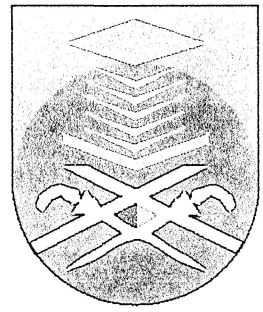

INVESTIGATION OF ROBOTIC WELDING PROCESS BY USING ROBOTSTUDIO™5.10 AND ABB ROBOT

SHAHFUAN HANIF BIN AHMAD HAMIDI

(2005607728)

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Faculty of Mechanical Engineering

MARA University of Technology (UiTM)

40450 Shah Alam,

Selangor Darul Ehsan.

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"I declare that this thesis is the results of my own work except the ideas and summaries which I have clarified their sources. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any degree."

Signed: .....

Date :.....24.11.2009.....

Shahfuan Hanif Bin Ahmad Hamidi

UiTM No: 2005607728

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ABSTRACT

This project discussed about the investigation of robotic welding using RobotStudio™5.10 Software and ABB Robot. In this project there are two approaches that have been taken, simulation and execution. In simulation, there are several steps need to be carried out. Those are CAD modeling, layout arrangement, and rapid programming which are available on RobotStudio™5.10 Software. The author makes some study cases on this software on basic understanding for the readers. The study cases are including simple geometry for generating rapid program, I/O programming where in creating signal with other devices and advanced rapid programming by creating new movement function. In execution approach, the author executes a rapid programming directly to ABB robot. These activities required some preparation before, during, and after execution. Therefore, the author used example of ship panel structure to adapt all the preparation that need to be carried out. This example is documented together with the suitable welding parameter. In conclusion, by reading this book, readers should have general ideas of basic fundamental in applying in simulation and execution of robotic. They also know about the advantages of the software and the robot itself.

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