



Bridges Today I

Building Faster & Smarter

Using proven techniques, contractors overcome logistical and construction challenges

By Karin Tetlow

WHAT'S INSIDE

- Accelerating Bridge Construction
- Delivering Massive Steel Girders
- Merging Routes Over the Los Angeles River
- Documenting Welding Compliance
- Meeting AASHTO MASH Specifications
- Crossing the Mississippi
- Waterproofing Rail Tracks

Waterproofing Rail Tracks in the Netherlands

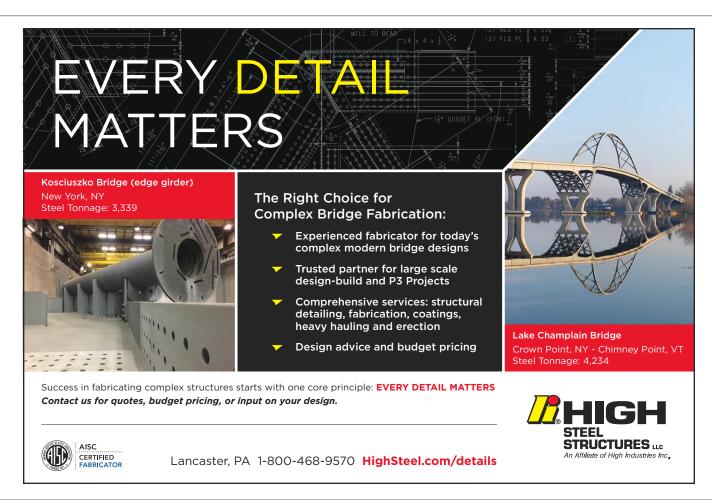
In 2016, ProRail, the Netherlands governmental agency responsible for railway maintenance, determined that a critical rail bridge over the Van Starkenborgh Canal in the town of Zuidhorn needed replacement with a larger span and higher vertical clearance. The steel replacement bridge was assembled along 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, water-proof 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 presaturated 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.

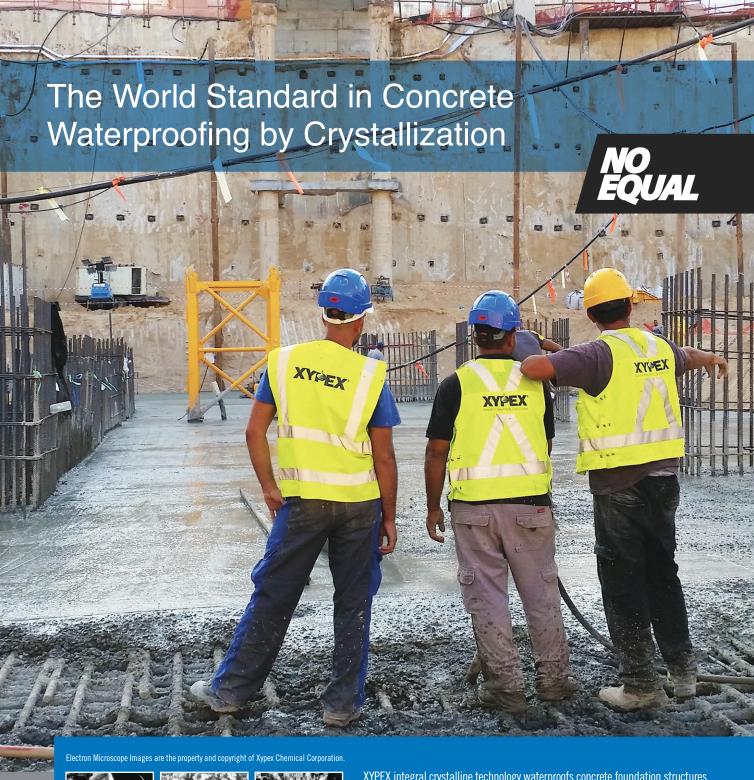
According to Totech Project Manager Patrick Mallens, the use of Xypex Concentrate to protect the new railway bridge not only helped keep the project on schedule but also provided a significant cost savings over epoxy coatings. "Xypex was ideal for this project," he says. "It offered the shortest possible 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.



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Concrete (Untreated)



Xypex Crystallization (Initiated)



Xypex Crystallization (Mature)

XYPEX integral crystalline technology waterproofs concrete foundation structures as they're poured and cannot be damaged during installation or backfilling.

Unlike membranes, Xypex is added to the concrete at the time of batching avoiding application errors. This sustainable technology also contributes to LEED credits.

When you select Xypex Crystalline Technology, you've chosen the best... more than 40 years of independent testing, experience in over 90 countries, unmatched product and service standards ... and still no equal.

