

HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DEVELOPMENT OF A SEQUENCE CONTROL
FOR A SILO CEMENT SYSTEM USING
PROGRAMMABLE LOGIC CONTROLLER

E/1155

PAPAYIANNIS YIANNAKIS

JUNE 1998

HIGHER TECHNICAL INSTITUTE

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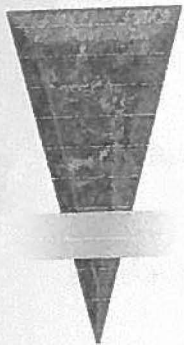
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HIGHER TECHNICAL INSTITUTE	PROJECT NO. <i>2890</i>
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PROJECT REPORT

Project submitted by:
PAPAYIANNIS YIANNAKIS

DEVELOPMENT OF A SEQUENCE CONTROL FOR A SILO CEMENT SYSTEM USING PROGRAMMABLE LOGIC CONTROLLER

In partial fulfillment of the requirements of the award
of the **Diploma of the Technician Engineer**
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Lecturer in Electrical Engineering, H.T.I.

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This book is dedicated to my family.

Preface

This book concerns the philosophy of a Programmable Logic Controller. It will explain the operation of PLCs and show their applications in modern industry.

Chapter 1 is an introduction to the basic concepts of a PLC. It outlines the historical development of PLCs throughout the years and shows their advantages and disadvantages.

Chapter 2 deals with the PLC architecture and internal operation. The various parts of a PLC such as the processor, input and output modules are described here.

Chapter 3 outlines the PLC programming languages. The Ladder Diagram language is extensively reported, since it will be applied in the project.

Chapter 4 cover the basic functions of a PLC and analyse how the instructions, of Ladder Diagram Language, are executed.

Chapter 5 introduce the requirements for the project and indicate the address allocation of the program.

In chapter 6 the ladder diagram is explained in detail rung by rung.

Finally chapter 7 is deal with the costing of the project using the SLC 500. The use of PLCs instead of conventional relay panels minimise the cost of the project.