

Civil Engineering Quantities By Ivor Seeley

The book begins by considering the general backcloth to civil engineering works and contracts, including funding, preliminary investigations and the preparation of engineer's reports. The form and purpose of the various contract documents are examined and the principal requirements of the ICE Conditions summarised and explained. The principal tendering arrangements are described and compared, together with the more commonly practised approaches to estimating the cost of civil engineering works. Site organisation and supervision are covered in sufficient depth to illustrate the means by which a civil engineering project can be effectively planned, managed and controlled, and having regard to such important aspects as productivity, plant usage and safety of operatives. The method of measuring and valuing civil engineering works is explored and this encompasses the use of daywork, issue of interim certificates, settlement of final accounts, valuation of variations and financial control of contracts. Finally, the book examines the background to contractors' claims and how they should be presented by the contractor and dealt with by the engineer.

This book sets out in simple language the art of detailing structures in steel, reinforced concrete and timber. It assumes no prior knowledge of structural mechanics or design and is suited to self-study or use as an introductory text for students of architecture, building, civil and structural engineering.

This book examines estimating and bidding for construction work in the context of construction economics and construction management. It will appeal to undergraduate students of the built environment, particularly those studying building, construction economics and quantity surveying. After an introductory chapter on the construction industry and the market forces that operate within it, there follows a review of a range of estimating methods and an examination of the relationship between estimating and project planning. Sub-contracting, the price of preliminaries, plan and specification contracts, and overheads, profit and project financing are each considered separately, with examples, in ; chapters 7 to 10. Chapter 11 considers the adjudication and bid submission process, while subsequent chapters deal with risk and uncertainty in estimating and tendering, bidding strategies, the client's view of the competitive bidding process, consortium and joint venture bidding, and the use of computers.

Describes and explains the principles of the techniques that can be used to appraise the financial viability for a developer of undertaking the construction of a building project. Adopts an integrated approach that takes into account the roles of all the parties normally involved in the development process in UK, namely, the developer, the financial analyst, the property valuer, the quantity surveyor, the accountant, the building surveyor and the facilities manager. The book analyses the two factors which determine viability: the value realised, and the cost incurred by the project developer. Both factors are analysed in an economic, financial and managerial context.

This popular and well-established book has been rewritten to conform to the seventh edition of the Standard Method of Measurement of Building Works (SMM7) The author explains in detail the practical measurement of building works, using some

twenty-five worked examples covering all the main building components, supplemented by extensive explanatory notes that clarify the basic principles and show how they are best interpreted and applied. As in previous editions, a chief aim has been to emphasise the usefulness of the book as a practical student guide to the measurement of relatively simple building work. A comparative review of construction techniques relating to low and medium rise buildings, based on five representative European Community countries - Denmark, France, Germany, The Netherlands and Portugal. Professional relationships and the roles of the architect, engineer and surveyor are described, together with contractual procedures as appropriate. Case study examples are discussed under each country and numerous line diagrams illustrate the different techniques adopted for the construction of foundations, floors, internal and external walls and roofs. Comparative data on other EC countries not examined in detail is included. A textbook and reference source for students of the built environment.

The book fully explains the principles contained in the third edition of the Civil Engineering Standard Method of Measurement (CESMM3) and shows how they are implemented in practice. The contractual background to the measurement and valuation of civil engineering works is described in detail, as are the value and use of method-related charges. All aspects of the measurement of civil engineering work, from taking-off to bill preparation are covered; these are illustrated by some twenty-two worked examples containing working drawings and clear handwritten dimension sheets with fully explanatory notes. In addition to being completely revised and reset, the coverage is also extended with a further chapter on the measurement of the renovation of sewers and water mains.

Value Management (VM) has been welcomed as a breakthrough in project management that can greatly increase the effectiveness of construction expenditure. This book provides a comprehensive, step-by-step review of authentic VM procedures, illustrated with examples and descriptions from the authors' extensive experience as practising value specialists. In addition to explaining all the steps that are integral elements of VM studies, it describes how to set up a VM programme and provides tips to ensure its success. The book will appeal to advanced students of construction management and to a wide range of construction professional.

Organisations of many kinds, perhaps none more so than those within the construction industry, are increasingly aware of the growing need to reduce the potentially harmful effects of their business upon the environment. Environmental management and environmental management systems are concepts that embrace those aspects of policy, strategy, procedure and practice that form an organisation's response to its environmental situation. This book provides a detailed guide to the concepts and practices involved in the field of construction.

A comprehensive, up-to-date and illustrated exposition of building maintenance in all its aspects, to serve the needs of building surveyors and other professionals involved in this activity and building, surveying and architectural students. It

shows the great importance of properly maintaining buildings and the advisability of providing adequate feedback to the design team. All the main building defects are described and illustrated and the appropriate remedial measures examined. Alterations and improvements to buildings and the specifying, measurement, pricing, tendering and contractual procedures are all examined, described and illustrated. In addition, the planning and financing, execution and supervision of maintenance work receive full consideration.

