

Influence of Some Technological Parameters on the Content of Voids in Composite during On-Line Consolidation with Filament Winding Technology

Authors : M. Stefanovska, B. Samakoski, S. Risteska, G. Maneski

Abstract : In this study was performed in situ consolidation of polypropylene matrix/glass reinforced roving by combining heating systems and roll pressing. The commingled roving during hoop winding was wound on a cylindrical mandrel. The work also presents the advances made in the processing of these materials into composites by conventional technique filament winding. Experimental studies were performed with changing parameters - temperature, pressure and speed. Finally, it describes the investigation of the optimal processing conditions that maximize the mechanical properties of the composites. These properties are good enough for composites to be used as engineering materials in many structural applications.

Keywords : commingled fiber, consolidation heat, filament winding, voids

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