

BOULEVARD BREWERY WASTEWATER EXPANSION

In order to tap into the expanding market for its craft beers, Kansas City-based Boulevard Brewing Company expanded its facilities with a new fermentation cellar and an onsite wastewater treatment system protected by concrete coatings from Tnemec.

"The waste stream generated by the brewing process can be aggressive," explained Scott Keilbey of Midwest Coating Consultants, Inc. "The project required protective coating systems for a concrete effluent equalization basin and an attached pump station wet well used to pretreat wastewater before it is discharged into a municipal treatment system."

The structures were designed and constructed by Smith & Loveless Inc., which introduced Keilbey to the project. Smith & Loveless has specialized in wastewater pumping stations since 1946.

Engineers from Boulevard followed Keilbey's coating recommendations after a careful review of case studies about other projects that used Tnemec's Perma-Shield family of products that are specifically designed for wastewater immersion environments.

"The director of engineering and the project manager shared a detailed description of the waste stream and the varying temperatures of the effluent during different stages of the pre-treatment process," Keilbey recalled. "Using this information, we collectively arrived at two coating systems for the project."

The equalization basin and wet well were prepared in accordance with SSPC-SP 13/NACE No. 6 Surface Preparation of Concrete to achieve an International Concrete Repair Institute (ICRI) Concrete Surface Profile (CSP) 5. The concrete was then patched and filled with Series 218-1000 MotarClad, an aggregate-reinforced epoxy-modified cementitious mortar, to eliminate voids and bugholes prior to being topcoated.

The 7,200-square-foot effluent equalization basin was lined with an abrasion-resistant, 100 percent solids modified polyamine epoxy coating system. Series 436 Perma-Shield FR, a fiber-reinforced, abrasion-resistant lining was spray-applied at 125 miles dry film thickness (DFT) followed by a finish coat of Series 435 Perma-Glaze spray-applied at 15 mils DFT.

"The biggest challenge with the project was to keep the cured concrete sufficiently dry for coating," Keilbey added. "These structures were below grade, so every time it rained the concrete would be wet. Getting the concrete dried out long enough to get the coating system applied was an obstacle."

As one of the largest specialty brewers in the Midwest, Boulevard Brewing Company increased its fermentation capacity by 40 percent to more than 300,000 barrels a year with the completion of its expansion in mid-2015. In 2014, Boulevard became part of the Duvel Moortgat family of breweries.

FEATURED PRODUCTS

- Series 218-1000 MotarClad
- Series 435 Perma-Glaze
- Series 436 Perma-Shield FR



PROJECT INFORMATION

Project Location

Kansas City, Missouri

Project Completion Date

December 2015

Owner

Boulevard Brewing Co.
Kansas City, Missouri

Applicator

Genesis Environmental Solutions
Blue Springs, Missouri

Boulevard Brewery in Kansas City, Mo., utilized a tried-and-true wastewater coating system from Tnemec for its expanded filtration systems.

