

Air permeability of hardener-free epoxy-modified mortars using NDT

Abstract:

The purpose of this study is to investigate the air permeability of hardener-free epoxy-modified mortars by applying a non-destructive testing method developed by RILEM Technical Committee 189-NEC. Considering intelligent patch materials for the repair work of deteriorated reinforced concrete structures, hardener-free epoxy-modified mortars using a bisphenol A-type epoxy resin without any hardener are prepared with various polymer-cement ratios, and tested for moisture content, air permeability and strength. As a result, although there is no significant strength improvement, the coefficient of air permeability of the hardener-free epoxy-modified mortars is markedly decreased with an increase in the polymer-cement ratio.