

Author(s): Henriques, DF (Henriques, Dulce Franco); Nunes, L (Nunes, Lina); de Brito, J (de Brito, Jorge)

Title: Development of a penetration test for timber impregnation products for use in old buildings

Source: Construction and Building Materials, 24 (7): 1095-1100 JUL 2010

Language: English

Document Type: Article

Author Keywords: Wood; Treatments; Old buildings; Penetration test

KeyWords Plus: Wood Preservatives; Treated Wood; Boron; Decay

Abstract: This paper studies the application of commercial biocides to old maritime pine timber structures (*Pinus pinaster* Ait.) that have previously been impregnated with other products. A method was developed in the laboratory to be used in situ to determine the impregnation depth achieved by a new generation biocide product applied to timber from an old building. This timber had once been treated with an unknown product difficult to characterize without extensive analysis. The test was initially developed in laboratory conditions and later tested on elements of the roof structure of an 18th century building. In both cases the results were promising and mutually consistent with penetration depths for some treatments reaching 2.0 cm. The application in situ proved the tests viability and simplicity of execution giving a clear indication on the feasibility of possible re-treatments. (C) 2009 Elsevier Ltd. All rights reserved.

Addresses: [Nunes, Lina] Lab Nacl Engn Civil, Struct Dept, P-1700066 Lisbon, Portugal; [Henriques, Dulce Franco] Inst Super Engn Lisboa, Dept Civil Engn, P-1949014 Lisbon, Portugal; [de Brito, Jorge] Univ Tecn Lisbon, Inst Super Tecn, Dept Civil Engn & Architecture, P-1049001 Lisbon, Portugal

Reprint Address: Nunes, L, Lab Nacl Engn Civil, Struct Dept, Av Brasil 101, P-1700066 Lisbon, Portugal.

E-mail Address: linanunes@lnec.pt

Publisher: ELSEVIER SCI LTD

Publisher Address: THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, OXON, ENGLAND

ISSN: 0950-0618

DOI: 10.1016/j.conbuildmat.2009.12.034

29-char Source Abbrev.: CONSTR BUILD MATER

ISI Document Delivery No.: 601DX