

REINFORCED CONCRETE STRUCTURE

Abstract of the Disclosure

A metal coating of typically a valve metal, especially a titanium metal coating, is applied by thermal spraying to the surface of concrete, most particularly steel-reinforced concrete. The metal such as titanium may be sprayed by any one of several thermal spraying techniques including flame spray, electric-arc spray, plasma spray, high-velocity oxyfuel spray, or detonation gun spray. The metal coating should be tightly adhered to the concrete and desirably will have a porosity to facilitate extensive coating of the metal itself, as well as facilitate any activation that may be needed for the metal. Such activation can be in the form of an active material which allows the coating to function catalytically. One coating option is to apply a solution onto the spray-applied metal, then polarize the metal anodically to effect deposition of active material on the metal. Another option includes depositing active material directly onto the concrete, then applying an adherent, electrically conductive overlay such as a titanium metal coating to the treated concrete.

This Sheet Has Been Replaced

