



Maintenance, Repair, Rehabilitation and Retrofitting of Structures

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About the Book

Reinforced concrete structures have always been the first choice for the construction industry world over. This composite material has proved its robustness and versatility beyond doubts. However, these structures are subjected to constant deterioration due to effects of ageing, inadequate maintenance, severe environmental exposure, penetration of catalytic agencies such as moisture, gases like CO₂ and oxygen, chloride ions, industrial pollutants, abuse (overused and misused), etc. This deterioration needs to be timely arrested before it leads to irreversible damage making it imperative to repair and upgrade (retrofit/strengthening) the current stock of deteriorated and deficient structures. This book has been designed with the aim to give the students an insight into the subject of concrete repair, its protection and strengthening. It is profusely illustrated with neat diagrams and actual site photographs.

The book broadly deals with:

- Deterioration of concrete structures
- Visual deterioration of structures
- Conditional/damage assessment & evaluation of structures
- Damage assessment allied tests
- Retrofitting/strengthening
- Seismic retrofitting of concrete structures
- Protection & maintenance of structures
- Long-term health monitoring
- Structural health monitoring
- Demolition techniques
- Repair of underwater structures
- Various materials and equipment used in repair work.
- Guidelines for all the processes given by governments.

This book will be a guide to B.E. (Civil Engineering), ME (Structural Engineering) students and practising civil engineers.

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- Materials, Techniques for Repair and Protection Methods
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- Underwater Repair Materials and Techniques
- Demolition Techniques
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About the Author

G. Nandini Devi :- has over 17 years of teaching and research experience in Engineering College. She is Editorial Board Member for 12 international journals and has 38 publications in both international and national journals (few were cited). She is a recognized supervisor of Anna University, Chennai. She is a Life member of ISTE, IEI. Her area of research is structural response of concrete structures, earthquake resistant structures and FRP composites in structures.