

## **INVESTIGATION ON EXPERIMENTAL MODAL RESPONSE OF HYBRID CARBON COMPOSITE PLATES, COMPOSED OF VARYING WEIGHT FRACTION OF MICRO RUBBER PARTICULATES**

C.Senthamaraikannan (Assistant Professor), M. Monish Kumbhat (UG Scholar), Dr.R.Ramesh (Professor)  
Dept of Mechanical Engineering,  
Sri Venkateswara College of Engineering, Sriperumbudur, Kancheepuram-602117.

In the present work, free vibration of woven fiber Carbon/Epoxy composite plates was done and results were analysed. Modal responses of carbon /epoxy plates reinforced with different weight fractions of micron sized rubber particles were critically investigated. The hand layup method was used to fabricate the composite plates. Free Vibration analysis was conducted for three different concentrations of micro rubber particles like 3, 9 and 15 wt. % of rubber concentration in epoxy resin. Frequency response function was extracted from RPro® software and cumulative FRF obtained from various locations were given to MEScopeVES® application software to simulate the mode shapes. The effects of rubber particle on modal frequencies, damping and mode shapes for varying rubber content were discussed for four-layered composite plate under free-free boundary condition.

