**Review on Dion of Crcks Present in Comsite Canever Bem by Viation Analysis Tecques**

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***Abstract -****During the last few decades, intense research on the detection of crack using the vibration based techniques has been done and various approaches have been developed by researchers. In the present paper, detection of the crack presence on the surface of composite cantilever beam -type structural element using natural frequency is presented. First three natural frequencies of the cracked beam have been obtained experimentally and used for detection of crack location and size. Detected crack locations and size are compared with the actual results and found to be in good agreement. Also, the effect of the crack location and the crack depth on the natural frequency is presented. Experimental Modal Analysis (EMA) was performed on beams with cracks and the measuring first three natural frequencies changes. To identify the crack, contour of each normalized frequency in terms of the normalized crack depth and location are plotted. The point of intersection of three curves gives crack location & depth. It is observed that, results obtained from experimental method have a very good agreement with actual results also we can justify the results through simulation*.

***Keywords****: Crack location, Crack depth, Mode shape, Natural frequency, Vibration Analysis,*

*ANSYS14.0*

**1. INTRODUCTION**

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**2.DEMAND FORVIBRATION MEASUREMENT TECHNIQUE.**

In vibration measurement technique vibration transducer, signal converter, display unit, recorder are used as per shown in above figure1. Vibration

Vibrating machine or structure

Vibration transducer or pickup

Signal conversion instrument

Display unit, recorder of computer

Data analysis

**Fig.1.Vibration Measurement [9]**

transducer pick up the vibrations and gives to signal converter to convert the input vibration signal into frequency ,after that analysis of collected data is carried out and display it on display unit.

The predicted result by this method should in good agreement with actual values. This nondestructive method are very much suitable to identify the locations and depth of cracks from fixed end of cantilever beam .It can gives more accurate and faster results compared to other nondestructive methods such as dye penitent, magnetic particle testing ,ultrasonic testing, visual inspections. Hence we are increasing the life of machines and structures efficiently by detecting the cracks and its extent through vibration analysis technique.

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