

Applicability of the Building Envelope Requirements of
'Energy Efficient Building Code (EEBC) for Commercial Buildings in Sri Lanka'.

A Dissertation Presented
to
The Faculty of Architecture
University of Moratuwa
Sri Lanka
for
M.Sc. (Architecture) Examination

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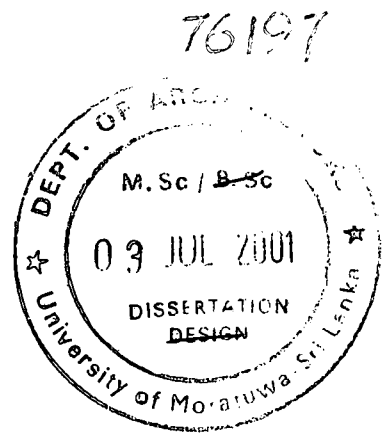
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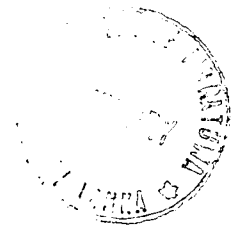
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a b s t r a c t

This study is focused on the recently published 'Energy Efficient Building Code (EEBC) for Commercial Buildings in Sri Lanka' and its applicability for Sri Lankan office buildings. It attempts to examine the Building envelope and Air Conditioning aspects of the EEBC and the actual effect of the code towards energy saving. The relevant standards stipulated are critically evaluated. The energy saving guidelines and their implications and the effects in view of energy saving has been practically established. A "typical" average multi-storey office building of Colombo has been (computer) modelled. The "typical" case is developed by analysing the current office building practices in Colombo.

The said model is tested for different interior set-point temperatures and OTTVs (Overall Thermal Transfer Value), including the conditions stipulated in the EEBC Sri Lanka, thereby discussing the most suitable combinations in Sri Lankan context.

It was found that considerable cooling load is needed to maintain the given standard by EEBC thereby leading to more energy consumption instead of energy saving. Probable ideal standards considering a balance of Energy efficiency and User comfort are obtained. In conclusion recommendations have been made for a better suitable EEBC for Sri Lanka.



a c k n o w l e d g e m e n t

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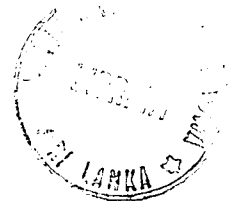


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contents



c o n t e n t s

Abstract	I
Acknowledgement	II
List of illustrations	V
Introduction	1
Topic Explanation	
Architectural Problem/ Issue	
Justification	
Objectives	
Limitations	
Method of Study	
1.0 Chapter One - Background	
1.1 Thermal comfort	4
1.1.1 Parameters of Thermal Comfort	5
1.1.2 Operative, Equivalent and Effective Temperatures	8
1.1.3 Thermal comfort index	9
1.1.4 Local Thermal Discomfort	10
1.1.5 Evaluating the Thermal Quality of a Room	12
1.2 Energy Consumption in Buildings	13
1.2.1 Energy Consumption Pattern in Buildings	13
1.2.2 Energy Consumption Pattern in Sri Lanka	14
1.2.3 Energy Consumption in commercial Sectors	15
1.3 Energy Efficient Building Code for Commercial Buildings in Sri Lanka	16
1.3.1 Introduction	16
1.3.2 Load Calculations	17
1.3.3 Temperature Controls	18
1.3.4 Building Envelope	18
1.4 Computer Simulation	23
1.4.1 General Introduction	23
1.4.2 The Output/ Results Obtainable from DEROB	24
1.4.3 Text Data Produced by DEROB	26

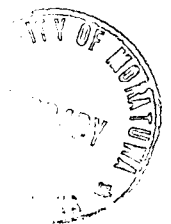


2.0 Chapter Two - Methodology	
2.1 Development of the 'typical multi-storey office building of Sri Lanka'	27
2.2 Input Data	31
2.2.1 Climate data	31
2.2.2 Internal Loads	31
2.2.3 Data for OTTV	32
2.3 Analysis Technique	34
2.4 Hypothesis	37
3.0 Chapter Three- Results and Discussion	
3.1 OTTV and Cooling Load	38
3.2 OTTV and Hourly Operative Temperature	40
3.3 OTTV, PMV and Operative Temperature distribution	42
3.4 Implications	45
3.4.1 Means of reducing OTTV	45
3.4.2 Improvements to EEBC	51
Conclusion	54
Summary of Findings	
Recommendations	
Limitations of Study	
Directions for Further Study	
Appendices	58
Bibliography	62





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list of illustrations

l i s t o f i l l u s t r a t i o n s

Chapter 1

Fig 1.1 effects of changes in core-body temperature	4
Fig 1.2 measurement of environmental parameters	7
Fig 1.3 integrated temperature	8
Fig 1.4 integrated temperature parameters	8
Fig 1.5 PMV and PPD	9
Fig 1.6 percentage of dissatisfied from radiation	11
Fig 1.7 percentage of dissatisfied from vertical air temperature difference	11
Fig 1.8 percentage of dissatisfied from cold and warm floors	12
Fig 1.9 measuring the thermal quality of a room	12
Fig 1.10 energy consumption of major sectors	15
Fig 1.11 end use of energy in buildings	15
Fig 1.12 energy end use in commercial buildings	16

Chapter 2

Fig 2.1 ceylinco seylan towers	27
Fig 2.2 vauxhall tower	28
Fig 2.3 7 th floor office interior - vauxhall tower	28
Fig 2.4 WTC twin towers	29
Fig 2.5 DEROB 'typical' model	30
Fig 2.6 R1 & R2 against SC	32
Fig 2.7 equations for R1 & R2	33
Fig 2.8 SC value for R1 & R2 = zero	33
Fig 2.9 model #1	34
Fig 2.10 OTTV calculation for model #1	34
Fig 2.11 model #2	35
Fig 2.12 OTTV calculation for model #2	35
Fig 2.13 model #3	36
Fig 2.14 OTTV calculation for model #3	36

Chapter 3

Fig 3.1 OTTV 90 - cooling load comparison	38
Fig 3.2 OTTV 45 - cooling load comparison	39
Fig 3.3 OTTV 135 - cooling load comparison	39
Fig 3.4 cooling load comparison for 24 ⁰ c set point temperature	40
Fig 3.5 cooling load comparison for 27 ⁰ c set point temperature	40
Fig 3.6 OT comparison for OTTV 90	41
Fig 3.7 OT comparison for OTTV 45	41

Fig 3.8 OT comparison for OTTV 135	41
Fig 3.9 OT comparison for set point temperature 24 ⁰ C	41
Fig 3.10 OT comparison for set point temperature 27 ⁰ C	41
Fig 3.11 PMV distribution for set point temperature 24 ⁰ C -OTTV 90	42
Fig 3.12 PMV distribution for set point temperature 27 ⁰ C -OTTV 90	42
Fig 3.13 OT distribution for set point temperature 24 ⁰ C -OTTV 90	42
Fig 3.14 OT distribution for set point temperature 27 ⁰ C -OTTV 90	42
Fig 3.15 model #1 -OTTV 90	42
Fig 3.16 PMV distribution for set point temperature 24 ⁰ C -OTTV 45	43
Fig 3.17 PMV distribution for set point temperature 27 ⁰ C -OTTV 45	43
Fig 3.18 OT distribution for set point temperature 24 ⁰ C -OTTV 45	43
Fig 3.19 OT distribution for set point temperature 27 ⁰ C -OTTV 45	43
Fig 3.20 model #2 -OTTV 45	43
Fig 3.21 PMV distribution for set point temperature 24 ⁰ C -OTTV 135	44
Fig 3.22 PMV distribution for set point temperature 27 ⁰ C -OTTV 135	44
Fig 3.23 OT distribution for set point temperature 24 ⁰ C -OTTV 135	44
Fig 3.24 OT distribution for set point temperature 27 ⁰ C -OTTV 135	44
Fig 3.25 model #3 -OTTV 135	44
Fig 3.26 comparison of OTTV for different wall types	47
Fig 3.27 comparison of OTTV for different window types	48
Fig 3.28 comparison of OTTV for different window area	49
Fig 3.29 comparison of OTTV for different window orientation	49
Fig 3.30 comparison of OTTV for different window overhang direction	50
Fig 3.31 comparison of OTTV for different window overhang length	50

