



**STUDY ON TENSILE AND FLEXURE
PERFORMANCE OF HYBRID COMPOSITE**

**ABD. HALIM BIN ITHNIN
(99191254)**

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**Faculty of Mechanical Engineering
Universiti Teknologi MARA (UiTM)**

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ABSTRACT

The purpose of this project is to determine the tensile and flexure characteristics of five types fibre reinforced polymer composites. There are (a) Kevlar/E-glass Woven Cloth Mat (KECM390/200), (b) E-glass Chop Strand Mat (CSM300), (c) E-glass Chop Strand Mat (CSM400), (d) E-glass Woven Roving, (e) PVC Airex Linear Foam Core (R63.150SC-12). These materials are used in Marine industry for their good, low density, high strength and ease of maintenance.

The samples are prepared by hand layout technique and the samples were then machined for the tensile and flexure tests. Microstructures were also made to determine the predominant failure mechanism using an image analyser.

From this project, the basic mechanical properties and failure mechanism of the material have been understood and these findings are useful for the manufacturer of the products.

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