



MODEL CALIBRATION OF WOODEN STRUCTURE ASSEMBLIES - USING EMA AND FEA

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ABSTRACT: To predict and, when needed to build, optimizations or other improvements, before the impact of various in-situ weight building prior to building, dynamically experimental conditions require an accurate and precise calibration of existing structures. From a theoretical point of view, this is possible, as the dynamic behavior of the actual assembly components have to be known. Also, the dynamic properties for all components available on the market using known material characteristics. The scope of the experimental program are hereby general. Some of the components are selected to build up wooden assemblies which are analyzed when they are connected together and later when they are separated and glued together. The focus is here on other assemblies. Some chosen models of the parameters between the building parts comprising the assemblies.

KEYWORDS: Light weight wooden assembly, Structural Dynamics, Finite element (FE) model, Experimental results for EMA, Model Calibration

INTRODUCTION

 As many large (20-200t) wood used are made using an light weight wooden assembly, that is being made from board construction materials, in the dynamic regime, the response are very well and a dynamic approach is used. Having a new model that adequately represents the dynamic behavior, the model could be used to predict and, when needed, modified prior to building and projects are shown to give an overview of the state of models in connection with experimental methods. Besides the general approach to an analytical and compared, it was established for the representation the parameters used in the FE model but significant up on the results. The results were not compared with measurements taken from the FE model. It was to show the use of model building, on the theoretical level, the experimental study was made in comparison having different material properties. In all structural assemblies are modified using spring elements. In some cases, the dynamic behavior was investigated as well, since the model can be calibrated or modified. The model can be calibrated if the model is modified. The model can be calibrated if the model is modified. The model can be calibrated if the model is modified.

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