HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DESIGN OF THE ELECTRICAL INSTALLATION OF A FACTORY

E / 1048

BY: ANDREOU KATERINA

JUNE 1997

DESIGN OF THE ELECTRICAL INSTALLATION OF A FACTORY

Project report submitted by:

ANDREOU KATERINA

In part satisfaction of the award of Diploma of Technical Engineer in Electrical Engineering of the Higher Technical Institute, Cyprus.

Project Supervisor: **E. Michael**

Lecturer in Electrical Engineering

Department, H.T.I.

JUNE, 1997

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation and thanks, for their valuable help and guidance to prepare this project to:

a. My project supervisor Mr E. Michael lecturer in Electrical Engineering in H.T.I.

b. Yioula Kalorkoti who typed this project.

CONTENTS

APPENDIX 2: Overload relays

2.1. Technical tables

APPENDIX 3: Circuit breakets

3.1. Technical tables

APPENDIX 4: Earthing arrangements

4.1. Systems of Earthing

APPENDIX 5: Fire alarm systems

5.1. System 1002

5.2. Break - Glass Callpoints

5.3. Audible Alarm devices

5.4. Smoke detectors

5.5. Design and Installation limitations of smoke detectors

5.6. Design and Installation limitation of heat detectors

GENERAL INFORMATION

This project report is about,

The design of the Electrical Installation of a clothing factory.

Objectives:

(1) To design the complete electrical installation of a factory.

(2) To study the illumination engineering work involved and determine the lighting load of the factory accordingly.

(3) To provide all necessary diagrams schedule of materials and costing including labour.

(4) To design a fire alarm system.

Terms and Conditions:

(1) Voltage 415/240V, 50HZ

(2) Details of the plan layout of the factory together with details of load will be provided.

(3) CIBS code will be considered in calculating levels of illumination.

(4) The Cyprus Fire Brigade recommendations will be taken into account, for the fire alarm design work.

(5) The Cyprus Fire Bridge recommendations will be taken into account, for the fire alarm design work.

INTRODUCTION

The design of the electrical installation of this Clothing factory is based on the 16th Edition of the I.E.E. regulations.

The earthing system of supply is the TT system.

CHAPTER 1:

It deals with the illumination work and the lighting load calculations.

The Lumen method of design is used for the calculation of the number of luminaires to be installed in the factory.

All the final results are shown in a table form.

CHAPTER 2:

It deals with the socket load calculations. All the final results are shown in a tble form.