

Historical study of timber in the architecture of Valencia.

Preliminary analysis for the conservation: identification of wood, constructive analysis, assessment, classification and dendrochronology

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ABSTRACT

With regards to the historic timber structures, the historical research, the typological and constructive analysis, the structural classification and assessment done on-site are the basis of their conservation. The text of this dissertation focuses on timber structures in the city of Valencia, including some examples of the Valencian Community.

The research is structured into three parts whose common thread is the endorsement of the conservation of historic wooden structures.

The first part focuses on the management done by the Carpenters' Guild and on the matters of the local transport of wood, as well as its import from the United States, trying to draw the geographic origin of the material used in the historical structures of Valencia.

The second part focuses on the typological and constructive study of the floor and roof's structures that can be currently found in Valencia. After a first approach to the places, a systematic analysis of the floors and roofs is done through a classification that finally synthesizes the information collected in order to define the characteristics of the different types and morphologies of the architectural elements that characterize those structures, showing the richness also in the simplest and most widespread morphologies. In parallel with this typological synthesis a statistical analysis of the dimensional data is performed in order to further specify the characteristics of the components.

The last part focuses on practical aspects of timber structures' analysis necessary to carry out any knowledgeable restoration project. As this part is applicable to different realities, the analyzed buildings are located not only in the historical center of Valencia, but also in the Valencian Community. Among these studies there is, firstly, the assessment of the structures and then, once identified and understood the types and causes of degradation, the process continues with the classification of the structures in order to estimate their mechanical characteristics. The text ends with the use of the dendrochronological analysis for the dating of wooden structures.