction is our endeavour



## Dr. Fixit Institute of Structural Protection and Rehabilitation

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