




**DESIGN SYSTEM OF EXCHANGE DIES FOR  
STAMPING SMALL PRESS 110 T MACHINES  
TO ACHIEVE SMED**

**MUHAMAD HANAFI BIN GHAZALI  
(2005606913)**

**BACHELOR ENGINEERING (HONS)  
(MECHANICAL) UNIVERSITI TEKNOLOGI MARA  
(UITM)  
MAY 2009**

“I declare that I read this thesis and in my point of view this thesis is qualified in term of scope and quality for the purpose of awarding the Bachelor of Engineering (Hons.) (Mechanical)”

Signed :  .....

Date : ..... 11/5/09 .....

Supervisor or Project Advisor

**Mrs. Azianti Bte Ismail**

Faculty of Mechanical Engineering  
MARA University of Technology (UiTM)  
40450 Shah Alam  
Selangor

## **ACKNOWLEDGEMENT**

Alhamdulillah and thanks to Allah the Almighty with whose Bounty and Mercy, the author had succeeded to complete this project although many problems occur during the processes to complete the project. Thanks to my family, colleagues and all the people who have helped and support directly or indirectly for the completion of this project. I would like to express my sincere gratitude and appreciation to my supervisor Mrs. Azianti Ismail for her continuous support, generous guidance, patience and encouragement in the duration of the project preparation until its completion. Moreover, this project would not have been possible without the help of Mr. Asfar Abd Rahman and Mr Hanifah Syukri, both are engineer at Autokeen Sdn. Bhd for their assists throughout the entire period of this project.

## **ABSTRACT**

Single Minute Exchange of Dies (SMED) is basically a methodology for systematic and radical reduction of setup times, with documented cases reductions from hours to less than ten minutes (single digit minutes). Consequently, they are widely used in industrial companies to manage exchange dies activity with cost effective, utilization of time, minimize manpower and equipment. This project presents an optimum design of SMED for Autokeen Sdn.Bhd to replace the current small press production lines exchange dies system. Several improvement steps are being applied throughout the project to measure the impact from redesigning the current system. The results from improvement are being compared to the current system in terms of downtime, and percentage of reduction.

## TABLE OF CONTENTS

	CONTENTS	PAGE
	ACKNOWLEDGEMENT	
	ABSTRACT	ii
	TABLE OF CONTENTS	iii
	LIST OF TABLES	vi
	LIST OF FIGURES	vii
CHAPTER 1	INTRODUCTION	1
	1.1 Project Background/ Problem Statement	2
	1.2 Objective Of Project	2
	1.3 Scope Of Project	3
	1.4 Significance Of Project	3
	1.5 Project Methodology	3
CHAPTER 2	LITERATURE REVIEW	6
	2.1 Lean Manufacturing / Toyota Production System (TPS)	6
	2.2 General Setup Time Reduction	7