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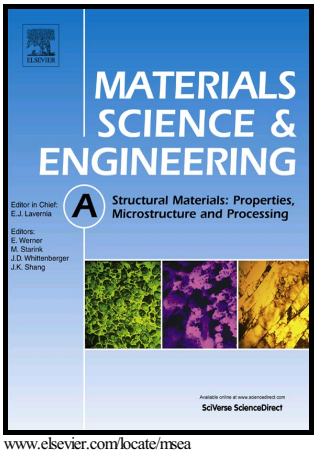

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Modeling of the thermal and mechanical properties of clay ceramics incorporating organic additives

P.M. NIGAY[1], R. SANI[2], T. CUTARD[3], A. NZIHOU[4]

[1]Centre RAPSODEE, Ecole des Mines d'Albi, Campus Jarlard, Route de Teillet, 81013 Albi Cedex 09, France (corresponding author)

Email: pierre-marie.nigay@mines-albi.fr

Telephone: +33 (0) 5 63 49 32 28

[2]Centre RAPSODEE, Ecole des Mines d'Albi, Campus Jarlard, Route de Teillet, 81013 Albi Cedex 09, France.

Email: rababe.sani@mines-albi.fr

[3]Institut Clément Ader, Ecole des Mines d'Albi, Campus Jarlard, Route de Teillet, 81013 Albi Cedex 09, France.

Email: thierry.cutard@mines-albi.fr

[4]Centre RAPSODEE, Ecole des Mines d'Albi, Campus Jarlard, Route de Teillet, 81013 Albi Cedex 09, France.

Email: ange.nzihou@mines-albi.fr

Abstract

This paper presents the results of a combined experimental and theoretical study on a clay ceramic used for building applications. The thermal and mechanical properties of the clay ceramic were improved by addition of organic additives. The organic additives consisted of Olive Stone Flour (OSF), with round-shape particles of 55µm, and Wheat Straw (WS), with 877µm particles in the form of fibers. It was found that the combustion of OSF and WS resulted in a porosity formation during the firing process. The morphology of these pores