HIGHER TECHNICAL INSTITUTE

MECHANICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DATA ACQUISITION AND CONTROL USING A PERSONAL COMPUTER

M / 887

BY

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JUNE 2000

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Project Report

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in

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Dedicated to

F. Athanasios

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SUMMARY

DATA ACQUISITION AND CONTROL USING A PERSONAL COMPUTER.

Project Supervisor: Dr. Polyvios Eleftheriou.

The objective of the project is to assemble a complete Data Acquisition and Control system. A system that can acquire data from external environment, process them and take control action accordingly.
An overview of the characteristics of such systems and the related technology is presented in chapter one of project.
The second chapter deals with the specific system used in the case of this particular application and its accessories. It also demonstrates the software used to communicate with the devices and the way that this occurs.
It continuous with the integration of the DAcq & C system with the custom application. In the case of this project it is the control and performance test of the CUSSONS Laboratory turbine.
The calculations and formulas needed to derive the thermal efficiency are included within the fourth chapter.
The project ends with a short comment and discussion on the results of the final setup.