

Utilizing Quicklime (Calcium Oxide) for Self-Healing Properties in Innovation of Coconut Husk Fiber Bricks

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Abstract : True experimental research with descriptive analysis was conducted. Utilizing Quicklime (Calcium Oxide) for self-healing properties of coconut husk fibre concrete brick. There are 2 setups established: the first one has the 1:1:2 ratio of calcium oxide, cement and sand, and the second one has a 2:1:2 ratio of the same variables. The bricks are made from the residences along Barangay Greater Lagro. The mixture of sand and cement is mixed with coconut husk fibers and then molded with different ratios in the molder. After the drying of cement, the researchers tested the bricks in the laboratory for compressive strength. The brick with the highest PSI is picked by the researchers to drop into freefall testing, and it makes remarkable remarks as it is deformed after dropping to different heights with a maximum of 20 feet. Unfortunately, the self-healing capabilities were not observed during the 12 weeks of monitoring. However, the brick was weighed after 12 weeks of monitoring, and it increased in weight by 0.030 kg. from 1.833 kg. to 1.863 kg. meaning that this ratio 2 has the potential to self-heal, but 12 weeks of monitoring by the researchers is not enough to conclude that it has a significant difference.

Keywords : self healing, coconut husk bricks, research, calcium oxide, utilizing quicklime

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