# FULLWAVE CONTROLLER RECTIFIER FOR

# WARD LEONARD SYSTEM

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ABSTRACT

Ward Leonard System which makes used of an AC drives as a prime mover for a DC generator, which in turn is used to supply a DC voltage to a DC motor. The armature voltage of the motor can be control by varying the field current of the DC generator.

Ward Leonard concept is being used for speed and position control of DC adjustable speed drives from fractional horsepower portable tools to sizes, in such application as machine tools. The limitations are imposed by the speed and horsepower capabilities of the DC motor.

The objective for this project is to improve Ward Leonard Speed Controller System by using full wave phase angle control system. The converter circuit has been designed and test successfully. The output from the project is full wave at the load.

In this works, concentrate the full wave controller to replace from Mr. Rezal done at last year. His done the half wave controller. This project focus only on the phase controlled converter systems.

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## 1.0 INTRODUCTION

The movement using dc machines to calibrate the water current sensor has been used in Jabatan Parit Dan Saliran. As a requirement for calibration purpose various velocities must be achieved through the use of Ward Leonard system.

This method has been used over the year but there is a problems in achieving constant speed.

As a result of these problems, a research was carried out by Mr. Rezal [1]. However, his work was on a single phase half wave controller to provide voltage to exciter. In this work, full load wave controller was employed.