HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING COURSE

DIPLOMA PROJECT

DEVELOPMENT OF A SEQUENCE CONTROL FOR TIN PLATE LITHOGRAPHY LINE USING A PLC

E/1003

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JUNE 1996

PROJECT REPORT

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Project Submitted by:
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DEVELOPMENT OF A SEQUENCE CONTROL FOR TIN PLATE LITHOGRAPHY LINE USING A PROGRAMMABLE LOGIC CONTROLLER (PLC)

In partial fulfilment of the requirements of the award
of the **DIPLOMA** of the **TECHNICAL ENGINEER**
in Electrical Engineering of the
HIGHER TECHNICAL INSTITUTE CYPRUS

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Type of project: Individual

JUNE 1996

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2539

CONTENTS

PAGES

Aknowledgements
Summary
Introduction

SECTION 1: INTRODUCTION TO PLC 1

1.0 Introduction 2
1.1 Definition 2
1.2 History of PLC 's 3
1.3 Comparison of control systems 3
1.4 Advantages of PLC 's 7
1.5 Disadvantages of PLC 's 8

SECTION 2: DESCRIPTION OF PLC SYSTEM 10

2.0 Introduction 11
2.1 The overal system 11
2.2 The CPU (Central Processing Unit) 12
2.3 The Processor 13
2.4 Input or Output Modules 14
2.4.1 Input Modules 17
2.4.2 Output Modules 17
2.5 Power Supplies 18
2.6 Programmer / Monitor (PM) 20
2.7 The Printer 20
2.8 Program Recording Devices - Tape or Disk 21

SECTION 3: PLC LANGUAGES 23

3.0 Introduction 24
3.1 PLC Languages 24

PAGES

3.1.1 Ladder Diagrams (Ladder Logic) 24
3.1.2 Boolean Language Programming 26
3.1.3 Code Language 26
3.2 Programming Instructions 26
3.3 Program Files 28
3.4 Data Files 28
3.4.1 Data Files Types 28
3.4.2 Data Table 29
3.5 Memory Organisation and Addressing 30
3.6 Bit Addressing 31

SECTION 4: BASIC FUNCTIONS OF PLC 33

4.0 Introduction 34
4.1 Relay Logic (Bit) Instructions 34
4.1.1 Bit Examining Instructions 35
4.1.2 Bit Controlling Instructions 35
4.2 Timer and Counter Instructions 36
4.2.1 Timer Instructions 37
4.2.2 Counter Instructions 39
4.2.3 Reset Instruction (RES) 40
4.3 Comparison Instructions 41
4.3.1 Equal 41
4.3.2 Not Equal 41
4.3.3 Less Than 41
4.3.4 Less Than or Equal 42
4.3.5 Greater Than 42
4.4 Compute and Math Instructions 42
4.5 Move and Logical Instructions 43
4.6 Bit Shift Instructions 44

PAGES

4.7 Sequencer Instructions 45
4.8 Control Instructions 45
4.9 Other Advance Functions 47

SECTION 5: AN APPLICATION SCHEME 48

5.0 Introduction 49
5.1 Curcuit Construction Planning Steps 49
5.2 Program Requirements 50
5.2.1 I/O Addressing 54
5.2.2 Ladder Diagram of Program 56
5.3 Explanation of the Program 64

SECTION 6: COSTING 69

6.0 Introduction 70
6.1 Costing of Project 70
6.2 Comparison with Conventional Methods 71
6.3 References 72

APPENDICES 73

ACKNOWLEDGEMENTS

I would like to express my appreciation to my project supervisor Mr E. Micheal for his guidance and aid during the project.

Furthermore I would like to thank Mr J. Pampouris for his valuable contribution during the preperation of this project.

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SUMMARY

TITLE: Development of a Sequence Control for Tin Plate Lithography Line using a Programmable Logic Controller (PLC)

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The report investigates the programming capabilities of a "ladder language". It also examines the characteristics and capabilities of Programmable Controllers. Then the development of an application program using the programmable controller for the main control panel of a factory is made.

The application program is based on the Allen-Bradley SLC 500 Programmable Controller's instruction techniques and the PLC of the H.T.I.

INTRODUCTION

The main objective of this project is to develop an application program using the programmable controller for the main control panel of a factory.

For this reason a "ladder diagram" was constructed using the "ladder language".

This report also gives an overall discription of the Programmable Logic Controler (PLC's) as far as their characteristics,capabilities and programming are concerned

The whole project consists of six (6) sections , each one divided into subsections.

Section 1 is an introduction on PLC's. The definition , history , advantages and disadvantages of PLC's are described in this section.

The components and modules that make up a PLC system are described in Section 2. A brief idea about the internal operation of the PLC's is given here.

Section 3 and 4 explain the programming languages, and especially the Ladder diagram language. Also the basic PLC action is analysed.

The actual case study problem and the explanation of the ladder PLC program , rung by rung , is the objective of Section 5.

Costing and comparison with conventional methods is provided in Section 6.

The main objective of this report is to give a basic knowledge on PLC's and their applications. Furthermore it provides the reader with the basic information in order to deal with certain applications and give the explanation of the program and an overall costing of the system.