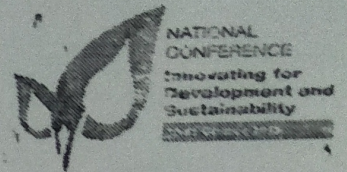


## ST 04 - Manufacturing Techniques of Fiber Reinforced Polymer Matrix Composites: A Review



Ms. Alpa Tapan Bhatt Assistant Professor, Mr. Hiral Parikh Assistant Professor,  
School of Science and Engineering, Navrachana University,  
Vadodara (Guj.) INDIA  
alpab@nuv.ac.in and hiralp@nuv.ac.in

The technological boom in various sectors has created demand for new materials, which can perform in stringent conditions where the conventional materials fail to perform. This has triggered the concept of composites where two or more materials are combined and optimistic properties of both can be utilized. The application area of composite material has developed in many Engineering applications like automobile, aeronautics, shipbuilding, medical, sports and accessories, etc., due to its characteristics like light weight to strength ratio, corrosion resistance and silent operational condition. Among various classes of composites today PMC (polymer matrix composites) is stipulated more due to its self lubricated properties. Due to the environmental concern nowadays more emphasis is given on the natural fiber polymer matrix composites which can replace the synthetic fibers. The major challenge with the manufacturing of fiber polymer matrix composites (FRP/PMC) is due to its hydrophilic nature. This paper is proposing a comprehensive study of various manufacturing techniques used for FPMCs.

Key words: Composites, Fiber Reinforced Polymer Matrix Composites (FRPCs), Vacuum Assisted Resin Transfer Molding (VARTM), Resin Transfer molding (RTM).