

## **EXPERIMENTAL STUDY ON EFFECT OF FIBER ORIENTATION ON THE TENSILE PROPERTIES OF FABRICATED PLATE USING CARBON FIBER**

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### **ABSTRACT**

Advantageous application of corrosion resistant fiber reinforced polymer (FRP) reinforcement is in structures especially susceptible to deicing salts, and/or located in extremely pungent environment. As low density, high thermal conductivity, good chemical stability and exceptional abrasion resistance, and can be used to decrease or reduce cracking and shrinkage. These fibers increase some structural properties like tensile and flexural strengths, flexural toughness and impact resistance. This experimental program determines the fibre content and fiber orientation of carbon fibre on tensile properties of the fabricated composites. In this research different fiber orientations are examined and the fabrication is done by hand lay-up process. The variation in the properties corresponding to the different layers in increasing number of fiberplate thickness is also considered. Tensile strength of specimens upto failure is tested by means of INSTRON universal testing Machine. The result of tensile strength and from that the modulus of elasticity is calculated.

**KEYWORDS:** Carbonfiber, Carbon Fabric Plate, Fabrication, Fiber Reinforced Polymer (FRP), Strengthening