

THE PROPOSED EXPERIMENTS
ON
MAGNETIC AMPLIFIERS

by



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ABSTRACT

This thesis deals with the historical development, the basic circuits and the experiments on magnetic amplifiers. It presents the methods of performing the experiments on saturable reactors, and nonpolarized, polarized, push-pull type, external feedback, single stage and multi-stage magnetic amplifiers. Each experiment includes the purpose, procedure in details, circuit diagrams and typical data.



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INTRODUCTION

Nowadays the magnetic amplifiers are introduced practically to many electrical works and every branch of industry which require a perfect control system, especially in the servo system. Because of its wide use, the magnetic amplifier theory is now introduced to undergraduate courses in the Electrical Engineering Department of Chulalongkorn University. Theory alone is not sufficient for engineering students, it is necessary to build up some experiments on magnetic amplifiers in order to promote the understanding. For this reason, this thesis has been successfully done and aimed only in basic principle.

In fact, the experiments on magnetic amplifiers are already performed in several universities in Europe and The United States. But owing to the conditions in our country the experiments in this thesis can not follow those performed abroad. The main obstacle is the lack of proper materials for constructing the test specimens. All standard materials can not be found in this country so the experiments in this thesis are proposed for the material which can be found locally.

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