Abstract

Composite materials are on high demand in recent days amongst high performance products that need to be strong enough in severe loading conditions. It can be developed with a suitable combination of matrix and reinforcement materials to meet the requirement of specific applications. The present work attempts to form composite plates using a combination of natural polymers and fibers to improve certain properties. The focus is to develop a biodegradable composite of comparable properties with those available commercially. The formed plates are tested to determine different mechanical properties such as tensile strength, impact resistance, hardness etc. The thermal parameters are also determined by DSC (Differential scanning calorimetry) test. A finite element analysis is conducted and the results have been compared with Graphite epoxy composite for checking the effective use of this material.

References


Index Terms

Computer Science

Applied Sciences
Keywords

Composite, Differential scanning calorimetry, Finite Element Analysis, Stress Concentration