

## **MECHANICAL BEHAVIOUR OF E-GLASS, , EPOXY REINFORCED WITH FILLER MATERIALS ( rubber powder ) COMPOSITE**

### **ABSTRACT**

Now-a-days, the natural fibres from renewable natural resources offer the potential to act as a reinforcing material for polymer composites alternative to the use of glass, carbon and other man-made fibres. A hybrid composite is a combination of two or more different types of fibre in which one type of fibre balance the deficiency of another fibre.

Composites of various compositions with three different fibre 0, 5, 10 , 15 percentages are fabricated using simple hand lay-up technique. It has been observed that there is a significant effect of fibre loading and percentage on the performance of composites. The developed composites undergo different kinds of tests. The result shows composites having good strength and stiffness compared to natural hybrid composites.

**Keywords: Renewable, Mechanical Properties, filler material ratios.**

## INTRODUCTION

Mankind has been aware composite materials since several hundred years before Christ and applied innovation to improve the quality of life. Although it is not clear how Man understood the fact that mud bricks made sturdier houses if lined with straw, he used them to make buildings that lasted. Ancient Pharaohs made their slaves use bricks with straw to enhance the structural integrity of their buildings, some of which testify to the wisdom of the dead civilization even today. Contemporary composite results from research and innovation from past few decades have progressed from glass fibre for automobile bodies to particulate composites for aerospace and a range of other applications.