

BRAZILIAN “TAGUÁ” RED CLAY REINFORCED WITH SANITARY WARE WASTES TO PRODUCE STRUCTURAL CERAMICS

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ABSTRACT

A variant for an ecological friendly disposal of non-burned industrial sanitary ware wastes with economy and technical advantages is being studied through a Technological Innovation Project in Smaller Enterprises supported by FAPESP – The State of São Paulo for Research Support Agency. The applying variant for that is to produce structural ceramic products as bricks, blocks and roof tiles where the traditional “Taguá” red clay is mixed in certain proportions with sanitary ware wastes. The main goal of this paper is to present the results obtained with mixtures of unburned sanitary ware wastes with common clay from the region of Jundiaí – SP. The sanitary ware wastes were obtained from special deposits located nearest the Jundiaí River. Those accumulations of sanitary ware wastes are a constant menace for the river and of course, for the environment. Preliminary tests of incorporation (1,0% to 30,0% in weight) were made with hand formed spherical test samples. With the proportion that presented spheres with the higher compression strength after drying and after firing (950°C) prismatic samples were extruded. Based on the ceramic properties of those mixtures an industrial test was performed. Six hundred hallow blocks containing 30% waste were produced and presented ceramic properties similar to those without incorporation.

Keywords: Sanitary ware waste, Recycling, Structural red ceramics.

