

12TH INTERNATIONAL BRICK/BLOCK Masonry CONFERENCE



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AN OVERVIEW OF STRUCTURAL ASPECTS IN RELATION TO THE MOISTURE EXPANSION OF FIRED CLAYISH CONSTRUCTION MATERIALS

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ABSTRACT

The phenomenon of moisture expansion gives rise in masonry brick to frequent pathologies. Though much research has been dedicated in the past focused in the identification of phases and conditions which produces this effect, nowadays this aspect is yet considered by several researchers all over the world.

Even several types of clays as raw materials have been tested in order to find relations with the production of this phenomenon. Here from an overview of more recent literature and own experimental research on commercial products in actual pathologies in several buildings a personal vision of the problem is given. Two methodologies are the main as approach for the explanation of this effect: the searching of relations with the composition of phases (crystalline, vitreous and porosity) which constitute the construction bricks and the look for relations with some intrinsic mechanical properties as is the elasticity modulus.

