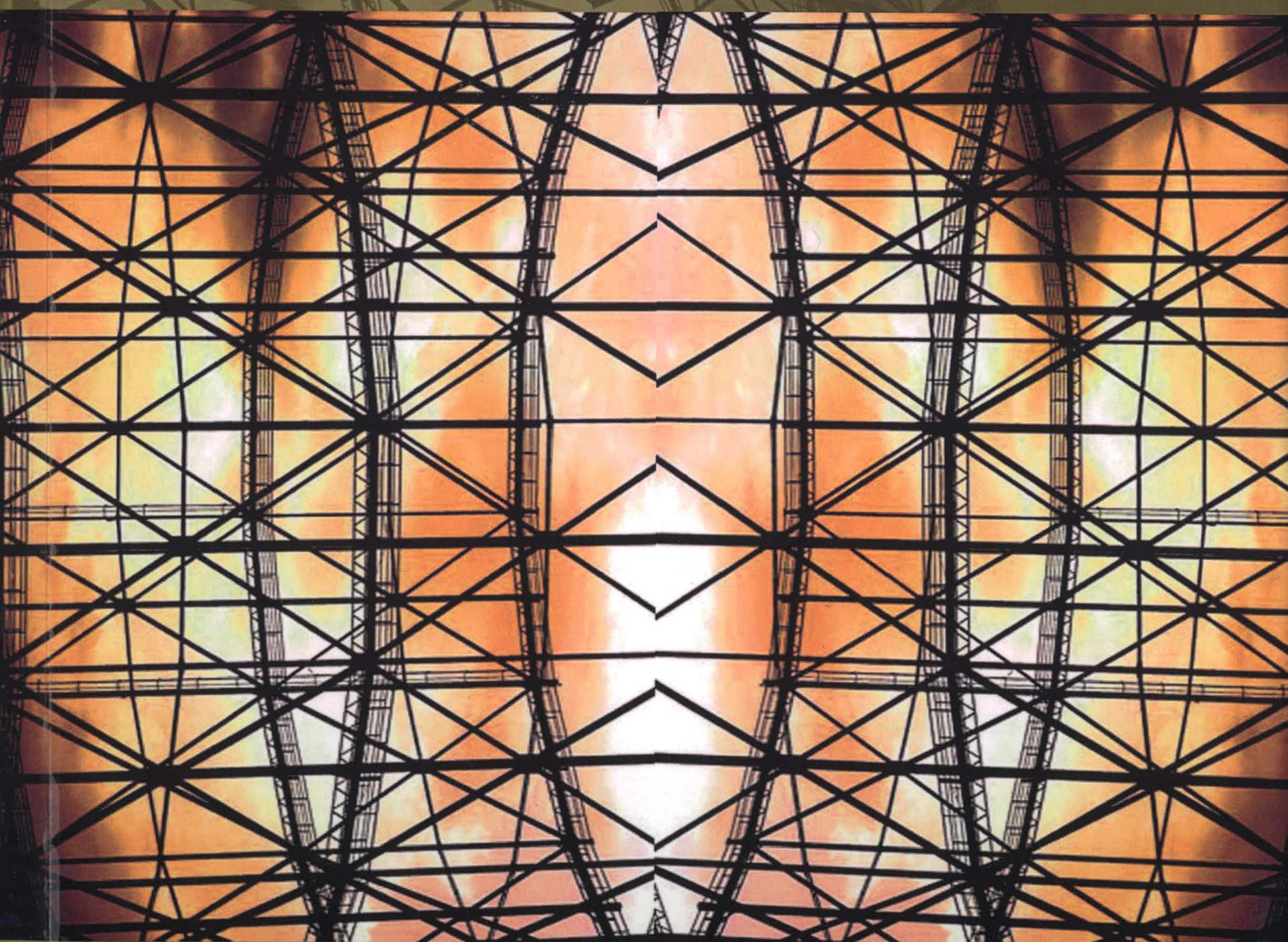
RESEARCH IN *QUANTITY SURVEYING*

Tan Chin Keng



Research Management Centre
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

RESEARCH
IN
QUANTITY SURVEYING

Editor
Tan Chin Keng

IIUM Press

Published by:
IIUM Press
International Islamic University Malaysia

First Edition, 2011
©IIUM Press, IIUM

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without any prior written permission of the publisher.

Perpustakaan Negara Malaysia Cataloguing-in-Publication Data

Tan Chin Keng: Research in Quantity Surveying

ISBN: 978-967-418-203-8

Member of Majlis Penerbitan Ilmiah Malaysia – MAPIM
(Malaysian Scholarly Publishing Council)

Printed by :
IIUM PRINTING SDN. BHD.
No. 1, Jalan Industri Batu Caves 1/3
Taman Perindustrian Batu Caves
Batu Caves Centre Point
68100 Batu Caves
Selangor Darul Ehsan

TABLE OF CONTENTS

CHAPTER 8

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

Azrin Bin Mohd Din[1]

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

[1] Academic Fellow, Department of Quantity Surveying, Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia.