



**DEPARTMENT OF BUILDING SURVEYING
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING
UNIVERSITY TECHNOLOGY MARA**

**PATTERN DEFECT OF WATER TANK
AT HIGH-RISE BUILDING**

**SITI ROHAYA BINTI ZAINOL
(2007275898)**

BACHELOR OF BUILDING SURVEYING (HONS)

APRIL 2009

TABLE OF CONTENTS

CONTENTS	PAGES
ACKNOWLEDGEMENT -----	iv
ABSTRACT -----	v
LIST OF PICTURE -----	vi
LIST OF PIE CHART -----	vii
LIST OF TABLE -----	viii
LIST OF FLOW CHART -----	ix
LIST OF FIGURE -----	x
CHAPTER 1: INTRODUCTION	
1.1 INTRODUCTION -----	1
1.2 ISSUE -----	2
1.3 OBJECTIVE STUDIES -----	3
1.4 SCOPE OF STUDIES -----	4
1.5 METHODOLOGY -----	5
1.5.1 METHODOLOGY OF STUDIES	
1.5.2 COLLECTION OF DATA	
1.6 SUMMARY OF CHAPTERS -----	9

CHAPTER 2: THEOROTICAL STUDIES

2.1	HIGH-RISE BUILDING -----	10
	2.1.1 DEFINITIONS	
	2.1.2 CATEGORY OF HIGH-RISE BUILDING	
2.2	WATER TANK -----	16
	2.2.1 SOURCE OF WATER	
	2.2.2 WATER TANK	
	2.2.3 TYPES OF WATER TANK MATERIALS	
	2.2.4 ELEMENTS OF WATER TANK	
	2.2.5 CHARACTERISTIC OF WATER TANK MATERIAL	
	2.2.6 DESIGN CONSIDERATION	
2.3	COMMON DEFECT OF WATER TANK -----	36

CHAPTER 3: CASE STUDY

3.1	INTRODUCTION -----	49
3.2	QUESTIONNAIRE -----	53
	3.2.1 INTRODUCTION	
	3.2.2 RATIONALE OF QUESTIONNAIRE TO THE SUPPLIER	
	3.2.3 RATIONALE OF QUESTIONNAIRE TO THE CORPORATION MANAGEMENT	
3.3	ANALYSIS OF DATA -----	67
3.4	FINDINGS -----	90

ACKNOWLEDGEMENT

Firstly i woul like to thank the Mercy Allah for this blessing and his will to enabling me to finish this Dissertation Accademic Project II (BSB 695).

Besides i like to express my deepest gratitude especially to my supervisor Sr. Ellemy Iskandar B. Khalid because of his guide and oppinion in completing this dissertation report.

I would also like to express my heart to my dearest parents Mr. Zainol b. Jusoh and his beloved wife, Mrs. Rosadah Bt. Din for the love and support throughout the preparation of this dissertation.

At the same time not forgetting my fellows friends for given me support needed in order for me to complete my dissertation.

I like to record my gratitde to all building manager and maintainance manager who have gave me the coororation. May Allah bless them for their good deep and repay them. Thank you very much to all person who is contributes in completing this dissertation report.

ABSTRACT

This dissertation was carried out to determine the percentages of pattern defect at high-rise building in Klang Valley. The water tank is always exposed to the weather condition. The location of water tank at the roof top of a building makes the water tank fast to deterioration and malfunction. The detail survey or inspection should be carried out to identify the pattern of defect. Before the detail inspection was carried out the water tank materials and their equipments should be recognized because of the characteristic of water tank material and their equipment is different with others.

The design consideration is important to study because of the defect of water tank may influence by the design characteristic. The common defect of a water tank at high-rise building usually happens due to lack of maintenance. Systematic schedule should be planned to minimize the defects and maintenance budget.