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DESIGN OF FIRE AND INTRUDER ALARM SYSTEM FOR A BUILDING

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Project Report

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SUMMARY

ANTONIOU STYLIANOS
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A security system in a building has to do with the protection against fire and intrusion. So, a security system consists of a fire and burglar alarm system.

In the case of fire, the system must provide an early warning of fire and also to provide quick attack for the extinction of the fire. In this study, some areas of the building are protected by a fire fighting system. These areas have valuable things so an immediate extinction of fire is provided.

In the case of an intrusion, the burglar alarm system used, is provided in such a way that there is no possibility of entrance in the building. The system is separated into zones in order to know in the case of intrusion, from what area the intrusion took place.

This study includes details about the planning, design and construction of the three systems as well as details for the various equipment used. Also, inspection procedures are found for all systems and their analytical costing.

All these systems are designed and installed according to British Standard regulations. By following these regulations we come to the conclusion that the building is effectively protected against fire of intrusion. Also, due to the high cost of such systems the equipment used must be installed only where they are strictly necessary.

INTRODUCTION

Technology is nowadays very important for the human life. Many people have affected by the expansion of technology and improved their way of living. One of the many fields that technology has expanded is safety. So, burglar alarm and fire alarm systems as well as fire fighting systems have been introduced so as to cover the need for safety in our world.

In many countries, for example England, these systems are very popular and need to be installed almost everywhere. This start to happen also nowadays in Cyprus where such systems have a great demand. In the past years such systems were installed only in banks but now they are installed in companies, factories, schools and even shops.

A burglar alarm system can be defined as an electrical installation to detect and indicate the presence, entry or attempted entry of an intruder into protected premises.

A fore alarm system may be installed in buildings in order to satisfy several different needs. It may be installed for the protection of property or for the protection of life. In some applications, it may be installed to meet a mixture of purposes, either simultaneously or differing in time or place.

A fire fighting system is installed in areas where valuable things are found so as to extinguish the fire quickly and save the areas.

All these systems are installed according to the British Standard regulations. All systems are connected to an auto-dialer which informs the police and the fire brigade for the case of an intrusion or fire.

The equipment specification is very important. It is in the interest of the designer, installer and user to ensure that the equipment, selected is fit for its purpose and fully compatible. The first step is to select, where possible, equipment that complies with its British Standard specification. Moreover, it should be realised that compatibility of equipment is more easily achieved when it is all made by the same manufacturer.

Many parties are likely to have an interest in a fire and burglar alarm system. So, those who should be consulted before the design is finalised may include:

a) the system installer,

b) the health and safety executive,

c) the fire and burglar insurer,

d) the local fire authority,

e) the police, and

f) the consultants.

For the private building concerned in this design, some assumptions have been made by the designer due to the absence of any other interested parties. The important thing was to have a good and practical design, as close to reality as possible.