

GEOMETRY EFFECTS OF CARBIDE CUTTING TOOL ANGLE TO THE TOOL
LIFE AND WEAR OF THE LATHE PROCESS ON S45C
BY USING ANSYS SOFTWARE

By

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

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The existence of cutting tools in a machining process is very important. One of the types used in metal work on lathes is cutting chisels with ISO 6 standards. In standard ISO 6 chisels it has a certain rake angle geometry shape. In this research we have done the lathe machining process using ISO 6 instrument which has been changed its rake angle and lathe Weiller LZ 360 S with engine speed 1593 rpm and the depth of cut is 0.6 mm to get shrinkage shape that happened. To learn tools life using software ANSYS Workbench 15.0. In this research, it is known that the effect of the change of cutting tool geometry on ISO 6 rake angle chisel has an effect on tool life and wear to long on S45C material on rake angle 14°

Keywords: Geometry shape, ANSYS Workbench 15.0, Tools life, material S45C

DEDICATION

I dedicate this Thesis:

1. My mother SUBUR WINANTI WIBOWO, my father SUNARSO and my sister PRIHUTAMI WINANTI PUTRI.
2. Workplace ATMI CIKARANG.
3. All friends



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With limited knowledge and ability, the authors believe that this thesis is far from perfect, therefore the authors expect criticism and suggestions.

Finally, the authors hope that this paper can be useful for all readers.

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