

Abstract

At the end of this decade, one of the fastest growing materials in the field is composite. Composite materials are the first choice in product development because they have several advantages over conventional metal materials. To find out the comparison of the original material from the power window panel with bamboo composites. The method used is a critical analysis of bamboo composites using the latest journals, there are 2 tests namely tensile test with ASTM D-3039 with a volume fraction of 20%, composite NaOH 4%, 6%, and 8% and bending test with ASTM D-790 -03 with 5%: 95% fiber and resin composition, 10%: 90%, 15%: 85%, 20%: 80%. After that the testing is simulated in Fusion 360 with 4 forces, namely 250N, 500N, 750N and 1000N, and get some testing simulations namely safety factor, Von Mises, 1st Principal, 3rd Principal, Displacement.

Keyword: *bamboo composite, tensile tes, bending test, panel power window, simulation*