

SESG6039 – Composites Engineering Design and Mechanics

Individual Assignment 2

Introduction

The assignment is based on analysis of the test results provided in the laboratory class folder on Blackboard for both the pre-preg and the infused materials and some additional materials tested for comparison. Properties of the materials and the stacking sequences of the materials can also be found on Blackboard.

Report

Submit a short report of no more than 2000 words that:

- Describes the tensile testing procedure and associated analysis procedure of the results.
- Determine the actual ply thickness (from the measurements given in the results folder) for the laminates tested and using your CLPT code, predict the theoretical values of E_x and E_y .
- A table with the tensile properties obtained experimentally for (E_x , X_t and ϵ_{tx}) for both the infused and pre-preg laminates, with a discussion on variability and why the values are different based on the manufacturing process.
- A graph comparing a typical stress-strain relationship from each of the laminates tested in tension.
- Discuss the causes of any differences between the calculated and experimental obtained values.