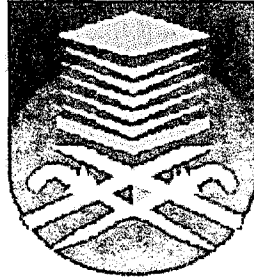




DESIGN OF TEST FIXTURE FOR HIGH CYCLE  
FATIGUE TEST OF FIBER-REINFORCED  
COMPOSITE LAMINATES

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SEPTEMBER 2002



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TEST OF FIBER-REINFORCED COMPOSITE LAMINATES**

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

**Faculty of Mechanical Engineering  
University Teknonogi MARA (UiTM)**

**SEPTEMBER 2002**

## **ACKNOWLEDGEMENT**

In the name of Allah, the Most Gracious, the Most Merciful

Alhamdulillah, 'His' willing has made it possible for me to complete my final project successfully. Here, I would like to gratefully acknowledge the contributions of several people who have directly or indirectly involve during our research.

Firstly, I would like to convey my greatest sincere gratitude to my project advisor, En. Yakub b. Md. Taib which has contributed immensely towards the completion of my final project. He has spent his time patiently, guidance, advises, supporting and gain me with a lot of knowledge.

Secondly, deep appreciation to all Mechanical Engineering Laboratory staff especially to En. Baharum b. Abdullah (Manager), which had give permission for me to used the Laboratory after office hours. I would also like to convey my heartfelt gratitude to En. Khalili B. Mat Som (Dynamic Lab Technician), En. Abu (Strength Lab Technician) and En. Ayub (Material Science Lab Technician) for their collaboration and support really helped me to fulfill my research's requirement.

Last but not least, to all colleagues and my families for being understanding and encouraging me a lot. Thank you very much. Also not forget to everybody who are together to ensure the successful of this project.

**May Allah Bless All Of You.**

**Wassalam.**

## ABSTRACT

Residual strength of polypropylene epoxy laminated subjected to three frequencies of 30, 50 and 70 Hz and at various cycles were studied. Test rig was specially designed to accommodate a composite type specimen.

Composite type of specimens configuration were used throughout the study in the fatigue test conducted by which the specimen is fixed at one end and subjected to fluctuating load at the free end. Maximum amplitude subjected at the free end was 1.5 mm from the initial position (Zero load). This provides a maximum applied stress at the end which about 10.95 Mpa.

The composite type specimen were then will undergo to tensile test. The purpose of this testing is to determine the maximum stress of the composite while at the same time to find the modulus of elasticity of the composite. From the results achieved, hence the relationship between the modulus and frequency could be gathered.

The composite type specimen that have been fatigue and tensile were then be observed by means of using image analyzer to find out if there have any damage occurred while subjected to the frequency as mentioned above.

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