



**NUMERICAL INVESTIGATION ON MECHANICAL BEHAVIOUR OF
COMPOSITE SANDWICH STRUCTURE**

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ABSTRACT

Composite sandwich structure is designed for light weight structure that required high structural strength and high stiffness. This project presents a study about sandwich construction and conducted a numerical investigation on mechanical behaviour of composite sandwich structure. The numerical analysis is done using SHELL91 one of the feature in ANSYS software. SHELL91 is an 8 noded, 3-D shell element with 6 degree of freedom at each node. The simulation is performed for three point bending, tensile and compression tests employing on sandwich structure composed of graphite epoxy skins and the aluminium core. The numerical results were compared with the experimental results from previous works, in order to prove the modelling is correct.

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