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Study on Drilling Induced Delamination of Woven Kenaf Fiber Reinforced Epoxy Composite Using Carbide Drills

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Abstract

In this research study, it presents the influences of drilling parameters on the delamination factor during the drilling of woven kenaf fiber reinforced epoxy composite laminates when using the carbide drill bits. The purpose of this study is to investigate the influence of drilling parameters such as cutting speed, feed rate and drill sizes on the delamination produced when drilling woven kenaf reinforced epoxy composite using the non-coated carbide drill bits. The damage generated on the woven kenaf reinforced epoxy composite laminates were observed both at the entrance and exit surface during the drilling operation. The experiments were conducted according to the Box Behnken experimental designs. The results indicated that the drill diameter has a significant influence on the delamination when drilling the woven kenaf fiber reinforced epoxy composites.

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