

Experimental Study of Various Sandwich Composites

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Abstract : The use of Sandwich composite materials in aerospace and civil infrastructure application has been increasing especially due to their enormously low weight that leads to a reduction in the total weight and fuel consumption, high flexural and transverse shear stiffness, and corrosion resistance. The essential properties of sandwich materials vary according to the application area of the structure. The objectives of this study are to identify the mechanical behaviour and failure mechanisms of sandwich structures made of bamboo, V- board and metal (Aluminium as face sheet and Foam as Core material). The three-point bending test and UTM (Universal testing machine) experimental tests are done for three specimens for each type of sandwich composites. From the experiment results of three sandwich composites, bamboo shows high Young's modulus of elasticity and low density.

Keywords : bamboo sandwich composite, metal sandwich composite, sandwich composite, v-board sandwich composite

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