Valle d'Aosta bridges

Focus product: Intercrete® 4841

Location: Milan-Turin Autostrada, Italy

Client: Italian Highways Authority

Summary: Protection against chloride ingress from de-icing salts and freeze/thaw cycling on Alpine bridges

Background

Motorway bridges in this Alpine region are exposed every winter to sub-zero temperatures and heavy snow, needing liberal use of de-icing salts to keep them open.

Such salts, combined with frequent freeze-thaw cycling, impose a heavy burden on reinforced concrete structures and the bridges were starting to show signs of deterioration, which needed to be arrested.

The solution

Intercrete 4841 was selected by the Highways Authority as the ultimate in protective coatings, not only waterproofing to provide resistance to cycles of freezing and thawing, but also forming an exceptional barrier to both chlorides and carbon dioxide. Intercrete 4841 is a proven defence against carbonation and has exceptional resistance to water penetration - amazingly 2mm coating offers equivalent water permeability to approximately 1 metre of structural quality concrete. It is capable of being applied at temperatures as low as 5°C, and it retains a degree of flexibility to take up the demands of thermal movement without cracking or loss of adhesion.