

Palm Oil Fuel Ash Based Mortar Composition



INVENTION

A new composition of mortar cement with Palm Oil Fuel Ash (POFA). POFA is an industrial waste which is linked with environmental pollution and health hazard

MARKET NEED

- To reduce CO₂ emissions from cement manufacturing process, construction industry invests a lot in technologies that improve cement production methods and formulations.
- Green technologies in concrete utilize waste materials as at least one of their components to ensure that their use does not harm environment.
- Concrete industries are looking for green ideas which offers high performance and life cycle sustainability.

APPLICATIONS

The invention can be used by industries specialized in preparing the Ready-mix concrete.

ADVANTAGES

- The novel composition uses POFA as a binding agent and mixed with the mortar cement.
- All construction industry standards were followed while preparing the concrete mixture.
- The resulted structure prepared with the novel mortar composition was tested for its durability and compressive strength for a period of one month and showed promising results.

PROJECT STATUS

- All necessary lab tests were conducted at a specialized research lab.
- The mortar composition needs further validation at large scale industrial facilities before it can be used in the construction.



LOOKING FOR A DEVELOPMENT PARTNER

- We are looking for industrial partner who can provide access to large scale facilities for further testing the mortar compositions.
- Our researchers can work in refining the mortar composition and its method of preparation as suited for large scale industrial manufacturing standards.
- The ultimate objective is to license the intellectual property to such partner for commercialization.

PATENT PROTECTION

Two US patent applications 16522200 and 16533014 cover composition and method of preparation of mortar composition.

ABOUT KFUPM

KFUPM was established in year 1963 and is located in Dhahran city of Saudi Arabia. KFUPM currently ranks at 186 in QS World University Rankings 2021. KFUPM's Innovation & Technology Transfer office strives for taking innovation from lab to market place.

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