Determination of Corrosion of Steel Embedded in Alkali Activation of a Binary Mixture

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In order to evaluate the use of structural concrete conventional different mixtures with different components were made to Portland cement, such as fly ash and steel slag, cementitious materials were mixed in binary form and in different percentage. Degradation was determined against corrosion phenomena due to permanent chloride attack by wetting and drying cycles. Electrochemical techniques used for evaluation corresponding to potential corrosion and electrochemical impedance spectroscopy. The results indicate the trend of concrete mixed with fly ash and steel slag, to present potential of anodic oxidation corrosion. The results of the electrochemical characterization comparatively describe concrete containing Portland cementing a slightly more porous and permeable material, which makes it more susceptible to attack by chlorides.

Keywords: fly ash, steel slag, chloride ion, corrosion.

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