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# A novel approach to predict the delamination factor for dry and cryogenic drilling of CFRP

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## Abstract

The need for lighter and more efficient industrial components has led to extensive research in fabrication and machining of composites such as CFRP. Machining processes such as drilling induce high magnitude stress on composites which causes extensive delamination damage.

The past few years have seen an increase in the popularity of cryogenic machining processes in industries. This trend is attributed to the reduced material damage in cryogenic assisted machining processes. This paper presents a systematic study of the drilling of CFRP in both dry and cryogenic conditions by analysing the effect of cutting speed and feed rate on thrust force, delamination and surface roughness. The results demonstrated that with a decrease in temperature, both the delamination factor and the surface roughness exhibited a decreasing

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