LOAD FLOW STUDY USING FAST DECOUPLED METHOD

Presented in partial fulfilment for the award of the

Bachelor of Electrical Engineering (Honours)

From

UNIVERSITI TEKNOLOGI MARA

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ACKNOWLEDGEMENT

In the name of ALLAH, the Beneficent, and the Merciful. It is with the deepest sense of gratitude of the almighty ALLAH who gives strength and ability to complete this project and eventually this thesis as it is today.

With the completion of this paper, I would like to give my deepest and greatest gratitude to those who has been lenient to me all this time from start to finish Prof. Madya Muhammad Yahya, Prof. Madya Titik Khawa for teaching me power system 3, Puan Kama Azura for reviewing my program, Prof. Madya. Ismail Mushirin for providing me with the Matlab version of result for comparison, my friends and especially to my beloved family. Please accept my most wonderful appreciation in your association in this project. Again thank you all.

ABSTRACT

This thesis presents a framework that allows systematic studies on the hypothesis and derivations concerning the standard version of the fast decoupled load flow method using C programing language. Testings include studies on very simple systems, e.g. a 3-bus trasmission system. The 3-buses trasmission system test result will be presented in this thesis and is considered as a base case which enables further modification of the presented netwok. Other results of the standard IEEE system is also presented (6 bus,9 bus, and 14 bus). The typical models presented here are based on the principle that the system is balanced, i.e., only one phase is really necessary to model the system, and that phasors of voltages and currents, $\tilde{V}=V\angle\theta$ and $\tilde{I}=I\angle$ can be used to represent the actual voltages and currents.

Keywords —load flow, trasmission network, fast decoupled, C programming.

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