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Experimental Investigation on Transparent Concrete using Optical Fiber and Crumbed Rubber-A Review

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Abstract: *Transparent concrete as the smart and green building material with increased strength good aesthetic appearance and also having the light transmitting property. Transparent concrete is the new type of concrete introduced in modern era which carries special property of light transmitting due to presence of glass powder & is also known as translucent concrete or light transmitting concrete and also by adding crumbed rubber It is lighter than conventional concrete having special features such as low density and thermal conductivity with main advantage of reduction in dead weight.Tranmissive and light weight properties due to embedded light optical elements usually Optical fibers and glass powder and crumbed rubber. Main aim of the study is to design light weight and translucent concrete blocks with the use of glass powder and crumbed rubber with sand & cement. The cement replaced with glass powder and fine sand replaced with crumbed rubber and then analyse their various physical & engineering properties with respect to conventional concrete. The specimen casted will contain 90%of concrete and 5%of plastic optical fibers. And 5% crumbed rubber The concrete considered is cement mortar which contain fine aggregate and cement. The fibers are disturbed in shortest direction to increase the transparency of concrete use of this concrete is an architectural purpose for good aesthetical view of the building.*

Keywords: Glass powder Crumbed rubber , optical fibers, Workability, Compressive strength, Flexural strength

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