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ADVANCES IN CLEANER PRODUCTION

“CLEANER PRODUCTION INITIATIVES AND CHALLENGES FOR A SUSTAINABLE WORLD”

Study of Incorporation of Wind Blades Waste in Portland Cement

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Abstract

Industrial Residues represent a huge waste of raw material. And also they represent a potential risk to the environment. The incorporation of waste in other processes may minimize environmental damages, contributing to clean production. A residue produced in large quantities in Sorocaba (S.P.) is the residue of wind blades. This waste needs a great area to disposal which means much cost to the company. An alternative to residue disposal is incorporation in cement matrix. The aim of this work is study the incorporation of wind blades waste in Portland cement matrix, and produce a new material. The residue was characterized by wettability techniques, infrared spectroscopy and granulometric analyses. The waste is hydrophilic and less heavy than pebbles. A reduction in the mechanical strength occurred as the waste additions were increased. The incorporation of this waste in cement matrix can be used to produce non-structural bricks.

Keywords: *Portland cement, Waste, Characterization.*

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