

# **IMPROVEMENT OF REAR BUMPER DESIGN**

**MOHD HAFIZAN BIN MAMAT**

**UNIVERSITI MALAYSIA PAHANG**

# UNIVERSITI MALAYSIA PAHANG

## BORANG PENGESAHAN STATUS TESIS •

JUDUL: **IMPROVEMENT OF REAR BUMPER DESIGN**

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**MOHD HAFIZAN BIN MAMAT (860305-46-5133)**  
(HURUF BESAR)

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Disahkan oleh:

(TANDATANGAN PENULIS)

(TANDATANGAN PENYELIA)

Alamat Tetap:

**171 Felda Kerteh 6,  
Ketengah Jaya,  
23300 Dungun,  
Terengganu.**

**ZAMRI BIN MOHAMED**  
(Nama Penyelia)

Tarikh: **7 NOVEMBER 2008**

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## **IMPROVEMENT OF REAR BUMPER DESIGN**

**MOHD HAFIZAN BIN MAMAT**

A report submitted in partial fulfillment of the requirements  
for the award of the degree of  
Bachelor of Mechanical Engineering with Automotive Engineering

Faculty of Mechanical Engineering  
UNIVERSITI MALAYSIA PAHANG

NOVEMBER 2008

### **SUPERVISOR'S DECLARATION**

We hereby declare that we have checked this project and in our opinion this project is satisfactory in terms of scope and quality for the award of the degree of Bachelor of Mechanical Engineering with Automotive Engineering.

Signature

Name of Supervisor: MR. ZAMRI BIN MOHAMED

Position: LECTURER

Date: 7 NOVEMBER 2008

Signature

Name of Panel: MR. AZIZUDDIN BIN ABD AZIZ

Position: LECTURER

Date: 7 NOVEMBER 2008

**STUDENT'S DECLARATION**

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged. The thesis has not been accepted for any degree and is not concurrently submitted for award of other degree.

Signature

Name: MOHD HAFIZAN BIN MAMAT

ID Number: MH05044

Date: 7 NOVEMBER 2008

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**LIST OF ABBREVIATIONS**

3D	Three Dimension
AISI	America Iron and Steel Institute
FEA	Finite Element Analysis
FYP	Final Year Project
KMC	Knowledge Management Centre
UHSS	Ultra High Strength Steel
UMP	Universiti Malaysia Pahang
UTS	Ultimate Tensile Strength
VPG	Virtual Proven Ground