



Retrofitting of solid waste based RC beams using CFRP laminates.

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Abstract : Reinforced Concrete structural components are found to exhibit distress, even before their service period is over due to several causes. This present study is focused on the usage of solid waste material as cement replacement and aggregate replacement in concrete. The GGBFS is used for about 30% as the partial replacement of cement and 20% of recycled aggregate is used as coarse aggregate. After the occurrence of distress strengthening are essential. The technique used for strengthening of structural components is known as Retrofitting. Carbon fiber reinforced polymer(CFRP) is used as the Retrofitting material which can be applied quickly to the surface of the damaged element without the requirement of any special bonding material and also it requires less skilled labour.

The flexure and shear deficient of RC beams initially stressed to a prefixed percentage of the safe load are retrofitted using CFRP to increase the strength of beam in both shear and flexure.

Keywords : Flexure, shear, CFRP laminates, Solids waste, GGBFS and recycled aggregate.

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