**ABSTRACT**

Being substantially higher in cost, synthetic fibers such as Kevlar, glass, carbon etc. are slowly being replaced by naturally abundant and perpetual fibers which could possibly be used as reinforcement in composite materials for reduced cost applications. Nowadays many researchers are focusing on behavior and properties shown by natural fibers when used as main reinforcement in composite. Natural Fibers are highly environmental friendly, bio decomposable, primarily available in ample amount, perpetual and also possess low weight. Mainly from pseudo stem of banana, fibers are extracted. These pseudo stem is a waste product. So, it is extreme necessity to extract fibers from pseudo stem and carry out extensive research work on the behavior shown by banana fibers when used in conjunction with matrix.

This work elaborately explains about the techniques applied in manufacturing of composite of short raw banana fiber reinforced polyester matrix and characterization test performed as per ASTM standards. 3mm and 5mm thick samples of each 5 %, 10 %, 15 %, 17.5 % and 20 % fiber volume fraction are fabricated by using hot compression moulding technique. Casted specimens are tested to obtain tensile strength, impact strength and flexural strength as per respective ASTM standards. The results point out that with enhancement of fiber, there is also enhancement in tensile, flexure and impact strength property. Also from result there is indication of banana fiber reinforced polyester composites could possibly be used as low cost alternative material for building construction.