



FINAL YEAR PROJECT REPORT

DIPLOMA IN MECHANICAL ENGINEERING
Mara University Of Technology
Shah Alam
Selangor Darul Ehsan

SOLID SHAFT DESIGN USING COMPUTER AIDED ANALYSIS

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APRIL 2001

ACKNOWLEDGEMENTS

We wish to acknowledge and express our sincerest thanks to our supervisor, Assoc. Prof. Ir. Dr. Hj. Abdul Rahman Omar for his supervision, encouragement, suggestions and help throughout this project, especially turning ideas to reality. His prompt comments and valuable recommendations have helped in the preparation of this project, also made helpful suggestions for improving the original report.

I also wish to express our thanks to our honorable lecturer, Ir. Dr. Wahyu Kuntjoro, Encik Ahmad Kamil Hussain, Puan Norhapiza Mohd Ariffin and Encik Mohd. Azam Ismail from company of Teliti Sdn. Bhd. for sharing their vast experience and knowledge that has made our project workable. Also to all our colleagues of November 1997 batch, who deserve our thanks for their help and co-operation. Our appreciation to those who have directly or indirectly contributed in the preparation of this project.

Not forgetting to AA2217 Computer Laboratory Technician, Encik Ziyadi Zamri for his full co-operation and effort for giving us a lot of facilities in the computer lab.

Finally, we wish to express our love to our families for their encouragement moral and financial support. May Allah bless all of you.

ABSTRACT

Nowadays, computer analysis has become the important process towards globalization of technology especially in engineering application. One of the important parts in using computer analysis is engineering design process, which is required to produce very precise product. This project describes the shaft design process, which usually occur in any designed product or construction using Visual C++ programming. Shear, bending moment, and torsional moment will be considered in the analysis to determine the required diameter or optimum diameter would be determined that depends on the material and the loading required. Factor of safety is also considered in the analysis. The project will produce a fully computerized product seems like a programmed model or software that could be use by users to design shaft using any materials and one type of loading which is the concentrated load. This software can be upgraded and maximize its functions by program more type of material and loading.

The value of the software is demonstrated through two case studies.

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