This text aims to meet the needs of students studying building measurement in the early years of quantity surveying and building degree courses. 27 worked examples embracing all the principal building elements are included.

This book studies the technical basis of the environment which exists in and around buildings. The main considerations are the effects of heat, light and sound within buildings; together with supplies of water and electricity. This edition discusses climatic effects, energy use, sick buildings and other topical subjects.

The maintenance of existing building stock is receiving increasing attention in most developed and in many developing countries. Intended as a comprehensive textbook for students, as well as a valuable reference for the professional, this book is a study of building defects, their diagnosis and cure. It deals with the full range of materials, components and elements involved in a building and is fully illustrated and referenced throughout.

This comprehensively rewritten, updated and extended new edition of this established text focuses on what has become the most important single facet of the quantity surveyor's role - cost management. The scope of the book has been broadened to take account of the widening and more sophisticated cost management and control service that clients now require. The book examines the factors influencing building costs and how the precontract costs can be estimated, analysed and controlled, to ensure that buildings can be completed within the agreed budget and timescale, and be of acceptable quality, function effectively and provide value for money. A new chapter on value management has been added, together with an introductory chapter on cost modelling; the chapter on life cycling costing is extended, while the sections on energy conservation and occupancy costs are expanded. Throughout the text many new case studies, with supporting tables and diagrams, are included in order to enhance the value of this book to the student and the practitioner.

This volume focuses on Latin America, since it was mainly there that Europeans (or their colonial descendants) actually engaged in mining in the 16th-19th centuries; elsewhere they traded metals mined by others. The principal metals produced, and in prodigious quantities, were silver, in the Spanish colonies, and gold, mainly in Brazil in the 18th century. These articles analyse the volume and pattern of production and the forms of labour found in mining. Particular attention is given to the technologies of extraction and refining, notably the adoption of the mercury amalgamation process: this had a major impact, driving down silver production costs; because the mercury mines were a royal monopoly, it also handed control to the Spanish crown.

This book offers a new approach to the management of resources within the construction industry, and with special reference to smaller construction companies. A systems approach, based on a case study, is adopted to describe how the basic production resources are planned for, monitored and managed. Each resource is considered in detail, highlighting its associated problems for management, the aim being to develop a structured approach to the management of each resource within an overall integrated framework. The early chapters examine the

problems of resource control; they describe the economic, financial, social and legal constraints under which management decisions are taken. Subsequent chapters deal with manpower, materials, plant and subcontracting. Then come several chapters that examine costs from the viewpoint of classification, monitoring and control. The closing chapters discuss resource cost management and cashflow, culminating in a final chapter that demonstrates how an integrated systems of cost and cashflow management may be operated.

Examines the principles which govern civil liability for the construction of defective buildings. The book deals with the key questions of who can be sued if a building is defectively constructed; who can sue if a building is defectively constructed; and what damages are recoverable. Special emphasis is placed on the consumer aspect of liability for defective buildings, the relationship between contract and tort, and the increasing importance of European legislation.

The increasing sophistication of buildings means that most of the work on an average project will be sub-contracted, so sub-contractors now play a crucial role in practically all building projects. This book is a comprehensive examination of the legal principles which affect sub-contractors and explains in detail the key provision of the standard sub-contracts for use with the various JCT forms of the main contract. It examines issues such as design by sub-contractors, variations in sub-contract work, payment and set-off, and sub-contractor's claims for extensions of time and loss and expense.

A guide to developments in construction contracts law. It explains typical problem areas using illustrations, and discusses procedures for treating a variety of contractual problems. It also suggests guidelines for better practice on the part of the employer's team as well as contractors.

This book covers the whole range of skills and knowledge that modern quantity surveyors require to perform their work efficiently and effectively. The text has been thoroughly revised and substantially extended to enhance its value to the reader. All the basic skills of the quantity surveyor in construction procurement, contract administration and cost control and management are dealt with in sufficient detail to meet the needs of students. The newly developing areas of project management and value management are examined and illustrated in a practical way.

A clearly written and self-contained introductory textbook that presents the principles of economics for non-specialist students of the built environment. Using relevant examples, it shows how economics can provide a logical framework within which construction activity can be analysed. The text assumes no prior exposure to economics and aims to give readers the confidence to use economics at the microeconomic and macroeconomic levels.

A long established text that aims to meet the needs of students studying building measurement in the early years of quantity surveying and building degree courses. It contains a careful selection of 28 worked examples embracing all the principal building elements and including alternative constructional methods to illustrate a range of approaches.

Constructability has been defined as 'the optimum integration of construction knowledge and experience in planning, engineering, procurement and field operations to achieve overall project objectives'. Those who advocate it as a concept and approach claim that it can bring real benefits to all involved clients, consultants, contractors and users. This book provides for the advanced student or practitioner a review of the concepts, principles and practices of constructability at each stage in the total construction

