

HR-220 Protection of Structural Concrete Substructures

KEY WORDS: Corrosion, reinforcing steel, chloride penetration, deicing salt, concrete sealers, concrete coatings

ABSTRACT

The corrosion of reinforcing steel within concrete has always been a problem in construction of bridge decks. With low slump concrete and epoxy rebar, progress has been made in controlling the corrosion.

There is concern, however, that the chloride also attacks the substructures, specifically the pier columns. They are subject to chloride attack by chemical deicers in the drainage from the bridge deck. Piers supporting grade separation bridges are also subject to chlorides contained in the direct splash from the lower level traffic.

In this project, a field evaluation was conducted to evaluate the effectiveness of commercially available products in preventing chloride intrusion.