

Historical and Structural Analysis of the Lintel Fracture Over the Monastery of El Escorial Main Door



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Lintels are typical horizontal elements of the oldest buildings, especially in Egypt and Greece. Their presence has been constant throughout the centuries in countless buildings and constructions. When the lintels are masonry they have many limitations due to their low flexural strength, which can cause their fracture. Here we analyse a very relevant case in a very significant monument. This article conducts a historical analysis to diagnose the moment in which the fracture of the lintel of the main door of the Monastery of El Escorial occurred and a structural analysis to diagnose the causes and danger of this fracture.

Biography:

Rubén Rodríguez Elizalde is Geologist and Civil Engineer, PhD in Architecture and Heritage and Senior Occupational Health and Safety Degree. On professional level, he is specialized in pathology and structural rehabilitation. In addition, he has carried out preventive management tasks, fundamentally in construction, metal and entertainment sectors for the last twenty years: he has worked as execution director, health and safety coordinator on project phase and health and safety coordinator on execution phase. In this sense, he has been health and safety coordinator of great renown works in Spain. Currently, he is a professor at various university centers, such as Universitat Oberta de Catalunya (UOC). In addition, he is Member of the National Association of the Technical Inspection of Structures in Spain, member of the Geology Applied to Engineering Spanish Association and member of the International Association for Engineering Geology and the Environment. In addition, he is Technical Director at EIP, company specializing in structural rehabilitation and prevention management in the construction sector. As a final anecdote, it should be noted that Rubén is a Remote Piloted Aircraft (RAP) Pilot and a Pilot Instructor and Examiner.