0708-F-036  INTERNAL STRUCTURE CHANGE OF CARBON TOOL STEEL AFTER HEAT TREATMENT

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

Faculty of Mechanical Engineering
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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 Manufacturing

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STUDENT’S DECLARATION

I hereby declare that the work in this thesis entitled “internal structure change of carbon tool steel after heat treatment” 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.

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LIST OF SYMBOLS

E  a constant determined by the form of the indenter

e  the permanent increase in penetration
LIST OF ABBREVIATIONS

AISI  African Information Society Initiative
BCC  Body-centered cubic
BCT  Body-centered tetragonal
CMP  Chemical mechanical polishing
FCC  Face centre cubic
HB  Brinell hardness value
HRC  Rockwell hardness value
SiC  Silicon carbide
C  Carbon
Cr  Chromium
Fe  Iron
Mn  Manganese
Mo  Molybdenum
Si  Silicon
W  Tungsten
V  Vanadium
α-Fe  alpha iron
γ-Fe  gamma-iron
δ-Fe  delta-ferrite
Fe₃C  Cementite
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