BEHAVIOUR AND STRENGTH OF REINFORCED GEOPOLYMER CONCRETE BEAMS IN THE MARINE ENVIRONMENT

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Abstract
Portland concrete has a weakness against sea water corrosion. The main material in concrete is Portland cement, Portland cement binder in which susceptible to chemical attack, especially acid, sulfate salts, and chloride. One way to overcome this problem is by replacing portland concrete by geopolymer concrete.

In this research, reinforced geopolymer concrete beams made using basic materials fly ash and aggregates are mixed with an alkaline solution of sodium hydroxide is sodium silicate and care and in the marine environment and also at room temperature for comparison. This reinforced concrete beams with dimensions width 10 cm, height 15 cm, length 150 cm. These beams using flexural steel 8mm diameter for the beam flexural strength test, for cross bar use 6mm diameter.

The results of the testing that has been done shows that the value of flexural strength of geopolymer concrete beams are treated in marine environment is greater than treated at room temperature.

Keyword : Beams, Bending Strength, Concrete, Fly Ash,, Geopolymer, Marine Environment.
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