



PLASTIC WASTE AS CEMENT REPLACEMENT IN BRICK

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DESCRIPTION OF INNOVATION

- HDPE-cement brick is a new innovative product uses High Density Polyethylene plastics as replacement for cement in the production of bricks.
- Cement can cause pollute our environment especially air due its production emits dust, carbon dioxide and etc.
- Excessive plastic production will cause pollution and harm to health.
- Result from compressive strength show that highest reading between four percentage are from 5% replacement of HDPE-cement brick.
- Based on calculation, the optimum percentage in range water absorption test are from 0% replacement in HDPE-cement brick.



IMPACT OF INNOVATION

ADVANTAGE

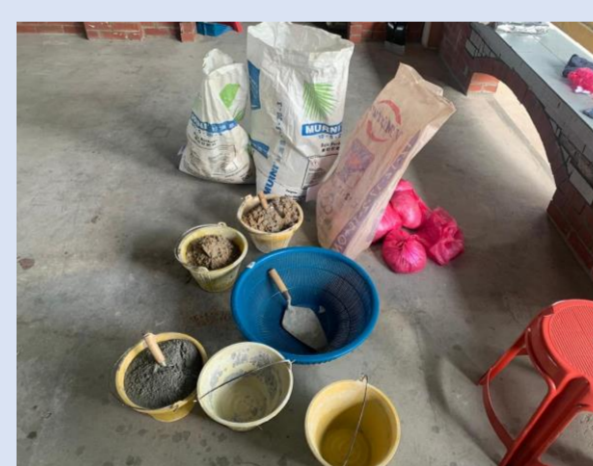
- By using plastic in this innovation it can reduce environmental pollution because nowadays the use of plastic is increasing.
- HDPE-cement brick that have been innovated with plastic have a comparable strength and are even stronger than the conventional bricks'.
- The new application of plastic in tiles can help the environment to free from the negative impact from human activities.

MARKET POTENTIAL

- HDPE-cement brick is different from the other conventional brick because of it material and environment benefit.
- Plastic-cement brick is made by recycle material which can keep our environment safe because it reduced the amount of plastic that is thrown away every day.
- Government enforcement on green environment innovation product
- Development investment on construction increase slightly per year
- This innovation needs to be improved by future generations so that it can be used in the future

OBJECTIVE

- 1 • To produce HDPE plastic bricks
- 3 • To determine the compressive strength and absorption of bricks



1) Collecting and weighing materials



2) Heat the plastic in the oven



4) Insert the mixture into the mould



3) Mixing cement and sand



5) The result of the bricks obtained