



**EVALUATION AND ANALYSIS OF VARIOUS WELDING  
IMPERFECTIONS IN BUTT WELD COLLECTED FROM  
INDUSTRIAL FABRICATORS**


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“I declare 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 degree and is not concurrently submitted in candidature of any degree.”

Signed :  .....

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## **ABSTRACT**

The objective of this project is to recognize and evaluate the welding imperfections that were frequently discovered from the local fabricating industry. These imperfections may occur unintentionally and repeatedly, because the causes were not understood by the welder or the remedies were not effective in preventing them. Some of these imperfections may fall into the category of defect or reject. The cost of repair could be more expensive than making new. Prevention is definitely cheaper, but the welding operator and supervisor should have the correct knowledge in solving these problems.

The first stage of the process in collecting and tabulating the list of imperfections is to identify the companies there are involved with the metal fabrication. Welding samples were collected for inspection and evaluation by NDT procedure. Digital x-ray machine is employed to locate imperfections inside the weldment. The location with imperfections was cut for macro etching test.

The various types of welding imperfection were tabulated into a master chart. The types of imperfections will be described in details by sketch, photograph, radiograph and macro etching test. The causes and remedies on the chart will be informative to educate the readers the solution in overcoming future occurrence at

their fabrication site. The result of this finding would be an educational manual for any individual involved in welding fabrication.