

Study on Design Mixture of Stainless Steel/Polypropylene Hybrid Fiber Concrete and its Properties

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The workability of the concrete mixtures and all kinds of performance of concrete reinforced by stainless steel and polypropylene fibers were studied. The influence of different contents of stainless steel and polypropylene fibers on mechanical properties was tested and compared, moreover, the workability of the hybrid fibers concrete was also studied. The reinforced mechanism of stainless steel and polypropylene fiber to the concrete and the failure mechanism to hybrid fibers concrete were also studied. The hybrid fibers concrete made great improvement on mechanical properties, which contain volume fractions 0.5% of stainless steel fiber and 0.6kg/m³ of polypropylene fiber.