

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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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
Fe ₃ C	Cementite

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