International Conference on Architecture and Civil Engineering 2018

ISBN	978-81-933584-5-0	**VOL**	01
Website	www.coreconferences.com	**eMail**	mail@coreconferences.com
Received	18 – January – 2018	**Accepted**	10 - February – 2018
Article ID	CoreConferences009	**eAID**	CoreConferences.2018.009

Experimental Analysis of Single Walled Carbon Nanotubes- Bio Composites

Mohana Priya G[1], Mythili T[2], M Anuratha[3], M Samyuktha[4]
[1,2]Assistant Professor, [3,4]Student, Third year, Department of Aeronautical Engineering,
Mahendra Engineering College, Namakkal, India

Abstract: *In this study, a technique is presented for developing constitutes models for polymer composite systems with single walled carbon nanotubes (SWNT). Because the polymer molecules are on the same size scale as the nanotubes, the interaction at the polymer/nanotube interface is highly dependent on the local molecular structure and bonding. It is proposed herein that the nanotube, the local polymer near the nanotube, and the nanotubes polymer interface can be modeled as an effective continuum fiber by using an equivalent-continuum modeling method. The effective fiber serves as a means for incorporating micromechanical analyses for the prediction of bulk mechanical properties of SWNT/polymer composites with various nanotube lengths, concentrations and orientations. This experiment results the importance of composites in aviation industry and also explains in details about carbon nanotubes composites that can be used in aircraft structures. Considerable growth has been seen in the use of biocomposites in the automotive and decking markets over the past decades. The dispersion of nanotubes in composites has been investigated as a means of deriving new and advanced engineering materials, these composite materials have been formed into fibers and thin films and their mechanical and electrical properties determined. The remarkable properties of carbon nanotubes offer the potential for fabricating conducting polymers without impairing the other desirable polymer properties. Aircraft wing is made up of SWNT-biocomposites, which is allowed to test in a wind tunnel. These results in the determination of drag force and pressure distribution. The strength of the wing can be increased by using this biocomposites materials in recent works at laboratories, SWNTs have been dispersed in polymer and pitch solutions using high energy ultrasonic probes.*