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Effect physical and mechanical properties of fly ash-based geopolymers on corrosion reinforcement bar: A review

Abstract

A major concern for any society with reinforced concrete structures is steel corrosion. Much effort has been made to minimize corrosion damages in new structures and develop corrosion protection of existing structures. The physical and mechanical of fly ash-based geopolymer are enhanced with a few factors that influence its high performance than Ordinary Portland Cement concrete in many aspects such as compressive strength, workability, exposure to aggressive environment and high temperature. This review paper focus on effect of physical and mechanical properties of fly ash based geopolymer paste on the corrosion reinforcement bar. The geopolymerization process in geopolymer paste can improve the properties of fly ash-based geopolymers. Hence, the physical and mechanical properties is important the stability and contribute high compressive strength of geopolymer and improve the corrosion resistance of reinforcement bar.