

Determination of 'Pressure Application Window' (PAW) for the Vacuum Enhanced Resin Infusion Technology (VERITy) Process

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Abstract

Vacuum Enhanced Resin Infusion Technology (VERITy) is a hybridization of the Vacuum Assisted Resin Transfer Moulding (VARTM) and the autoclave molding processes. In this technique, innovative tooling concepts have been adopted and more importantly, an external pressure is applied at an appropriate time, after infusion has been completed. The application of external pressure ensures uniform consolidation, optimum fiber content, and low void content in the laminates. In the present study, a systematic approach has been taken to determine the pressure application window (PAW) for the RTM 120 resin system. Viscosity measurements, dielectric measurements and squeeze flow experiments were employed to determine the PAW. Parameters of void content and interlaminar shear strength (ILSS) have been chosen to evaluate the PAW determined.