

**Effectiveness of surface coatings in improving concrete durability**

Almusallam, A.A., Khan, F.M., Dulaijan, S.U., Al-Amoudi, O.S.B.  
Cement and Concrete Composites 25 (4-5 SPEC), pp. 473-481, 2003

**Abstract:** This paper reports results of a study conducted to evaluate the durability of concrete coated with concrete surface coatings representing five generic types. The durability of the uncoated and coated concrete specimens was evaluated by assessing water absorption, chloride permeability and chloride diffusion. The chemical resistance was evaluated by immersing the uncoated and coated mortar specimens in 2.5% sulfuric acid. The results indicated that epoxy and polyurethane coatings performed better than acrylic, polymer and chlorinated rubber coatings. However, noticeable variation in the performance of the same generic type procured from different manufacturers was noted. Therefore, the selection of coatings should be done after conducting trial tests rather than basing it solely on the generic type. © 2002 Elsevier Science Ltd. All rights reserved.