HIGHER TECHNICAL INSTITUTE

MECHANICAL ENGINEERING COURSE

DIPLOMA PROJECT

DESIGN OF A SOLAR HOT WATER SYSTEM FOR A BUILDING

M/892

BY: AGATHONOS SAVVAS

JUNE 2000

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Project Report

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INTRODUCTION

21st century has arrived with human beings reaching to an incredible technological evolution, which feel being its raw material.

The usage of these raw materials, fuels causes serious destruction on earth's environment and of course to human beings.

Also there is a thread of the fuel shortage. So people have started using new sources of energy as raw material.

Such a great source of energy is the Sun Solar energy, is for free and it is plenty. More over it does not cause environmental destruction. The sun is not just a source of energy but is identified as a source of life.

Human beings have used sun from the time of their existence but not in such a great degree. The past few years engineers and scientists have known that solar radiation, is an extremely important source of energy so they have started concentrating on how to collect, store and use solar radiation.

Effective ways were found out to collect and store the energy of the solar radiation. In order to collect these solar radiation the most effective way currently used is called "collectors". There are a lot of type of collectors but are very simple to construct and are made such a way as to collect as much solar radiation as possible for storage and further use.

Countries with a lot of Sunshine use the solar radiation for domestic uses. The collection of the solar radiation is done generally with flat plate collector to heat water for domestic use or to heat air for heating a space.

Another great category of collector, are the concentrating collectors. They are used in order to produce power and run the generator to produce electricity and not to use it from the EAC. Also does not causes pollution at the environment.