



**FABRICATION AND EXPERIMENTAL INVESTIGATION ON FILAMENT
WOUND COMPOSITE**

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ABSTRACT

The project of “Fabrication and Experimental Investigation on the Filament Wound Composites” has been carried out by the final year student of Bachelor Engineering (Hons) Mechanical under supervision of Dr. Zahurin Halim. The purpose of this project is to understand and fabricate the filament wound composite (FWC) using the filament winding machine and also to do experimental investigation on the specimens fabricated. The experimental investigation consists of tensile test and constituent content experiment. The project has started with reading, collecting and gathering information process through several sources like books, journals, Internet and also by referring to lecturers and other experts. The fabrication process has been done in International Islamic University of Malaysia (IIUM) using the filament winding machine which has been fabricated earlier by Puan Zuraidah Ahmad a mechanical engineering lecturer in IIUM. The fabrication process used fibre glass and epoxy resin as raw materials. The tensile test has been done at the Strength Laboratory in Universiti Teknologi MARA (UiTM) Shah Alam which supervised by Mr. Ziyadi Zamri the staff of strength laboratory using the Instron tensile test machine. After completed the tensile test, the specimens had undergone the constituent content experiment. This experiment has been done in “Makmal Penyelidikan Sains” in Universiti Teknologi MARA (UiTM) under supervised by Puan Faizah Mohd Salleh as one of the researchers there. After all the test and experiment completed, the calculation to find the tensile strengths and the properties of the specimens started. All the results obtained were then compared to the journals for validation purposes.

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