PROTOTYPE APPLICATION DEVELOPMENT FOR MACHINING OPTIMIZATION USING GENETIC ALGORITHM FOR DRILLING MACHINE

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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, 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

PROTOTYPE APPLICATION DEVELOPMENT FOR MACHINING OPTIMIZATION USING GENETIC ALGORITHM FOR DRILLING MACHINE

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This works talks about the optimization process which is not conducted very well in machining industries. Some of cutting parameters such as cutting speed (v) and feed (f) are chosen only by the operator's sense or by looking at the table. This works has a goal to construct a software application that can be used as an optimization tool, where time and cost will become the target variable in the optimization process. The optimization method process will be using Taylor Tool Life formula and Genetic Algorithm Method, where at the end both of them will be compared with each other.

Keywords: Drilling Operation, Prototype Application, Genetic Algorithm, Taylor Tool Life, Optimization, Cutting Parameter.

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DEDICATION

I dedicate this thesis to the most amazing family, my beloved parents who have become role models for me. Moreover, this thesis is also dedicated to my thesis advisor, who never stops encouraging, as well as to fellow readers who might benefit from this thesis.

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