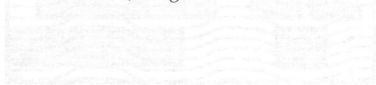


## The resonalyser method: A nondestructive method for stiffness identification of fibre reinforced composite materials

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**ABSTRACT:** The stiffness characterisation of Fibre Reinforced Composite (FRC) material presents more difficulties than the characterisation of traditional materials. This paper describes first the difficulties that can come across and next it presents a method that offers a possible solution to the problems. The main sources of difficulties are the anisotropy, the statistical nature of the macroscopic stiffness properties of FRC material and the errors induced by the measurement system. The proposed method for the identification of the stiffness values is a so-called 'Mixed Numerical/Experimental Technique '(MNET)'. The method is based on the observation of the vibration behaviour of rectangular test plates.