

Rawlinsons Australian Construction Handbook

This guidebook is a practical and essential tool providing everything necessary for structural design engineers to create detailed and accurate calculations. Basic information is provided for steel, concrete and geotechnical design in accordance with Australian and international standards. Detailed design items are also provided, especially relevant to the mining and oil and gas industries. Examples include pipe supports, lifting analysis and dynamic machine foundation design. Steel theory is presented with information on fabrication, transportation and costing, along with member, connection, and anchor design. Concrete design includes information on construction costs, as well as detailed calculations ranging from a simple beam design to the manual production of circular column interaction diagrams. For geotechnics, simple guidance is given on the manual production and code compliance of calculations for items such as pad footings, piles, retaining walls, and slabs. Each chapter also includes recommended drafting details to aid in the creation of design drawings. More generally, highly useful aids for design engineers include section calculations and force diagrams. Capacity tables cover real-world items such as various slab thicknesses with a range of reinforcing options, commonly used steel sections, and lifting lug capacities. Calculations are given for wind, seismic, vehicular, piping, and other loads. User guides are included for Space Gass and Strand7, including a non-linear analysis example for lifting lug design. Users are also directed to popular vendor catalogues to acquire commonly used items, such as steel sections, handrails, grating, grouts and lifting devices. This guidebook supports practicing engineers in the development of detailed designs and refinement of their engineering skill and knowledge.

Australia's largest library of construction cost information, providing vital data to all those involved in small projects.

Australia's largest library of construction cost information, providing vital data to all those involved in medium and larger projects.

Passive House Details introduces the concepts, principles, and design processes of building ultralow-energy buildings. The objective of this book is to provide design goals, research, analysis, systems, details, and inspiring images of some of the most energy-efficient, carbon-neutral, healthy, and satisfying buildings currently built in the region. Other topics included: heat transfer, moisture management, performance targets, and climatic zones. Illustrated with more than 375 color images, the book is a visual catalog of construction details, materials, and systems drawn from projects contributed from forty firms. Fourteen in-depth case studies demonstrate the most energy-efficient systems for foundations, walls, floors, roofs, windows, doors, and more.

Correctly understanding, designing and analyzing the foundations that support structures is fundamental to their safety. This book by a range of academic, design and contracting world experts provides a review of the state-of-the-art techniques for modelling foundations using both linear and non linear numerical analysis. It applies to a range of infrastructure, civil engineering and structural engineering projects and

allows designers, engineers, architects, researchers and clients to understand some of the advanced numerical techniques used in the analysis and design of foundations. Topics include: Ground vibrations caused by trains Pile-group effects Bearing capacity of shallow foundations under static and seismic conditions Bucket foundation technology for offshore oilfields Seismically induced liquefaction in earth embankment foundations and in pile foundations Free vibrations of industrial chimneys and TV towers with flexibility of the soil Settlements of high rise structures Seepage, stress fields and dynamic responses in dams Site investigation

Since the very early years of anthropology, Australian Aboriginal kinship has fascinated researchers in the field as well as theorists. Its complexity is considerable and, as some have remarked, its mechanical and logical beauty is astonishing. This complexity has however discouraged many scholars, students and people working in Aboriginal communities from actively and intellectually engaging with indigenous ways of conceiving and producing relationships based on kinship, despite the fact that it is a domain deeply embedded in everyday life and interaction. This handbook attempts to bring the principles of kinship in general, and Australian Aboriginal kinship in particular, closer to the reader in an understandable and pedagogic way. Aimed at Aboriginal people themselves, students in the social sciences and humanities or, in fact, any other person eager to learn more about Aboriginal Australia, while also discussing some issues of interest to even accomplished anthropologists, the book is divided into four general parts each tackling specific questions. Part 1 deals with the historical and ethnographic background against which the discussions on kinship are framed in later sections. Important concepts in anthropology such as 'culture' or 'hunter-gatherer societies' are looked at. Part 2 develops the basic tools and concepts needed to understand kinship. It discusses its main domains, such as terminology, marriage, descent and filiation. Part 3 applies the material considered up to this point to actual ethnographic examples from the Australian Western Desert and elaborates on other important concepts such as 'family', 'household' and 'domestic group'. Part 4 explains social organisation and, in particular, generational moieties, patri- and matrimeoieties, sections and subsections, all of which are central to Aboriginal peoples' ways of interacting. Finally, the concluding chapter discusses in a more critical fashion the concept of kinship itself and elaborates on the idea of relatedness as a meaningful expansion of formal kinship studies.

In an increasingly globalised built environment industry, achieving higher levels of integration across organisational and software boundaries can lead to improved economic, social and environmental outcomes. This book is the direct result of a collaborative global network of industry and academic researchers spread across nine countries as part of CIB's (International Council for Research and Innovation in Building and Construction) Task Group 90 (TG90) Information Integration in Construction (IICON). The book provides a broad view of some of the opportunities and challenges brought by integrating information across organisational and system boundaries in the built environment industry. Chapters cover a large range of topics and are separated into three sections: resources, processes and added value. They provide a much-needed international perspective on a current global evolution in the industry and present leading original research and valuable lessons for researchers, industry practitioners, government clients and policy makers across the industry. Key features

include: a broad range of topics that are not covered elsewhere in the literature; contributions from a diverse group of industry research leaders from across the globe; exemplar case studies providing real-world examples of where information integration has been a key factor for success or lack thereof has been at the root cause of failure; an analysis of future priority areas for research and development investment as well as their strategic implications for public and private decision-makers; the book will deliver innovation in best practice methodology for information sharing across disciplines and between the design, construction and asset management sectors.

This book presents the proceedings of CRIOCM_2016, 21st International Conference on Advancement of Construction Management and Real Estate, sharing the latest developments in real estate and construction management around the globe. The conference was organized by the Chinese Research Institute of Construction Management (CRIOCM) working in close collaboration with the University of Hong Kong. Written by international academics and professionals, the proceedings discuss the latest achievements, research findings and advances in frontier disciplines in the field of construction management and real estate. Covering a wide range of topics, including building information modelling, big data, geographic information systems, housing policies, management of infrastructure projects, occupational health and safety, real estate finance and economics, urban planning, and sustainability, the discussions provide valuable insights into the implementation of advanced construction project management and the real estate market in China and abroad. The book is an outstanding reference resource for academics and professionals alike.

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