Improving the Elasticity of Concrete Paving-Blocks Using Natural Rubber Latex and Rice-Husk-Ash Silica

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This study aims to improve the concrete paving blocks constructed to solve problems for senior individuals in the community. The study contains three main experiments. The first dealt with preparation of natural rubber latex. In the second experiment, the concrete paving blocks were created. In the final experiment, the capacity of the concrete paving blocks was tested through the universal testing machine for strength and flexibility examination and the water absorption. The internal structure was also analyzed by scanning tunneling microscope between the samples and the concrete paving block in the market. It was found that the concrete paving blocks added by the natural rubber and rice husk ash were flexible than the concrete paving blocks existing in the community. The strength and water absorbing of the concrete paving blocks built were of the standard level. The structure of the concrete paving blocks newly built were less porous than the concrete paving blocks available as a result of the natural rubber latex concealing the porous structure of the concrete paving blocks. The findings indicate that the concrete paving blocks constructed in this study should be used to facilitate senior individuals in our aging society.

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