HIGHER TECHNICAL INSTITUTE

MECHANICAL ENGINEERING COURSE

DIPLOMA PROJECT

DESIGN OF DIES FOR A DEEP DRAWING OPERATION

M/902

BY: SAVVAS PETRIDES

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Project Report

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Preface

The purpose of this project is to design dies for a deep drawing operation. This means the creation of a series of methods and calculations for producing a product. The product selected is a shaker most commonly used in bars for mixing drinks. The shaker is made of metal, in specific stainless - steel and it consists of three different parts, which are tightened together for further use.

To be able to construct the dies for producing this product it is essential to follow a series of calculations that will provide the necessary information for the design of dies and also a proper selection of a press machine. The calculations required are for determining the blank diameters, the number of draws, the maximum force of all processes, etc. Some of the processes required for the manufacture of this product are blanking, piercing, deep drawing, trimming and rolling.

Some further research is done for the selection of work material as well as the die material.

The conclusions of the report are about the methods used for producing cans of different shapes, mostly conical, the methods of designing a die and also the methods for selecting a press machine.

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