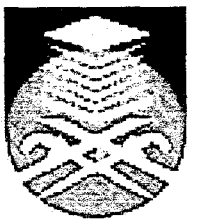

# THE EFFECT OF COOLING PROCESS AFTER WELD USING TENSILE AND IMPACT TESTS OF MILD STEEL JOINT


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

Signed : .....

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*With the name of Allah the Merciful and the Benevolent*

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## ABSTRACT

The aim of this research is to investigate experimentally the three different methods of cooling process (normalizing, spray quenching and normal quenching) after weld. The goal of research is to investigate whether spray quenching method are suitable after weld compares between normalizing and normal quenching method. Metalworking oil concentrate are used for cooling material for spray and normal quenching . The result is based on the properties of the specimen. All specimens used butt joint, single bevel of groove ($45^{o}$) and mild steel for preparation in weld process and used Flux Core Arc Welding (FCAW) for types of weld.

Tests that will conducted after the welding as tensile and impact test. This research also used arc spark spectrometer and micro test to analyses the result from tensile and impact test.

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