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Glass and Polypropylene Combinations for Thermoplastic Preforms

Authors : Hireni Mankodi

Abstract : The textile preforms for thermoplastic composite play a key role in providing the mechanical properties and gives the idea about preparing combination of yarn from Glass, Basalt, Carbon as reinforcement and PP, PET, Nylon as thermoplastic matrix at yarn stage for preforms to improve the quality and performance of laminates. The main objectives of this work are to develop the hybrid yarn using different yarn manufacturing process and prepare different performs using hybrid yarns. It has been observed that the glass/pp combination give homogeneous distribution in yarn. The proportion varied to optimize the glass/pp composition. The different preform has been prepared with combination of hybrid yarn, PP, glass combination. Further studies will investigate the effect of glass content in fabric, effect of weave, warps and filling density, number of layer plays significant role in deciding mechanical properties of thermoplastic laminates.

Keywords : thermoplastic, preform, laminates, hybrid yarn, glass
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