

Experimental and Analytical Design of Rigid Pavement Using Geopolymer Concrete

Authors : J. Joel Bright, P. Peer Mohamed, M. Aswin SAangameshwaran

Abstract : The increasing usage of concrete produces 80% of carbon dioxide in the atmosphere. Hence, this results in various environmental effects like global warming. The amount of the carbon dioxide released during the manufacture of OPC due to the calcination of limestone and combustion of fossil fuel is in the order of one ton for every ton of OPC produced. Hence, to minimize this Geo Polymer Concrete was introduced. Geo polymer concrete is produced with 0% cement, and hence, it is eco-friendly and it also uses waste product from various industries like thermal power plant, steel manufacturing plant, and paper waste materials. This research is mainly about using Geo polymer concrete for pavement which gives very high strength than conventional concrete and at the same time gives way for sustainable development.

Keywords : activator solution, GGBS, fly ash, metakaolin

Conference Title : ICURS 2014 : International Conference on Urban Regeneration and Sustainability

Conference Location : Melbourne, Australia

Conference Dates : December 11-12, 2014