

Development of Palm Kernel Shell Lightweight Masonry Mortar

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Abstract : There need to construct building walls with lightweight masonry bricks/blocks and mortar to reduce the weight and cost of cooling/heating of buildings in hot/cold climates is growing partly due to legislations on energy use and global warming. In this paper, the development of Palm Kernel Shell masonry mortar (PKSMM) prepared with Portland cement and crushed PKS fine aggregate (an agricultural waste) is demonstrated. We show that PKSMM can be used as a lightweight mortar for the construction of lightweight masonry walls with good thermal insulation efficiency than the natural river sand commonly used for masonry mortar production.

Keywords : building walls, fine aggregate, lightweight masonry mortar, palm kernel shell, wall thermal insulation efficacy

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