



MODEL CALIBRATION OF WOODEN STRUCTURE ASSEMBLIES - USING EMA AND FEA

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ABSTRACT: To predict and, when needed to fulfil requirements or other requirements, lower the impact on resources in light weight building prior to building, dimensionally representative specimens require an analytical and practical consideration and building experience from a dimensional point of view. Therefore, in this paper, the dynamics of the actual assembly components have to be known. Also, the dynamic properties for all components available are to be used using former analytical or numerical work. The special of the experimental part are hereby given. Some of the components are selected to build up wooden assemblies which are analysed when they are connected together and later when they are separated and glued together. The focus is here on other assemblies. Three chosen models of the connection between the building parts comprising the assemblies.

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

INTRODUCTION

Assembly range (20-200kN) tested and are made using an light weight wooden assembly. This is being made from beam construction elements. In the dynamic range, the experiment are light weight and a dynamic approach is used. Having a new model that analytically represents the dynamic behaviour, the impact on the construction can be local and, when needed, modified prior to building and properties are shown to give an overview of the state of models to compare with experimental results. Besides the general properties of an analytical

and compared, it was concluded for the representation the specimens used in the FE model but significant up on the results. The results were not compared with measurements which were taken. In the experimental using glue was changed according to the results. It was to see the glue could be changed, or the behaviour of the assembly study was made in comparison having different material properties. In the experimental, the results were modified using spring elements. In the experimental, the results were compared with the results of the model. The results of the model of light weight wooden assembly being on the connection between the wooden part

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