ABSTRACT

Restoration of old buildings is becoming increasingly important in the logic of encouraging the conservation of architectural heritage. This means that the number of scientific studies involving pathology and restoration is also growing in particularly those related with rising damp. If we analyze the pathologies observed in old buildings systematically, we find that rising damp is an important problem.

We have recently proceed to the experimental validation, in laboratory, of a new treatment technique for rising damp in old buildings which consists in ventilating the base of the walls resorting to a natural ventilation proceeding or to a hydro regulated mechanical system. At this moment we are caring out the experimental validation in real old buildings.

The experimental validation as been followed with different sensibility studies based in numerical simulations using 2D computational programs. The purpose of this paper is to present the results of numerical simulations that have been carried out with the main goal of analysing the influence of the thickness and the properties of the materials of the walls in the new treatment technique for rising damp: ventilation of the wall bases.

Key words: Ventilation of the Wall Base, Treatment of Rising Damp, Old Buildings.