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Case Studies

Seismic Analysis of a Portuguese Vernacular Building

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Abstract

Rammed-earth constructions are present all over the world and are common in Portugal, especially in the southern part of the country. In recent years, several research works published on this topic focused on characterizing the mechanical properties and understanding the structural behavior of buildings through experimental and numerical works. Much of the work focused on the characterization of the seismic vulnerability of rammed-earth construction. The research presented in this paper offers another contribution on this topic, particularly in understanding the influence of construction elements in a vernacular seismic culture. C the basis of a simplified case study, derived from a real building, a set of numerical analyses was carried out to assess the influen the geometry, layout, and different retrofitting solutions typical of vernacular rammed-earth constructions on behavior and seism performance.

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