
**A RESOURCE BOOK FOR STRUCTURAL STEEL DESIGN AND CONSTRUCTION**

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ABSTRACT: This publication highlights the design challenges and recent innovations of using structural steel to achieve large-span column free space. It presents the best of current practice and experience in the design and construction of multi-storey buildings and multi-functional sports, conference and leisure facilities. The implication of design on building costs is also discussed. Various structural options are highlighted to satisfy the intensive service requirements of the building tenants. Several high-rise structural schemes are examined, and their advantages and disadvantages are compared. The combined use of concrete cores, steel frames and composite floors to form an integrated system was recommended. The local industry has adopted the new approach of buildability design, and has recommended the use of prefabricated and precast structural components for better control of product quality and to reduce site labour. The basic features in the code of practice of buildability design, newly launched by the Building and Construction Authority of Singapore, were explained. From design to construction, the book offers new technologies and ideas for used in the construction of multistorey buildings and large-span multi-functional facilities which are suitable for used in the tropical and urban environment.