FINITE ELEMENT METHOD (FEM)
APPROACH TOWARDS COMPOSITE MATERIAL

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A thesis submitted in partial fulfillment of the requirements for the award of Bachelor Engineering (Hans) (Mechanical)

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MARCH 2002

ACKNOWLEDGEMENT

In the name of ALLAH, The Most Beneficent and Merciful

I am very grateful to ALLAH for giving me strength and ability to complete this project. May this project give benefits to other students and including myself. I wish to express my gratitude and appreciation to my project advisor En. Jamalludin and my co-project advisor En. Yakub Md. Taib for giving me guidance and support from the beginning to the end of this project.

I would also like to convey my appreciation to all the staff members of Mechanical Engineering Department especially En. Ziadi, for his support and cooperation.

Also my appreciation goes to my project associate En. Kassim bin Zakaria, who has helped me directly or indirectly in completing this project. Finally, I would like to express my gratitude to my parents, En. Nordin bin Abu Bakar, Puan Nooriah bte. Abdul Aziz and family members for their support and encouragement for me in completing this project and though my undergraduate course, here in UiTM. Above all, my greatest thanks to ALLAH s.w.t for giving me good health, strength and the trait of patience that is instrumental in accomplishing this final year project.

ABSTRACT

The objective of this project is to examine the behavior of composite under uniformly distributed loading on the top surface in the z-direction. The analysis of these elements consists of stress, strain and the displacement. There were two methods that have been used to examine these elements, which were theory and finite element method. LUSAS software has been used to associate with the finite element method. In finite element method it self, we consider two type of model to be analyzed. Which were 2-dimensional and 3-dimensional analysis. First type we obtain the result from quarter model and second type from full (real) model. Unfortunately the FEM results tabulated a significant percentage of errors. Therefore, more read-up was accumulated to signify possible reasoning for the percentage errors that kept occurring. (% Errors is the difference of value of the FEM displacement and the theoretical values the thesis by J.N. Reddy & A.K. Pandey, " A First Ply Failure Analysis of Composite Laminates")

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