

Complex Shaped Prepreg Part Drapability Using Vacuum Bagging

Authors : Saran Toure

Abstract : Complex shaped parts manufactured using out of autoclave prepreg vacuum bagging has a high quality finish. This is not only due to in the control of resin to fibre ratio in prepregs, but also to a reduction in fibre misalignment, slippage and stresses occurring within plies during compaction. In a bid to further reduce deformation modes and control failure modes, we carried experiments where, we introduced wetted fabrics within a prepreg plybook during compaction. Here are presented the results obtained from the vacuum bagging of a complex shaped part. The shape is that of a turbine fan blade with smooth curves all throughout ending with sharp edged angles. The quality of the final part made from this blade is compared to that of the same blade made from standard vacuum bagging process of prepregs, without introducing wetted fabrics.

Keywords : complex shaped part, prepregs, drapability, vacuum bagging

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020