RESUMEN Nº 113

PRODUCTION TILES WITH NATURAL COLOR FOR APPLICATIONS IN CIVIL CONSTRUCTION

[(1)]Tércio Graciano Machado
[(1)]Uílame Umbelino Gomes
[(2)] Flanelson M. Monteiro
[(2)] Gilson Garcia da Silva

(1) Universidade Federal do Rio Grande do Norte – UFRN/PPGCEM - Natal/Brasil
(2) Centro Federal de Educação Tecnológica do Rio Grande do Norte- IFRN – Natal/Brasil

Emails: gracianomil@hotmail.com; umbelino@dfte.ufrn.br

ABSTRACT

In Rio Grande do Norte - Brasil, the production of ceramics occupies a position of the capital goods industry, contributing to the development of local economy, only producing tiles, bricks and blocks of red ceramic. The most recent geological map of Rio Grande do Norte, there are over 2 thousand points that were analyzed produced or produces some kind of mineral. The Rio Grande do Norte shows a characteristic that is the presence of clay with the natural color, presenting various oxides that provide the variety of colors (white, yellow, purple, orange, among others), mainly in the coastal region. The variety of shades of clay is due to presence of oxides such as titanium. Ranging is the time and temperature of burning, you can get different colors, without the need for incorporation of other ceramic oxides, ceramic pigments and painting ceramics, when the finishing of parts. The purpose of this study is to produce tiles using ceramic body of origin kaolinitic clays mixed with natural color. Thus, we prepared four groups of samples with percentages of 20, 30, 40 and 50% natural color of clay. The samples were sintered to 950^{o}C, 1000^{o}C and 1100^{o}C. Tests were performed colorimetry, porosity, plasticity, thermal analysis and optical microscopy and SEM of the final product obtained. These cards will be used for application in internal environments of Environmental Building.

Keywords: Colorful clays, tiles, Civil Construction, Civil Construction