

HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING COURSE

DIPLOMA PROJECT

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

E/1003

BY: CONSTANTINOU CHARALAMBOS

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# PROJECT REPORT

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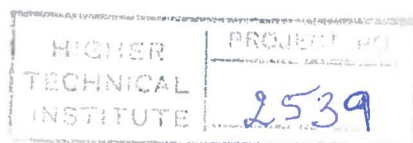
**DEVELOPMENT OF A SEQUENCE CONTROL  
FOR TIN PLATE LITHOGRAPHY LINE USING  
A PROGRAMMABLE LOGIC CONTROLLER (PLC)**

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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## 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.