

Residual Compressive Strength of Drilled Glass Fiber Reinforced Composites

Authors : Navid Zarif Karimi, Giangiacomo Minak, Parnian Kianfar

Abstract : Drilling is one of the most frequently used machining process for glass fiber reinforced polymer composites due to the need for structural joining. In drilling of composite laminates, interlaminar cracking, or delamination, has a detrimental effect on the compressive strength of these materials. The delamination can be controlled by adopting proper drilling condition. In this paper, the effect of feed rate, cutting speed and drill point angle on delamination and residual compressive strength of drilled GFRPs is studied. The objective is to find optimal conditions for maximum residual compressive strength.

Keywords : composite material, delamination, drilling, residual compressive strength

Conference Title : ICCM 2016 : International Conference on Composite Materials

Conference Location : London, United Kingdom

Conference Dates : January 18-19, 2016