

**EXPERIMENTAL AND INVESTIGATION ON PARALLEL
OPERATION OF THREE PHASE TRANSFORMER FOR
STAR-DELTA AND DELTA-DELTA CONNECTIONS.**

This report is presented in fulfillment for the requirement of
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ABSTRACT

Parallel operation of transformer involves two or more transformers connected to carry a common load. In order that two or more transformer may operate satisfactorily in parallel it is necessary to fulfill their requirement. The requirement which need to parallel the transformer are the voltage ratio, impedance, phase sequence and also the polarity.

The aim of this paper is understudying the requirement for parallel three-phase transformer and the condition when loading with the combination of load.

To achieve this, several test has been done including polarity test, phase sequence test, open circuit test, short circuit test and load tests.

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CHAPTER 1

INTRODUCTION

1.0 Introduction

The transformer serves many purposes in an electrical power transmission and distribution system. It can step up voltages to permit large amounts of power to be transmitted over long distances with minimum losses, and then step that voltage down to user levels. They permit parts of the electrical system to be electrically isolated from other parts for safety or convenience, and allow electrical quantities to be measured or scaled proportionally. Transformers operate at very high efficiencies, use stationary, with no moving parts and are well understood.

Transformer is one of the most important elements of electric power systems.

Transformer losses could be divided into two components: iron losses and copper losses.

The transformer is probably one of the most useful electrical devices ever invented. It can raise or lower the voltage or current in an ac circuit. Furthermore, the transformer enables us to transmit electrical energy over great distances and to distribute it safely in factories and homes.

1.1 Project Overview

This project contains about the experiment and investigation of a transformer. The experiments involved are polarity test, phase sequence test, open circuit test, short circuit test and load test. For load test, resistance, inductance and capacitive bank are used in this experiment. The experiments were also done using combination of