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ADVANCES IN CLEANER PRODUCTION

“CLEANER PRODUCTION INITIATIVES AND CHALLENGES FOR A SUSTAINABLE WORLD”

Feasibility of Using Scrap Tires How the Composition of Concrete Aggregates Sidewalk to Rubber

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Abstract

The disposal of scrap tires has become an environmental problem evident. The objective is to develop a technology that is capable of reusing these wastes inserting them into the composition of concrete paving of sidewalks, replacing the fine aggregate. For four traits that were made of concrete, one conventional and three with the addition of 5%, 10% and 15% of zest tires. The tests were conducted at ages 3, 7 and 28 days in body-in- cylindrical specimens of dimensions 10 cm x 20 cm and body-of-proof prismatic of dimensions 5cm x 5cm x 20cm, evaluating properties such as tensile and compressive strength in flexion, respectively. The results showed that the trait that best satisfy the use for paving sidewalks was 5% plus tire fibers, however, despite losing in strength, the concrete rubber won in other mechanical properties inherent in conventional concrete, mainly related to flexibility. The use of concrete could promote the reduction of scrap tires improperly disposed into the environment.

Keywords: *scrap tires, fiber, rubber, concrete, resistance.*

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