

PERFORMANCE COMPRESSION BETWEEN RCC BEAMS REPAIRED WITH POLYMER MODIFIED MORTAR AND ORDINARY PORTLAND CEMENT.

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Abstract

Repair of the damaged or vulnerable reinforced concrete structures has utmost importance in order to promise the safety of inhabitants and to increase the life of structure which eventually results in the saving of natural resources by escaping new constructions. This study reports the experimental study of total 24 RCC beams after 28 days curing and having different steel configurations, with central point bending test. 12 beams were tested up to deconstructing, remaining 12 beams were loaded up to 70% of this load as obtained in the virgin (undamaged) beams to have cracks at deformation. Two different materials were then used i.e. Ordinary Portland Cement (OPC) and Fospak mortar to repair the damaged beams, after the repairing process these 12 repaired beams again loaded up to deconstruction in Forney Universal Testing Machine of concrete laboratory Civil Engineering Department MUET Jamshoro, to know the performance of damaged beams. The results depicted that beams repaired with Fospak mortar are capable of taking more load by 4% - 13.7% as compare to beams repaired with OPC and can restore the load carrying capacity of damaged beams up to 90% of virgin beams. Finding of this research have built a new confidence in repair with Fospak.