



Scientific/Documentary study of stone materials in the Palace of the Congress of Deputies in Madrid

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The Palace of the Congress of Deputies is one of the most emblematic examples of late classicist architecture in Madrid. In addition to being highly representative, it is remarkable for the wealth of decorative elements which were added to the interiors, especially in view of the material and cultural poverty of the period.

Within the line of research that the authors have been pursuing with the object of completing a documentary and technical study of a major part of the Palace's mural decorations, the aim of the present work was to identify and characterize various eminently architectural stone materials (granite and limestone). Specifically, the study has focused on the stone of the facade and the various different elements in the exterior, completing the study is an analysis of the marble of the fireplaces in the Conference Hall. The work follows two parallel lines:

On the one hand, the archived documentary information has been used to determine the various materials employed and their distribution in the building, and most importantly, it has been possible to identify approximately where they were quarried.

At the same time, microsamples taken directly from the building have been used to conduct characterization assays: x-ray diffraction (x-ray spectrometry), and morphological study and microanalysis by x-ray energy dispersion (EDX) using scanning electron microscopy (SEM).

The data presented here are the result of a documentary and technical study of the samples, from which it has been possible to arrive at a proper characterization of the materials. On the basis of these data, we are proceeding in a second stage to make a

comparative study of samples taken from the quarries cited in the historical documentation.