DIAGNOSIS OF DYNAMIC BEHAVIOR OF LIGNO-CELLULOSE COMPOSITE PLATES IN THE CONSTRUCTION OF THE CLASSICAL GUITAR

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Abstract: *This paper deals with research performed on an experimental testing stand in order to determine the dynamic behavior of the ligno-cellulose composite plates related to the forced vibrations. Plates made of different species and wooden materials (plywood and solid wood), with various stiffening braces, were tested. The used method provides us with the modal shapes and the characteristics of the frequency transfer function. Taking into consideration the experimental results, the diagnosis of the dynamic behavior of plates incorporated in a guitar's structure can be made in order to improve the acoustic performances of the classical guitar.*

Key words: *ligno-cellulose composite, dynamical behavior, Chladni patterns, plate.*

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