

	PROTOCOLO DE GENERACIÓN DE PUBLICACIONES EN GTED-UC REGISTRO DE PUBLICACIÓN	Fecha: 19-06-2013
		Página 1 de 1

TITULO ARTÍCULO (En Inglés)	MINOR DESTRUCTIVE TECHNIQUES APPLIED TO THE MECHANICAL CHARACTERIZATION OF HISTORICAL RUBBLE STONE MASONRY STRUCTURES		
TITULO ARTÍCULO (En Español)	TÉCNICAS LIGERAMENTE DESTRUCTIVAS APLICADAS A LA CARACTERIZACIÓN MECÁNICA DE ESTRUCTURAS DE MAMPOSTERÍA IRREGULAR		
AUTORES	I. LOMBILLO, L. VILLEGAS, J. ELICES		
TÍTULO REVISTA	STRUCTURAL SURVEY (EMERALD)		
ISSN	Área de conocimiento	Impact Factor	Cuartil
0263-080X	Civil and Structural Engineering	0.248	SJR-Q3 (SCOPUS)
Fecha (Año/Mes)	Web revista		
2010-05	http://www.emeraldinsight.com/journals.htm?issn=0263-080X http://www.scimagojr.com/journalsearch.php?q=144911&tip=sid		
ABSTRACT (En inglés)			
<p>The analysis of ancient buildings presents professionals with important challenges, so it is necessary to have a rational methodology of analysis of these constructions. From the point of view of the technology of structures it is imperative to know the mechanical characteristics of the structural elements involved, as well as the existing stress levels. Currently the tendency is to obtain such knowledge in a non-destructive way, producing minimal damage. The purpose of this paper is to provide a vision of some of the minor-destructive techniques (MDT) applied to the diagnosis of historical rubble stone masonry structures. Design/methodology/approach: The paper focuses attention on the employment of techniques based on mechanical stress aspects: flat jack, hole-drilling and dilatometer, conducted on rubble stone masonry structures. Several computational models were made of parts of the building. These models were used to obtain experimental data (modulus of elasticity and Poisson's ratio). The accuracy of the models was contrasted through the comparison with compression stress levels obtained experimentally. Findings: The paper provides a brief description of these MDT, and exposes the flat jack tests results obtained on several historical masonry walls in the Major Seminary of Comillas (Spain): Compression stress levels, modulus of elasticity and Poisson's ratio of several masonries of this building. Practical implications: These techniques improve the computational models of constructions, because they can obtain a better knowledge of their mechanical properties, from experimental ways, and the calibration of models through experimental data. Originality/value: This paper describes one of the first applications of these techniques in Spain.</p>			
Keywords (En inglés)	Buildings; Mechanical testing; Spain; Stone; Structural engineering		
RESUMEN (En español)*			
Palabras clave (Español)*			

* Caso de estar publicado en revista de lengua española.