

**HIGHER TECHNICAL INSTITUTE
MECHANICAL ENGINEERING DEPARTMENT**

DIPLOMA PROJECT

**A FEASIBILITY STUDY ON THE INTRODUCTION
OF CAD/CAM IN METAL INDUSTRY**

By

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JUNE 1996

Delicated to
my family and
my country

A FEASIBILITY STUDY ON THE INTRODUCTION OF
CAD/CAM IN METAL INDUSTRY

by
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Project Report

Submitted to the Department of Mechanical Engineering

of the Higher Technical Institute

Nicosia Cyprus

in partial fulfillment of the requirements

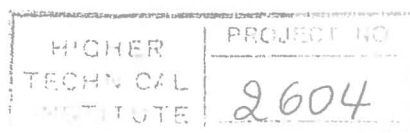
for the diploma of

TECHNICIAN ENGINEER

in

MECHANICAL ENGINEERING

June 1996



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Acknowledgments

I would like to dedicate this project to the memory of my supervisor Mr. Marios Pattichis.

I would like to thank Mr. L.Lazari , Mr. P.Demetriou ,and any one helped me in this project.

I also thank Melina and Constantinos for helping me with the printing.

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Project number : M/763

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Summary

The main objective of this project was to introduce the subject of CAD/CAM in metal industry.

For understanding the technical aspects of CAD/CAM the computer technology (hardware and software) and peripherals were investigated as a part of CAD.

In the side of manufacturing some automated machines , drives, and different operations which can be used in CAD/CAM were necessary to be explained.

It was also have been discussed the effects of productivity and the changes that might be done to the manufacturing firm.

At the end of the project a particular firm was selected for describing it's design and manufacturing operations , identify an area which a CAD/CAM system should be introduced and make a feasibility study.

INTRODUCTION

In some areas of metal industry the process of machining components and parts was done by hand tools or manually operated machines.

In the last 35 years the technology has risen to a level that computers and modern machines have been introduced in different areas of industry and manufacturing plants.

Systems that are used to simplify the work and introduce automation in industry are the CAD/CAM systems. CAD/CAM systems are used for different purposes but have a lot of advantages but and disadvantages too.

For a company to install such a system it must make a feasibility study to see if ~~is really needed~~ a CAD/CAM is really needed and what profits the company will make by the use of it. ✓

Unfortunately for the employees sometimes the replacement of the human factor in some areas is not acceptable because one of the purposes of CAM/CAM is the reduction of manpower in the drawing office and the production line.

The technology of CAD/CAM systems has improved with time and provides more capabilities and the applications in many sections of industry are getting wider. The main purpose for a company to use a system is the increase of its productivity and its profit and for doing jobs that are difficult to perform.