

EFFECT OF ALUMINA PARTICULATE ON EROSION WEAR BEHAVIOUR OF SHORT BAMBOO FIBER REINFORCED EPOXY COMPONENTS

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ABSTRACT

Now-a-days, the use of natural fiber reinforced composites starts gaining popularity in engineering applications due to the fact that this material possesses characteristics that are comparable to conventional materials. Among natural fibers, bamboo has been widely used for many such applications due to its availability. Attempts have been made in this paper to explore the potential utilization of bamboo fiber in polymer matrix composites. Therefore, this work is focused on the erosion wear behavior of short bamboo fiber reinforced composites filled with Alumina (Al_2O_3) particulate obtained through experimentation. It further outlines a methodology based on Taguchi's experimental design approach to make a parametric analysis of erosion characteristics. Finally, the morphology of eroded surfaces is examined using scanning electron microscopy (SEM) and possible erosion mechanisms are identified.