

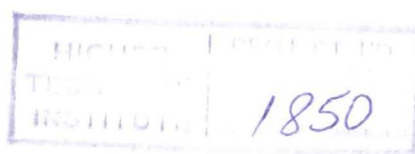
D E S I G N   O F   T H E   E L E C T R I C A L  
I N S T A L L A T I O N   O F   A   H O T E L

P R O J E C T   R E P O R T

submitted by Hadjichristodoulou Christakis  
in part of satisfaction of the award of Diploma of Technical  
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Type of Project : Individual



# A B S T R A C T

What it has to be done in the present project is the electrical installation of a hotel

The project is divided into 5 Chapters , 2 Appentices and the Drowings

The 5 Chapters are :

## 1. Illumination:

In this chapter the number of fitting is estimated . Also the types of luminaires and lamps used for every one of the hotel areas .

A typical calculation is done for the hotel's kitchen . All the others areas result are shown in table 1.1 .

## 2. Electrical Installation Design :

In the second chapter all the sizes of cables, MCBs and conduit runs used in the installation are calculated. Typical calculation is done for one lighting cct, one ring cct for socket outlets , for the refrigerator, and one for the motor of the elevator .

All the other sizes and ratings for the rest ccts are calculated and shown in tables 3.1 in Chapter 3

## 3. Distribution Boarts And Supply Cables :

For this chapter all the calculations necessary are made. One typical example for the distribution board DB A (typical's floor DB) is shown. In tables 3.1 that are follows all the sizes of the conductors and MCBs ratings are shown.

## 4. Earthing :

Chapter 4 shows the systems and methods of earthing. Also the importance of earthing is described.

## 5. Inspection And Testing :

In this chapter all the necessary information about the inspection and testing of the installation are written.

The two appentices are refered respectively to the first two chapters.

<p>CHAPTER 1 : ILLUMINATION</p> <p>-----</p> <p>1.1 Introduction</p> <p>1.2 Symbols Used In Illumination Design</p> <p>1.3 Definitions Used In Illu. Design</p> <p>1.4 The Lumen Method of Design</p> <p>1.5 Light Sources</p> <p>1.6 Flicker And Stroboscopic Effect</p> <p>1.7 Glare</p> <p>1.8 Typical Illumination Calculation</p>	<p>1</p>
<p>CHAPTER 2 : ELECTRICAL INSTALLATION DESIGN</p> <p>-----</p> <p>2.1 Circuits design procedure</p> <p>2.2 Typical Calculation for lighting cct.</p> <p>2.3 Typical Calculation for socket outl.</p> <p>2.4 Typical calculation for same electical equipments                                            (a) Refrigerator                                            (b) Elevator's motor</p>	<p>19</p>
<p>CHAPTER 3 : DISTRIBUTION BOARDS AND CABLE'S SIZING</p> <p>-----</p> <p>3.1 Introduction</p> <p>3.2 Design of the distribution boards</p>	<p>35</p>
<p>CHAPTER 4 : EARTHING</p> <p>-----</p> <p>4.1 Introduction</p> <p>4.2 Types of systems of earthing</p> <p>4.3 TT System</p> <p>4.4 Earth fault loop impedance</p> <p>4.5 Bonding</p> <p>4.6 Methods of earthing</p>	<p>65</p>

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- 5.1 Introduction
  - 5.2 Visual Inspection
  - 5.3 Testing
  - 5.4 Continuity of ring final circuit conductors
  - 5.5 Continuity of protective conductors
  - 5.6 Insulation Resistance
  - 5.7 Polarity test
  - 5.8 Operation of the residual current operated protective device

APPENDIX 1 : ILLUMINATION

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APPENDIX 2 : ELECTRICAL INSTALLATION DESIGN

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DROWINGS

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