HIGHER TECHNICAL INSTITUTE

MECHANICAL ENGINEERING COURSE

DIPLOMA PROJECT

DESIGN OF A SOLAR HEATING SYSTEM FOR A HOUSE

M / 878

BY: GOGAKIS CHRISTOS

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DESIGN OF A SOLAR HEATING SYSTEM FOR A HOUSE

BY: Gogakis Christos

Project Report

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Gogakis Christos

PROJECT NUMBER: M/878

TITLE: 'DESIGN OF A SOLAR HEATING SYSTEM FOR A HOUSE'

Objectives:

1. To calculate the heat requirements for space heating and hot water services for the house.

2. To design a suitable system for the collection and storage of low temperature solar energy to satisfy the heat requirements of the building.

3. To determine the optimum size of the solar collector, storage unit, pumps, piping and other equipment and accessories involved in the system, including all necessary instrumentation and controls.

4. To prepare detailed drawings showing clearly the system layout and components.

5. To conduct a cost estimate and compare it with that of a conventional heating system without solar.