TOOL WEAR ON PARALLEL TURNING OF CARBON STEEL BAR

ABDUL WAHAB BIN ABDUL AZIZ

Report submitted in partial fulfillment of the requirements
for the award of Bachelor of Mechanical Engineering with Manufacturing

Faculty of Mechanical Engineering
UNIVERSITI MALAYSIA PAHANG

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I hereby declare that I have read this report and in my opinion this report is sufficient in term of scope and quality for the award of the degree of Bachelor of Mechanical Engineering with Manufacturing Engineering

Signature : ……

Name of Supervisor : Mr. LEE GIOK CHUI

Position : Lecturer of Faculty Mechanical Engineering

Date : ……....

EXAMINERS APPROVAL DOCUMENT

I certify that the project entitled "*Tool Wear On Parallel Turning Of Carbon Steel Bar* " is written by Abdul Wahab Bin Abdul Aziz. I have examined the final copy of this project and in my opinion; it is fully adequate in terms of scope and quality for the award of the degree of Bachelor of Engineering. I here recommend that it be accepted in partial fulfillment of the requirements for the degree of Bachelor of Mechanical Engineering with Manufacturing.

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Position : Lecturer of Faculty Mechanical Engineering

Date : ……....

STUDENT DECLARATION

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

Signature : ……..

Name : Abdul Wahab Bin Abdul Aziz

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Date : ……..

TABBLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

LIST OF SYMBOLS

f	Feed Rate, mm/rev
d	Depth of Cut, mm
V_C	Cutting Speed, m/min
CS	Cutting Speed,mm/min
Do	Original diameter of workpiece, mm
Df	Final diameter of workpiece, mm
Davg	Average diameter of workpiece, mm
N	Rotational speed of the work piece, rpm
L	Length of cut, mm
t	Cutting time, s
V_B	Flank wear, µm
Ra	Surface Roughness, µm
r	Cutting Ratio
ϕ	Shear angle
α	Rake angle
P	Probability
R^2	coefficient of determination

LIST OF ABBREVIATIONS

DOE	Design of experiment
TiN	Titanium Nitride
SEM	Scanning Electron Microscope
AISI	American iron and steel institute
ANOVA	Analysis of variance
P	Probability value
SS	Sum of Square
MS	Mean of Square
L	Linear
Q	Quadratic