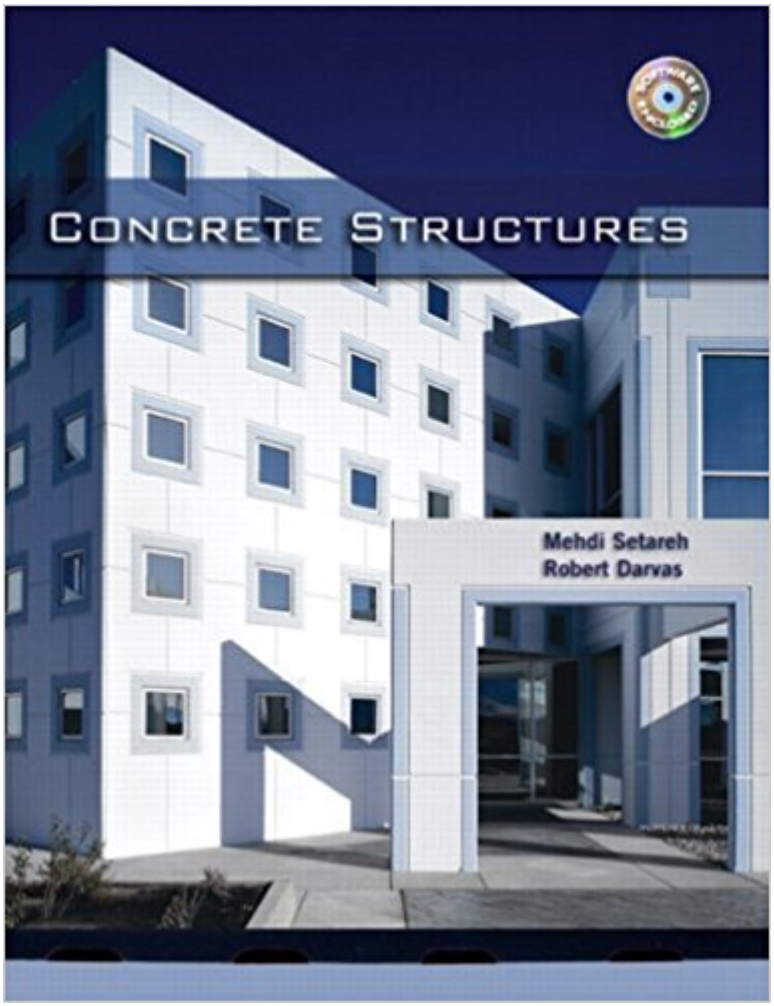
Concrete Structures



Synopsis

Based on the latest ACI Code, Concrete Structures takes a step-by-step approach to exploring the design and analysis of reinforced concrete structures and elements. Ideal for engineering, architectural engineering, building construction, and architecture students, it covers concrete technology, analysis and design of reinforced concrete beams, slabs, columns, footings, and walls. It also introduces the different types of reinforced concrete floor systems and the fundamentals of pre-stressed concrete structures. Unique self-experiments and realistic problems help readers further understand concreteâ ™s structural significance and potential as a building material. Includes the most recent methods of design and analysis of reinforced concrete structures and is based on the American Concrete Institute Code (ACI 318-05). Easy to follow using a step-by-step, non-calculus approach. Includes a series of experiments readers can conduct on their own to comprehend concrete's structural significance and understand more about concrete as a building material. Practicing architects and engineers, in particular individuals preparing for the licensing exams. People interested in the building design and construction can also benefit from the book as it follows a step by step approach in the design and analysis of concrete structures.

Book Information

Paperback: 576 pages
Publisher: Prentice Hall (August 10, 2006)
Language: English
ISBN-10: 0131988271
ISBN-13: 978-0131988279
Product Dimensions: 7.5 x 1.3 x 9.1 inches
Shipping Weight: 2.7 pounds
Average Customer Review: 5.0 out of 5 starsÂ Â See all reviewsÂ (7 customer reviews)
Best Sellers Rank: #183,314 in Books (See Top 100 in Books) #12 inÂ Books > Engineering & Transportation > Engineering > Materials & Material Science > Concrete #34 inÂ Books > Crafts, Hobbies & Home > Home Improvement & Design > How-to & Home Improvements > Masonry #62 inÂ Books > Engineering & Transportation > Engineering > Civil & Environmental > Structural

Customer Reviews

Concrete structures have been built since the days of the Romans, the Pantheon being the most notable example of their technical ability with the material. It’s not clear how the Romans managed to work out the problems associated with building large scale structures in concrete, but it

undoubtedly involved a combination of intuition, trial, and at least a few dramatic failures. Things have changed considerable for designers since that era.Fortunately, contemporary architects and engineers don't need to use the cumbersome Roman numeral system to make structural calculations. On the other hand, trial and error is no longer a valid way of learning to design structures. Todays designer is required to demonstrate before building that a design is safe to carry not only its own weight, but also the loads it will be subjected to in use. To the uninitiated, and probably even to quite a number of practicing designers, the array of formulas, charts, and diagrams employed in designing and proving efficient concrete structures can seem bewildering, and perhaps Byzantine in their complexity.Dr. Setareh and Robert Darvas have have done a great job of simplifying the problem of understanding how to comply with the requirements of the ACI code. The book begins with a concise and clear explanation of some of the basics of concrete types and uses. Practical experiments with beam models and simple experiments in casting and testing actual concrete samples develop the intuitive sense that is still important in the initial stages of the design process. There's no shortage of rigor, but it's in the presentation of the more difficult subject matter that the authors' years of teaching experience are most obvious.