

## Effect of Starter Defect to GIIC of Unidirectional CFRP Composite

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**Abstract**—Critical strain energy release rate in CFRP composites characterizes the delamination resistance. More study is still needed to measure the critical strain energy release rate in sliding shear mode (GIIC) considering various factors that influence its measurement. This study evaluates one of the influencing factors, the starter defect. Two types of on thin, unidirectional CFRP composites with one having thin film insert as starter defect and another one with pre-crack under Mode II loading were prepared and tested in three point bending end notch flexure (3ENF) test. It was found that the (GIIC) of the former was more than twice higher than that of the latter, supposedly due to the presence of resin rich region in the former.

**Keywords:** *CFRP; End Notch Flexure; Delamination; Energy Release Rate*