DESIGN OF AN AIR CONDITIONING SYSTEM

FOR A BLOCK OF FLATS

Project Report Submitted by

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SUMMARY

The purpose of this project is the design of an Air Conditioning System for a block of flats in Nicosia.

Energy conservation was considered to be of major importance in the design of the system.

Architectural drawings for the building were provided and enviromental data of Nicosia for the whole year were incorporated in the Computer Program.

This project can be separated into three main parts.

The first part deals with the calculation of the thermal load of the building for heating and cooling. The procedure was based on a computer program provided by CARRIER, which was based on the actual theory of heating and cooling loads estimation.

The second and longest part deals with the actual solution of this project. The equipment and pipe sizing was carried out after the system selection. Then, the machinery was selected as an example from manufacturers catalogues as well as the proposed detailed installation drawings where necessary.

In the last part, guidelines of typical maintenance scheme for the major parts of the system were provided. Finally an estimated cost analysis of the system to be employed was performed.

A complete set of mechanical drawings were prepared showing the air conditioning system layout.

The whole project is divided into 9 chapters.

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