

## COMPUTER AIDED DESIGN OF SAND CASTINGS

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In partial fulfilment of the requirements  
for award of the Diploma of Technician Engineer  
in Mechanical Engineering of the  
**HIGHER TECHNICAL INSTITUTE, CYPRUS.**

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Type of project : Individual

June 1994



## INTRODUCTION

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Since the first foundry center came into being, in the days of the Shang dynasty (1766-1122 B.C.) in China, metal casting has traditionally been an art and a craft with secrets of the trade passed jealously from father to son. Only in the last century have science and engineering made noticeable inroads on the materials and processes of the foundryman. But casting will always be one of the most economical routes from raw material to finished metal products, and it was inevitable the art of the founder would yield to the economy and precision of the engineering approach.

The traditional method of preparing a mould, involves making a model or 'pattern' of the article which is to be produced, and forming the imprint of this pattern in a mouldable plastic material.

The material often consist of a specially prepared sand. The use of 'cores' has considerably extended the field of casting in sand moulds.

This project is concerned with the 'Computer Aided Design of Sand Castings' for the batch production of Malleable Iron 'Manhole Steps' in accordance with BS 1247: Part 1:1990.

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