

TABLE OF CONTENTS

AUTHENTICITY STATEMENT.....	ii
THESIS APPROVAL OF SUPERVISOR	iii
THESIS APPROVAL OF EXAMINATION COMMITEE.....	iv
DEDICATION.....	v
MOTTO	vi
PREFACE	vii
ABSTRACT	ix
TABLE OF CONTENTS	x
LIST OF TABLE.....	xii
LIST OF FIGURE.....	xiv
CHAPTER I INTRODUCTION	1
1.1. Background	1
1.2. Problem Formulation	3
1.3. Research Objectives	4
1.4. Research Scope.....	4
1.5 Research Benefit.....	4
CHAPTER II LITERATURE.....	5
2.1. Inductive Study.....	5
2.2 Deductive Study.....	11
2.2.1. Quality Control	11
2.2.2. Six Sigma.....	11
2.2.3. DPMO and Sigma Level.....	12
2.2.4. Failure Mode and Effect Analysis (FMEA).....	13
2.2.5. Analytical Hierarchy Process (AHP)	17
2.2.6. Fuzzy Analytical Hierarchy Process.....	21
2.2.7 Fuzzy AHP-FMEA.....	23
CHAPTER III RESEARCH METHODOLOGY.....	24
3.1 Problem Identification	24
3.2 Problem Formulation	24
3.3 Literature Review	24
3.4 Data Collection	25

3.5	Data Processing	26
3.6	Discussion.....	26
3.7	Conclusion and Suggestion	26
CHAPTER IV DATA COLLECTION AND PROCESSING		28
4.1	Data Collection	28
4.1.1	Product Type.....	29
4.1.2	Defect Type.....	29
4.1.3	Production	29
4.1.4	Defect on Product	30
4.1.5	Weight of Criteria Determination.....	31
4.2	Data Processing	32
4.2.1	Stage of Define	32
4.2.2	Stage of Measure	32
4.2.3	Stage of Analyse	33
4.2.4	Stage of Improvement.....	41
4.2.5	Stage of Control	42
CHAPTER V DISCUSSION.....		44
5.1	Product Defect	44
5.2	Rank of Product Defect	44
5.3	Improvement	46
5.4	Control	47
CHAPTER VI CONCLUSION AND SUGGESTION		48
6.1	Conclusion.....	48
6.2	Suggestion	49
REFERENCES		50
APPENDIX.....		52