

Building Pathology and Rehabilitation



Humberto Varum · Fulvio Parisi ·
Nicola Tarque · Dora Silveira *Editors*

Structural Characterization and Seismic Retrofitting of Adobe Constructions

Experimental and Numerical
Developments

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Vasco Peixoto de Freitas, University of Porto, Porto, Portugal

Aníbal Costa, Aveiro, Portugal

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Mechanical Characterization of Adobe Bricks



Dora Silveira, Cristina Oliveira, Humberto Varum, Ioannis Ioannou, Lorenzo Miccoli, Nicola Tarque, Fulvio Parisi, Luigi Fenu, Mario Solís, and José D. Rodríguez-Mariscal

Abstract The mechanical characterization of adobe bricks is an important first step in the study of the behaviour of adobe masonry. For this reason, in the last decades, different authors have conducted research on the mechanical behaviour of adobes from various regions of the world. Despite the importance of mechanical characterization, there are still only a few standards and normative documents with clear indications for the mechanical testing of earthen materials and, in general, these indications are not thorough and vary among different countries. Consequently, authors tend to adopt different types of test specimens and procedures in their experimental work, thus obtaining results that are not directly comparable. The fact that the materials and procedures traditionally used are also not standardized, varying greatly from region to region, also contributes to the difficulty of comparing results from different studies. This chapter presents a review of the indications

D. Silveira (✉)

ADAI-LAETA, Itecons—Instituto de Investigação e Desenvolvimento Tecnológico para a Construção, Energia Ambiente e Sustentabilidade, 3030-289 Coimbra, Portugal
e-mail: dora.silveira@itecons.uc.pt

C. Oliveira

CONSTRUCT-LESE, University of Porto, Technology School of Barreiro, Polytechnic Institute of Setubal, 2839-001 Lavradio, Portugal
e-mail: cristina.oliveira@estbarreiro.pt

H. Varum

CONSTRUCT-LESE, Civil Engineering Department, Faculty of Engineering, University of Porto, 4200-465 Porto, Portugal
e-mail: hvarum@fe.up.pt

I. Ioannou

Ledra and Building Materials Laboratories, Department of Civil and Environmental Engineering, School of Engineering of the University of Cyprus, 1678 Nicosia, Cyprus
e-mail: ioannis@ucy.ac.cy

L. Miccoli

Division Building Materials, Bundesanstalt für Materialforschung und—prüfung (BAM), Unter den Eichen 87, 12205 Berlin, Germany
e-mail: lorenzo.miccoli@bam.de

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