INVESTIGATION OF WELDING PARAMETERS TOWARDS HIGH QUALITY PRODUCTS BY USING FLUX CORE ARC WELDING (FCAW)

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AUTHORS DECLARATION

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

Signed : .....

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ABSTRACT

The purpose of this project is to investigate and understanding the advantages and disadvantages of flux core arc welding process. The investigation is done by performing flat groove (1G), horizontal groove (2G) and vertical groove (3G). This study consist two steps. The first step was to get the variables for the voltage, current, travel speed and wire feed rate. This variable was obtained by performing 1F (flat position). The parameters were set by referring the AWS (American Welding Society) standard hand book, section 3B. Next step was establishing the test for each welding specimen by using NDT (Non Destructive Test) and DT (Destructive Test). These test is to observe either they are failed or passed. All the testing was referred to AWS standard, D1.1 (2004). The FCAW parameters was presented in this project which more focusing on the critical position such as vertical and horizontal compare to flat. Through out this study, the finding of variables such as voltage, current, wire feed rate and travel speed can helps in order to develop a new model design for research and development. As conclusion, the development of this study was very courage. However, further works need to be cover in future where this process should be carried out on the others materials for example stainless steel.

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