

DESIGN OF THE ELECTRICAL SERVICES OF A FACTORY

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In part satisfaction of the award of diploma of engineer in electrical engineering of the Higher Technical Institute, Cyprus.

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ABSTRACT

Summary

This project "the design of the electrical services of a factory" deals with the electrical installation of a foundry factory.

The main objectives are:

1) To design the complete electrical services for a specified factory which will include the following:

- a) Fire alarm system.
- b) Telephone installation and internal communications.
- c) Power factor correction.

2) To study the illumination engineering work involved.

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

In carrying out the design the IEE wiring Regulations 16th edition, E.A.C's. and CYTA's requirements were taken into account.

INTRODUCTION

The main purpose of this project is to carry out electrical installation design of a furniture factory. The whole installation is based on the 16th edition of the IEE Regulations.

Chapter 1 ✓

It deals with the illumination work. The "Lumen method" of illumination design is used for the calculations of the number of luminaries to be installed in the factory. The final results are shown in a table form.

Chapter 2 ✓

It deals with the lighting load calculations. The final calculation results are shown in a table form.

Chapter 3 ✗

It includes the electrical installation. In this chapter you can see requirements of an electrical installation.

Chapter 4 ✓

It includes the socket outlet load calculations. The final calculation results are shown in a table form.

Chapter 5 ✓

It deals with the machines load calculations. The final calculation results are shown in a table form.

Chapter 6 ✓

It includes the fire alarm system.

Chapter 7 ✓

It includes the telephone installation and the internal communication of the factory.

Chapter 8 ✓

It deals with the earthing of the factory.

Chapter 9 ✓

It deals with the distribution board and supply cables of the factory. The final calculation results are shown in a table form.

Chapter 10 ✓

It includes the fault level calculations.

Chapter 11 ✓

It includes the power factor correction.

Chapter 12 ✓

It includes the schedule of material cost, including labour costs

Chapter 13 ✓

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ACKNOWLEDGEMENTS

ABSTRACT

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