**Corrosion of steel reinforcement in polypropylene fiber reinforced concrete structures**

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ACI Materials Journal
Vol. 87, Issue.2, 1990

**Abstract:** Adding polypropylene fibers (0.2 percent by volume of concrete) to concrete mixes enhances the properties of both fresh and hardened concretes. This paper presents results of an investigation of the effect of polypropylene fiber reinforcement in retarding the corrosion of reinforcing steel in concrete, as a result of improving the durability performance of the concrete embedding the steel reinforcement. Reinforced concrete slabs of different water-cement ratios of 0.45, 0.55, and 0.65, made with and without polyproylene fibers, were subjected to severe corrosion-initiating conditions and their resistance to corrosion was monitored for a period of more than 7 months. The effect of adding polypropylene fibers was also studied on some properties of the concrete that closely relate to corrosion of reinforcing steel. Study materials, methods and results are discussed.