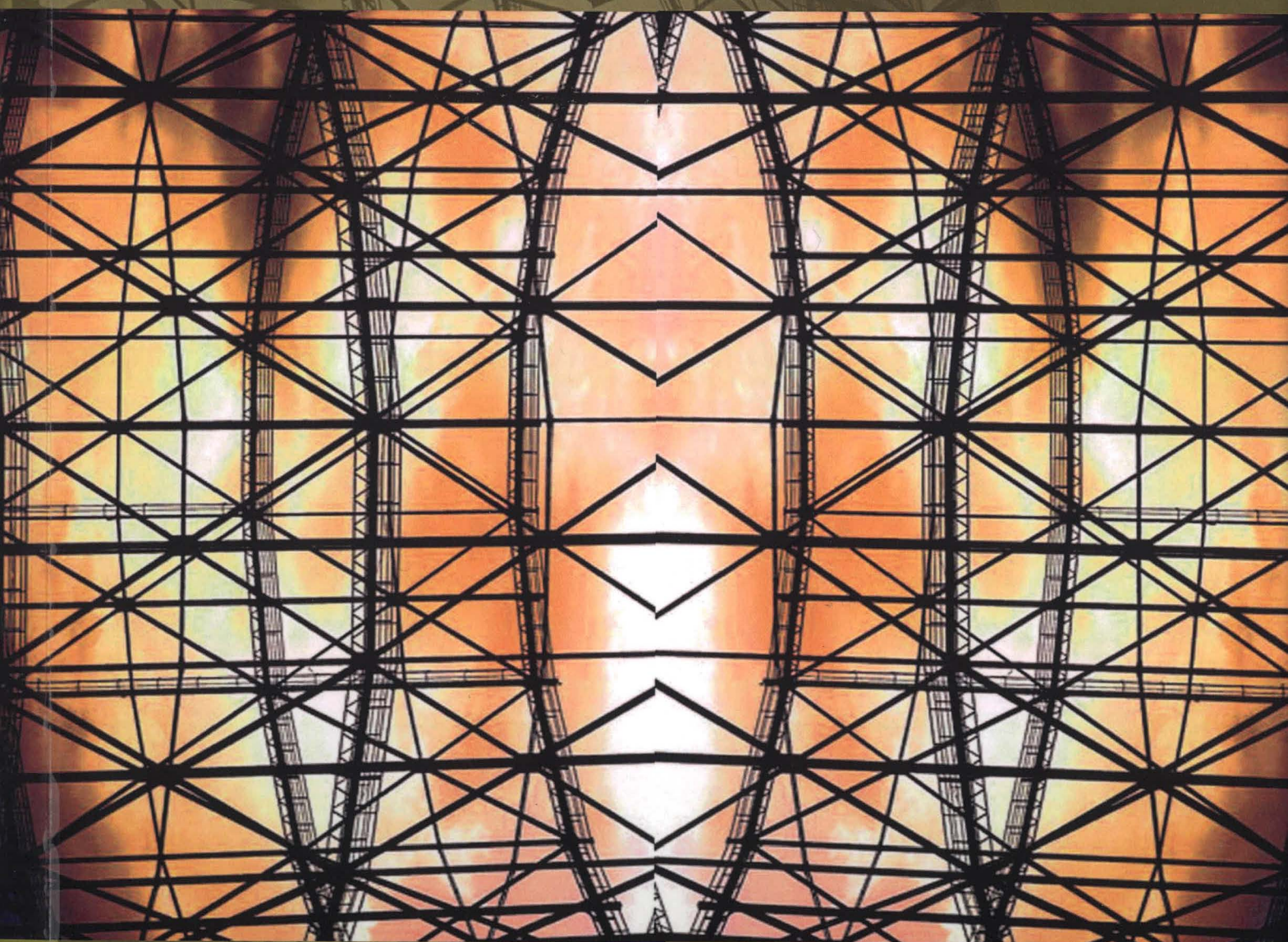


RESEARCH IN *QUANTITY SURVEYING*

Tan Chin Keng



Research Management Centre
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA



RESEARCH IN QUANTITY SURVEYING

**Editor
Tan Chin Keng**



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TABLE OF CONTENTS

Preface		v-vi
Acknowledgement		vii
Table of Contents		viii
Chapter 1	Performance Bond and Performance Guarantee Sum under the PWD 203A (2007) Standard Form of Contract <i>Khairuddin Abdul Rashid</i>	1
Chapter 2	The Legal Aspect of Procurement System - Doctrine of Variation Order with Respect to Design and Build Procurement System <i>Masidah Abdul Majid</i>	10
Chapter 3	Statutory Adjudication: New Alternative Dispute Resolution in Malaysia <i>Siti Nora Haryati Abdullah Habib</i>	19
Chapter 4	Employment of Foreign Labours in the Malaysian Construction Industry: Contractor's Perspective <i>Sharina Fariahah Hasan & Siti Hajar Mohd Nordin</i>	35
Chapter 5	Case Studies of Human-Related Problems in the Implementation of Quality Management <i>Tan Chin Keng</i>	48
Chapter 6	Main Contractors' Partnering with Domestic Sub-Contractors <i>Liban Hassan Sheikhhaden & Yahaya Mohd Yumus</i>	69
Chapter 7	Description of Items in the Bills of Quantities (B/Qs): Technique Revisit <i>Shamsulhadi Bandi</i>	96
Chapter 8	Serdang Hospital: A Comparison of Energy Performance and Load Apportioning Pattern in Selected Malaysian	107

	Government Hospitals <i>Azrin Bin Mohd Din</i>	
Chapter 9	Life Cycle Costing: Value-Added Service of Quantity Surveyors <i>Julian Osman & Noraziela Abdul Aziz</i>	170
Chapter 10	Personalised Learning Environments: Development Issues and Barriers <i>Sharifah Mazlina Syed Khuzzan</i>	182
Index		198

CHAPTER 8

SERDANG HOSPITAL: A COMPARISON OF ENERGY PERFORMANCE AND LOAD APPORTIONING PATTERN IN SELECTED MALAYSIAN GOVERNMENT HOSPITALS

Azrin Bin Mohd Din¹

ABSTRACT

Hospitals have unique and intensive energy use requirements. In addition to the need for lighting and heating 24 hours a day, hospitals demand extensive energy for ventilation, equipment, sterilization, and laundry and food preparation. Studies on hospitals abroad have shown that lighting contributes about 25 percent and HVAC contributing almost 45 percent of a typical hospital's energy bill. An electrical energy consumption field study was conducted at Serdang Hospital to represent the trend of Malaysian local hospitals. Serdang Hospital was selected since it is one of the recently commissioned and operationalised hospital in the Klang valley. The data was collected over 24 hour electricity utilisation for a one week period by using datalogger tool to map the energy consumption trend. The results have shown that the hospital's energy trend is similar to literature. Energy savings approaches need to be incorporated in future hospitals development because energy cost is rising and the hospital management need to allocate a higher percentage for it in its annual budget.

INTRODUCTION

Energy issues are taking centre stage in this millennium due to growing awareness among the public resulting from campaigns and media coverage of programmes initiated and conducted by non-governmental organisations either locally or abroad. The depletion of natural resources and emission of greenhouse gases into the atmosphere are direct results from the generation and utilisation of energy.

Hospitals have unique and intensive energy use requirements. The energy demand generally comprises of the need for lighting, heating 24 hours a day, ventilation, equipment, sterilization, laundry and food preparation. Research conducted has shown

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