

COMPUTER AIDED DESIGN OF

RIVETED JOINTS

by

Christou Christaki

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 1994



ACKNOWLEDGMENTS

I would like to express my sincere thanks and appreciation for the help and guidance given to me throughout this project , by my supervisors Mr. P. Demedriou and Mr. P. Tramountanellis , who were always most eager to me , and gave me their valuable advice and comments .

I also like to express my sincere thanks and appreciation to any other person who in any way facilitate my way through the project .

SUMMARY

The purpose of the project mainly is to produce a program to work on the design of riveted joints .The program was done on Visual Basic which is a new approach on programming (at our times since computers are developed all the time and more) . A listing of the program can be seen in the project .

A flowchart is showing in general lines how the program is developed , and the logic behind it .In the flowchart there can't be seen how all variables are changing because of its complexity .

The program does not cope with all case of riveted joints although it covers most of them .

Also the theory behind of rivets and riveted joints is represented .

C O N T E N T S

Acknowledgment	I
Summary	II
Introduction	III

<u>CHAPTER 1</u>	Page
1.1 Introduction	2
1.1.1 Rivets	2
1.1.2 Types of rivets	3
1.1.3 Rivet material	4
1.2.1 Types of rivets	5
1.2.2 Hole clearance	5
1.2.3 Hot riveting	6
1.2.4 Cold riveting	7
1.2.5 Types of riveted joints	8
1.2.6 Advantages/Disadvantages	9
1.2.5 Uses	10
1.3.1 Riveted joints loaded in shear	11
1.3.2 Centroids of rivet groups	14
1.3.3 Eccentric Loading	15

CHAPTER 2:

2 Flowchart	18
-------------	----

CHAPTER 3:

3.1 Need	22
----------	----

3.2	How to enter the program	22
3.3	Riveted joint environment	22
3.4	Start a new application	24
3.5	View the results	26
3.6	View various setting	26
3.7	Print results	26
3.8	Exit riveted joints	26
3.9	Get help	26

Appendices

References