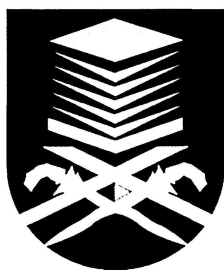


**CLASSIFICATION OF PARTIAL DISCHARGE USING
COMBINATION OF ACOUSTIC EMISSION DETECTION AND S-
TRANSFORM ANALYSIS**

This is presented in partial fulfillment for the award of the

**Bachelor of Engineering (Hons) Electrical
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In the name of Allah The Most Merciful,

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ABSTRACT

Partial Discharge (PD) is an electrical phenomenon which causes insulation to deteriorate and frequently is the reason for breakdown of an insulation system resulting in failure of the equipment. This project is conducted in order to identify a detected partial discharged using non-contact type of acoustic measurement. This study will be performed with laboratory experimental work in order to validate the experimental data. With the aid of an ultrasonic probe as detecting device, the ultrasonic signal is recorded and the data will be analysed in personal computer (PC) with the aid of MATLAB software. The recorded time-domain signal is then transformed into frequency-domain by using the S-Transform (ST) analysis. This study is to detect the acoustic PD and classify the pattern of ultrasonic sound emitted.

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