

APPLICATION RESULTS OF CORUMBATAÍ FORMATION (PERMIAN) ON CERAMIC TILES BY WET PROCESS.

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The region of Santa Gertrudes-Cordeirópolis (São Paulo) is the greatest manufacturer of ceramic tiles from Brazil. The installation of this important center occurred because an abundance of local raw materials. This unit is composed by siltstones and mudstones. It is already employed successfully in dry process of ceramic tile manufacture. The results of this work also show the characteristics of several samples tested by the wet process. The analysis of samples was done in the Cerâmica Villagres Laboratories. The methodology employed was wet milling (with sodium silicate), drying in an oven, wetting to 6.5%, pressing and firing heating at 1160°C for 40 min. Among 17 samples, the following characteristics were noted: water absorption, degree of shrinking, loss on ignition (LOI), as well as observations about the degree of defloculation. It was noted that characteristics such as the degree of weathering, and iron and alkali contents can have direct correlation with defloculation, improving with the more weathered materials and, consequently, more plastic behavior in higher smectite contents. The most weathered samples are less fundent than the less weathered ones. Slightly weathered portions are more cohesive and show high remains on milling (over 14%). High values of LOI are associated with carbonate cementation. These results show that is possible employ these rocks in the wet industrial ceramic process.