



International Journal on Recent Researches In Science, Engineering & Technology

(Division of Mechanical Engineering)

A Journal Established in early 2000 as National journal and upgraded to International journal in 2013 and is in existence for the last 10 years. It is run by Retired Professors from NIT, Trichy. It is an absolutely free (No processing charges, No publishing charges etc) Journal Indexed in JIR, DIIF and SJIF.

Research Paper

Available online at: www.jrrset.com

ISSN (Print) : 2347-6729

ISSN (Online) : 2348-3105

Volume 4, Issue 5,
May 2016.

JIR IF : 2.54

DIIF IF : 1.46

SJIF IF : 1.329

DRILLING OF GFRP COMPOSITES TO ACHIEVE OPTIMAL CUTTING CONDITIONS FOR SURFACE AND DELAMINATION FACTOR

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Abstract:- Delamination is the serious issue addressed by several researchers in the process of drilling of GFRP, because of its laminate construction of its structural bonding. The Problem of Delamination is caused due to the thrust force developed due to primary cutting parameters Cutting speed, feed rate and depth of cut. In case of holes to assemble components of free or pin joints it is essential to set non-compromise target for objectives such as surface roughness, ovality etc. In this work, drilling is carried out in GFRP composite using HSS drill tool comparatively single pass, multi-pass with single direction and multi-pass with alternative direction for each pass such that to investigate primarily about surface roughness of the hole, the ovality of the hole and delamination analysis. This work is focused to apply the Taguchi design model.

Keywords: GFRP, Delamination, Surface roughness, Ovality etc.,