GSM BASED ESPEC OVEN AUTOMATIC CONTROL DAMPER

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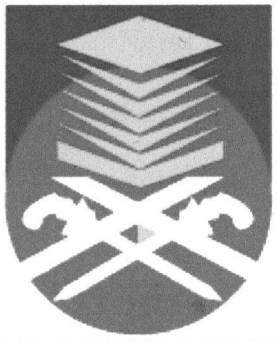

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ABSTRACT

This project presents an automatic control damper for "Espec Oven" which is widely used in the LED manufacturing plant. Espec Oven is used to cure LED autofocus. The purpose of this project is to design an automatic damper controller and send acknowledge via SMS to the operator. This project consists of several main parts based on Espec Oven in the factory manufacturer of small electronic components. The parts include a timer circuit to set maximum 4 hours to operate up to 135◦C, a SIEMENS TC35 GSM Module to send SMS or call the operator when the damper lift up automatically, and DC geared motor with encoder to lift up the damper after sufficient time 4 hours. This project able to facilitate the work of the operator in charge of the oven. By this project also, avoid finish product from the damage or over heat due to human error.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION OF THE PROJECT

Espec's Clean Ovens are used extensively for heat treatment of specimens and drying components in stringent clean air requirements of Class 5 cleanliness. This oven used to test auto-focus products on heat set temperature in an electronics factory located in Kawasan Perindustrian Pengkalan Chepa II. The factory is the Rohm-Wako Electronics (Malaysia) Sdn. Bhd. This factory engages in manufacture of diodes, resistors, and LED screens. The company was founded in 1989 and is based in Kota Bharu, Malaysia. Rohm-Wako Electronics (Malaysia) Sdn. Bhd. operates as a subsidiary of Rohm Co. Ltd. [9]

Figure 1: Espec oven

According to an in charge at the company [15] the oven will reach temperatures of 135◦C in an hour and will maintain until four hours. After four hours, the operator must lift up