



Tall Building Design: Steel, Concrete, and Composite Systems

By Bungale S. Taranath



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Addresses the Question Frequently Proposed to the Designer by Architects: "Can We Do This?

Offering guidance on how to use code-based procedures while at the same time providing an understanding of why provisions are necessary, **Tall Building Design: Steel, Concrete, and Composite Systems** methodically explores the structural behavior of steel, concrete, and composite members and systems. This text establishes the notion that design is a creative process, and not just an execution of framing proposals. It cultivates imaginative approaches by presenting examples specifically related to essential building codes and standards. Tying together precision and accuracy?it also bridges the gap between two design approaches?one based on initiative skill and the other based on computer skill.

The book explains loads and load combinations typically used in building design, explores methods for determining design wind loads using the provisions of ASCE 7-10, and examines wind tunnel procedures. It defines conceptual seismic design, as the avoidance or minimization of problems created by the effects of seismic excitation. It introduces the concept of performance-based design (PBD). It also addresses serviceability considerations, prediction of tall building motions, damping devices, seismic isolation, blast-resistant design, and progressive collapse. The final chapters explain gravity and lateral systems for steel, concrete, and composite buildings.

The Book Also Considers:

- · Preliminary analysis and design techniques
- The structural rehabilitation of seismically vulnerable steel and concrete buildings
- Design differences between code-sponsored approaches
- The concept of ductility trade-off for strength

Tall Building Design: Steel, Concrete, and Composite Systems is a structural design guide and reference for practicing engineers and educators, as well as recent graduates entering the structural engineering profession. This text examines all major concrete, steel, and composite building systems, and uses the most up-to-date building codes.

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Editorial Review

Review

"This book is an outstanding, comprehensive resource for all aspects of tall building design. I particularly appreciate the marriage of theory and practicality by having the foundation be a conceptual understanding that is then reinforced by code-based applications. This fact is what makes great engineers. Although it is a substantial text, it is not intimidating and is easily approached by new and advanced students. It is a text that students will want in their library as they move into their design careers."

?David Naish, Assistant Professor, California State University Fullerton, USA

"... one of the most comprehensive books covering structural design of high-rise buildings. Examples from the writer's rich experiences are beneficial for young structural engineers."

?Sang Dae Kim, Korea University, Seoul, South Korea

"Not only do I want to have it on the shelf, but also use it as a required textbook for my graduate course and technical electives. Dr. Taranath clearly demonstrates superior knowledge of building codes especially as it relates to wind engineering and earthquake engineering."

?Dr. Hany J. Farran, professor of structural engineering, Cal Poly Pomona, California, USA

About the Author

Dr. Bungale S. Taranath, PhD, PE, SE, had extensive experience in the design of concrete, steel, and composite tall buildings. He was a member of the American Society of Civil Engineers and the Concrete Institute, as well as a registered structural and professional engineer in several states. The author of a number of published papers on torsion analysis and multistory construction projects, Dr. Taranath published five books, three of which were translated into Chinese and Korean and are widely referenced throughout Asia. He also conducted seminars on tall building design in the United States, China, Hong Kong, Singapore, Mexico, India, and England.

Users Review

From reader reviews:

John Bennett:

This Tall Building Design: Steel, Concrete, and Composite Systems book is just not ordinary book, you have it then the world is in your hands. The benefit you get by reading this book will be information inside this book incredible fresh, you will get facts which is getting deeper you actually read a lot of information you will get. This specific Tall Building Design: Steel, Concrete, and Composite Systems without we know teach the one who reading through it become critical in thinking and analyzing. Don't be worry Tall Building Design: Steel, Concrete, and Composite Systems can bring when you are and not make your tote space or bookshelves' turn out to be full because you can have it in your lovely laptop even cell phone. This Tall Building Design: Steel, Concrete, and Composite Systems having great arrangement in word and layout, so

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