

## **Effect of Concrete Cracks and Coating Film Cracks on Water Penetration and Rebar Corrosion**

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Surface-protection materials have been used for the surface of concrete to recover and improve the durability of structures. On the other hand, due to aging deterioration, repeated load of trains, etc. coating film cracking and the structural concrete cracking can occur. In addition, these structures are exposed to the outdoor environment and are therefore susceptible to rainwater. However, the effect of water penetration into these deteriorated points is not clear. In this paper, for painted and cracked concrete, we report the results of the water penetration test, chloride ion penetration test, and the results of the rebar corrosion test. We also discuss some effective and process-saving repair methods for cracks.