

**LOAD BALANCING TECHNIQUE
USING SEMICONDUCTOR DEVICES**

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ABSTRACT

Load balancing system which employed diode rectifier and MOSFET inverter was presented and designed. The purpose of the this project is to shift the current from one load line to another load line of the three phase supply so that the supply would be balanced if viewed from the load side. The excess current being rectified and converted to AC using inverter with reference to the angle of the second line.

Other areas of investigation observed were the characteristics of the supply voltage and also the load voltage, the selection of the components for the above project. Finally, predicted results were verified through the experiment.

CHAPTER 1

INTRODUCTION

In current economic climate there is considerable interest in the efficient generating and transmitting (distributing) of load or power. Whereby this load being transmitted and distributed at 50 Hz or 60 Hz. It is more important to design and operate the system with highest efficiency, security and reliability.

With the development of more industrial area the demand for energy will increase from time to time. For an ideal power system, the voltage and frequency at supply point would be constant through out supply end. In normal practice these parameter should be independent of the distance and also the characteristic of the customer load. Each voltage from the main supply is designed to give optimum performance (balanced condition). However the variation in load from each line leads to the unbalanced condition to the main supply.

This project is concerned about improving the unbalanced condition of the supply due to the variations in load demands. This objectives is achieved by manipulating the unbalanced demand of the loads such that the loads would view the supply as a balanced system.