

Walter Bradley Coconut Fiber - Polypropylene Composites

Background:

Walter Bradley joined the Baylor faculty in 2002 with a mission to see what he could do to help people in really poor parts of the world. Walter Bradley began to explore the constituent parts of a coconut to try to figure out what can be done with the parts to make something of value. This led him to develop coconut fiber - polypropylene composites. Walter Bradley sees an opportunity to replace the polyester – polypropylene composites in common use with the coconut fiber based composite to create a cheaper, greener, material with better mechanical properties. This case explores the development of the new composite which will likely soon be appearing in automotive products such as the door panel shown Figure **1**.



Figure 1. Sample Coconut Fiber - Polypropylene Composite Door Panel

From a technical perspective, a simple potential assignment is given involving the calculation of some sectional properties as a function of modulus of elasticity and diameter. At UDM, the case will be incorporated into a mechanics of materials course.