

**ANALYSIS OF FAULT IN POWER TRANSFORMER BY USING  
DISSOLVE GAS ANALYSIS**

This thesis is presented in partial fulfillment for the award of the  
Bachelor of Engineering (Honors) Electrical

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## **ACKNOWLEDGEMENT**

Alhamdulillah, I would like to express my sincerely gratitude and thanks to my project supervisor, Madam Aida Sulinda Binti Kusim for his kindness, support, guidance, and suggestions during the progression of this project.

A special thanks to the co- supervisor, Mr. Aizam Bin Talib, Transformer Diagnosis Engineer, Tenaga Nasional Berhad Research Sdn. Bhd for the continuous guidance in every aspect to complete this project.

Finally, my deepest appreciation goes to my family for their moral and spiritual support. Last but not least, I would like express my gratitude and thanks to all my friends for their help and support and to all people who have been involved directly or indirectly contributes towards the progress of this thesis.

Thank you.

## **ABSTRACT**

Transformer is an equipment that transform power from one circuit to another circuit without changing any frequency but different in voltage level. Power transformer will successfully function depends on component which are in their consistent thermal and electrical stress. There is many type of fault occur in transformer which is arcing, partial discharging and overheating. All this type of fault can be traced by using Dissolve Gas Analysis Techniques. The main function of Dissolve Gas Analysis Techniques is to analyze and differentiate the type of electrical faults in transformer. Different gas level in the transformer oil that produced by the breakdown occur in the transformer oil will detected by Dissolve Gas Analysis. This research is focusing on investigate the type of dissolves gases and fault occur in fault mineral oil and comparing with fresh and new of the mineral oil. The techniques that need to use and investigate consist of three techniques that are Duval Triangle, Roger Ratio and Key Gases in order to detect a fault. The result will determine which is interpretation technique more capability and reliability to be used for test the fault in the transformer. This analysis finding that all methods of Dissolve Gas Analysis have an advantages and disadvantages when used. Dissolve Gas Analysis would more precise and accurate if all the method is applied together.

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