



Experimental Study of Pervious Concrete using M-Sand

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Abstract : Pervious concrete – which has been widely used all over the world to reduce the amount of runoff water due to rain and improve the water quality in pavements and parking lots, but its use in India is not in wide range but due to its reduced strength due to high porosity, pervious concrete is unfair able for highway pavements^{2,4}. This paper reports an experimental investigation on the development of pervious concrete providing the optimal combination of strength and water permeability. Pervious concrete pavement is an environmentally friendly paving material that allows water to drain directly through the pavement structure and infiltrate into the sub grade¹. By reducing runoff, pervious concrete pavement decreases the demand on the storm water management system. Pervious concrete trial mixes with different size of aggregate, with and without fine aggregates. Tested for its mechanical properties such as compressive strength, water permeability, and porosity. Pervious concrete is a porous concrete which allows water and air to pass through it. In this study, the pervious concrete is obtained by removing the fine aggregate wholly (0%), 5%, 10% and 15% of replacing coarse aggregate with M sand. The pervious concrete specimen of cube size of 150mm x 150mm x 150mm and they were cured in water for the period of 7, 14, 28 days. The compressive strength test and permeability is done in laboratory after curing. Then the compressive strength of pervious concrete is compared the compressive strength of M20grade of concrete.

Keywords : Pervious Concrete, M Sand, Compressive Strength, Permeability.

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