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Recycling of post-consumer plastic packaging into cementitious composite

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In African countries, post-consumer plastic packaging has become a challenge in terms of marine pollution by dumping of plastics; global warming gas generation by incineration of plastics technologies sustainability. Some cities with more than one million inhabitants still have only small landfills, while the size of the population involves huge amounts of waste. In the case of Madagascar, municipalities collect post-consumer plastic waste composed of different types of dirty polymers with other wastes. Among the

various types of recycling management approaches, the reuse of waste and recycled plastic material in the construction sector is considered an ideal method for disposing of plastic waste. This present work aims to assess the construction material using plastic packing waste as a replacement of cement in a concrete and evaluate the mechanical and physical properties of the product. Thus, the methodology is easy to implement and appropriate to the local context in Madagascar.

Biography

Rafenomananjara Tsinjo Nirina has completed his master's degree in chemical engineering at the age of 23 years from Polytechnics School University of Antananarivo, and studies at University of Miyazaki. She has worked in an oil company, then construction company as engineer before continuing her study in Japan.

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