

Abstract

This report looks into the application and feasibility of manufacturing natural composite canoes. The main fabrics that were analyzed are flax, hemp, and jute. These were then compared to carbon fiber and fiberglass to see the difference in mechanical properties. It was found that the natural fibers have lower mechanical properties but that this could be overcome by designing a balsa wood core with ribs running up the walls. After manufacturing a hemp canoe, many lessons were learned and areas of interest were further explored. With the use of different natural fibers, these canoes can greatly reduce the carbon footprint. They are cheaper, easier to harvest, and much friendlier to the environment.