UNIVERSITI MALAYSIA PAHANG FACULTY OF MECHANICAL ENGINEERING

We certify that the project entitled "Finite Element Modelling of Limiting Dome High Sheet Metal Formability Test" is written by Mohammad Amir B. Hashim. We have examined the final copy of this project and in our opinion; it is fully adequate in terms of scope and quality for the award of the degree of Bachelor of Engineering. We herewith recommend that it be accepted in partial fulfilment of the requirements for the degree of Bachelor of Mechanical Engineering.

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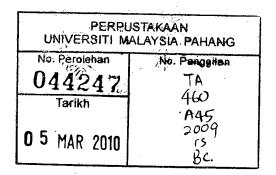
FINITE ELEMENT MODELLING OF LIMITING DOME HIGH SHEET METAL FORMABILITY TEST

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Thesis submitted in fulfillment of the requirements for the award of the degree of Bachelor of Mechanical Engineering

> Faculty of Mechanical Engineering UNIVERSITI MALAYSIA PAHANG

NOVEMBER 2009



SUPERVISOR'S DECLARATION

I hereby declare that I have checked this project and in my opinion, this project is adequate in terms of scope and quality for the award of the degree of Bachelor of Mechanical Engineering.

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Name of Supervisor: Dr. Ahmad Syahrizan Sulaiman Position: Supervisor Date: November 2009

STUDENT'S DECLARATION

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

Signature /

Name: Mohammad Amir B. Hashim ID Number: MA06026 Date: November 2009 I humbly dedicated this thesis to

my lovely father and late mom, Hashim B. Nordin and Miyen Bt Yasin all my dearest brothers, and all my dearest sisters,

who always trust me, love me and had been a great source of support and motivation.

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LIST OF SYMBOLS

A	Cross Sectional Area
mm	Millimetre
S	Second
t	Thickness
.1	Length
W	Width
d	Diameter
x	Horizontal distance
У	Vertical distance
Ν	Newton
σ_y	Yield Stress
E	Modulus of Elasticity
σ	Stress
Е	Strain

. *"*

LIST OF ABBREVIATIONS

AISI	American Iron and Steel Institute
ASTM	American Society for Testing Materials
FE	Finite Element
FEA	Finite Element Analysis
FEM	Finite Element Model
LDH	Limiting Dome High test