

THE NEW TECHNIQUES OF STRENGTHENING AND REHABILITATION OF EXISTING RC STRUCTURES

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Repair and strengthening of damaged or vulnerable reinforced concrete structures is important in order to guarantee the safety of residents or users. Structural elements are important for withstanding loads, so finding the efficient repair and strengthening methods are necessary in terms of maintaining the safety of the structures. In this lecture, previous and the newest works on structural assessment for strengthening and rehabilitation techniques systems will be presented to show the principal concept of structural assessment for existing structure buildings. Also, advanced and conventional strengthening techniques for rehabilitation in the construction market will be presented to show the differences among them. Moreover, the advantages and disadvantages of each system will be presented in detail for the famous systems. A famous practical application of them will be presented in actual projects. Classification to the analytical, experimental, and parametric studies are presented by others to cover this area and make complete survey on structural assessment and strengthening techniques

Biography

Islam M Ezz El-Arab is a Professor at the Structural Engineering Department, Faculty of Engineering, Tanta University. He obtained his BSc in Civil Engineering and MSc in Structural Engineering from Tanta University in 1998 and 2002, respectively. He has completed his PhD in Earthquake Engineering, 2007. He has published more than 25 papers and two international books in reputed journals and has been serving as an Editorial Board Member of repute. He is classified as Consultant Engineer in Reinforcement Concrete Structures in Egypt and KSA. He has participated as structural designer, reviewer and construction consultation engineer of the tall buildings, colleges, shopping complexes, hospitals, and security buildings by considering the structural requirements and adequate construct able systems to complete the projects within allocated budget and time schedule. He has founded INGAZ, IVE Consultant Bureau established at 2007 as Structural Consultant Specialist in structural assessment, strengthening, rehabilitation of existing buildings, and value engineering. His research interests include Earthquake Engineering and Structural Dynamics, Assessment of Existing Structures and precast structures, Experimental Testing of Small and Full-Scale Structures.

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