

## Chapter I

## INTRODUCTION

1.1 Purpose

The purpose of this thesis is to design and construct an ON-OFF temperature controller using an NTC thermistor as a temperature sensor and to analyse the temperature control system using the constructed controller. The requirement is to control an electric oven within the temperature range of  $110^{\circ}$  to  $130^{\circ}$  C with a temperature fluctuation of not more than  $\pm 3\%$  .

1.2 Outlines of Work

The outlines of work may be summarized as follows :

- (1) Parts of a temperature control system are described and analysed in Chapter II .
- (2) Calculation method of controller design and the given oven are presented in Chapter III .

- (3) The constructed controller is shown in Chapter IV .
- (4) Experimental and theoretical results are compared in Chapter V .
- (5) Conclusion and recommendation are given in Chapter VI .
- (6) Other important informations are also given in Appendices.