

Waterproofing Rail Tracks in the Netherlands

In 2016, ProRail, the Netherlands governmental agency responsible for railway maintenance, determined that a critical rail bridge over the Van Starckenborgh Canal in the town of Zuidhorn needed replacement with a larger span and higher vertical clearance. The steel replacement bridge was assembled along the canal and maneuvered into its final position using heavy-lift technology. Steel-reinforced precast concrete deck slabs were then installed on the bridge cross girders and topped with a cast-in-place concrete surface.

To meet its requirement for a chemical-resistant, waterproof track deck, ProRail usually specifies an epoxy coating. However, knowing that rain was likely, an alternative solution was sought. After meeting with Netherlands-based Xypex distributor and applicator Totech, ProRail and contractor Max Bögl selected Xypex Concentrate for the project. Since Xypex Concentrate is cement based and requires a pre-saturated surface to allow its active chemicals to diffuse into the concrete substrate, mist and rain are actually beneficial. It also was two to three times less costly than epoxy and offered the fastest possible application time—less than three days to coat 21,500 sq ft. Almost immediately after the application of Xypex, the contractor was able to install prestressed concrete railroad ties, gravel ballast and steel rails.

According to Totech Project Manager Patrick Mallens, the use of Xypex Concentrate to protect the new railway bridge not only helped keep the project on schedule but also provided a significant cost savings over epoxy coatings. “Xypex was ideal for this project,” he says. “It offered the shortest possible application and curing time, and greatest possible flexibility to accommodate varied weather conditions. The long-term benefits for the railway are also important and include lower maintenance costs and extended service life.” ♦



Installed on a railway track deck in the Netherlands, Xypex Concentrate saved application time and reduced costs.

PHOTO: COURTESY OF XYPEX

EVERY DETAIL MATTERS

Kosciuszko Bridge (edge girder)
New York, NY
Steel Tonnage: 3,339



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Lake Champlain Bridge
Crown Point, NY - Chimney Point, VT
Steel Tonnage: 4,234

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