

Influence of the Test Environment on the Dynamic Response of a Composite Beam

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Abstract : Quality estimation of the experimental simulation of boundary conditions is one of the problems encountered while performing an experimental program. In fact, it is not easy to estimate directly the effective influence of these simulations on the results of experimental investigation. The aim of this is article to evaluate the effect of boundary conditions uncertainties on structure response, using the change of the dynamics characteristics. The experimental models used and the correlation by the Frequency Domain Assurance Criterion (FDAC) allowed an interpretation of the change in the dynamic characteristics. The application of this strategy to stratified composite structures (glass/ polyester) has given satisfactory results.

Keywords : vibration, composite, endommagement, correlation

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