

# Coatings Keep Seafood Plant Swimming

By Cliff Haskins with Jen Kramer

A seafood processing plant was expanding its production capabilities to accommodate a new contract with a national seafood distribution chain. The plant was adding a large water chiller, capable of cooling bags of soup as they rolled off of the production line. The plant engineers needed to expand the facility to meet the production demand but the growth created a problem. Actually several. First, the construction timeline was aggressive to meet the new production opportunity. Plant engineers needed a secondary containment liner solution that could be installed over the new concrete foundation before the concrete had reached full cure. Representatives from the national distribution chain were scheduled to visit during the cure window. The solution also had to be food-safe. And, it had to meet strict indoor-air requirements as they would be working in a food manufacturing facility.



"After exploring several options, the facility looked to SPI and HT-SL polyurea," says Cliff Haskins, vice president of marketing for SPI. HT-SL polyurea is a spray-applied, thermo-set, elastomer coating that offers zero VOCs, 100% solids and has an extremely fast cure rate.

To speed up the waterproof liner installation process, the specs called for mechanically fastening geotextile fabric to the concrete, and then bonding the polyurea to the geotextile. This step, combined with the coating's rapid cure property, would allow the facility to be quickly returned to service.

Specs in place, the plant owners turned to an experienced coatings crew from Delphi Engineering to apply the HT-SL polyurea coating system and to an independent third-party inspection service. "When we arrived on site we knew we weren't going to leave until the job was finished," says Benny Abbott, of Abbott Consulting and Coating Inspections, the third-party inspector hired to oversee the project. "We hit the ground running."

## High Tech Coatings And Fancy Seafood Don't Mix

Fortunately for the time-crunched crew, the factory had taken care of the most time-consuming part of the safety process, having already constructed a wall to completely separate the work area from the rest of the production facility.

"That meant that we just had to be sure that the plant's air ventilation system was always turned on in order to draw any overspray or fumes away from the area," explains Abbott. "We didn't have to worry about setting up secondary containment or sealing off the work area. We could just put on our normal protective gear—Tyvek suits, eye protection, work gloves and respirators—and get right to work."

He does add a small caveat to the PPE routine, however. "When we went to the break room we had to take off our PPE and put on the factory's PPE—lab coats, covers for any facial hair, and hats."

First, the crew swept the concrete floor, scraping any high spots to prevent tearing the geotextile fabric.

Then, the Delphi team used a concrete nail gun to drive fasteners through metal strips placed over the geotextile and into the concrete.

Geotextile in place, "the HT-SL polyurea elastomeric coating was spray-applied to 80 mils (2.03mm) thick using a Graco HXP3 and a mechanical-purge Fusion gun," Abbott says. "This was followed by a 20 mil (0.51mm) top coat of Hard-Cap 100 aliphatic polyurea."

Slit samples were taken every 100 square feet (9.29m<sup>2</sup>) to verify the proper mil thickness of the coating. "We used razor knives to take the samples," Abbott states, "because the sooner you take the tests, the better the results. Since it is a destructive test, the repairs were immediately made."

## Chill Out

Working through the night, the crew brought the factory's new secondary containment area on-line. "The job went well," says Abbott, with a well-earned, "relaxed" satisfaction that belies the fast-paced 19-hour shift that he and the Delphi crew spent on the job.



Haskins describes the end results: "The purpose of the lining system was to have a 100 percent seamless, waterproof membrane, as water will constantly run from the chiller to the holding area and back to the chiller. The plant engineers were grateful to have a waterproof liner solution available to meet their project timeline."

He continues, "This polyurea/geotextile combination was the only system available that could be applied over new concrete, meet indoor air quality requirements during the application process, and provide a quick cure schedule."

They may have been working in a seafood chiller, but thanks to an innovative coating and a determined crew, this is one job where nobody was left out in the cold.

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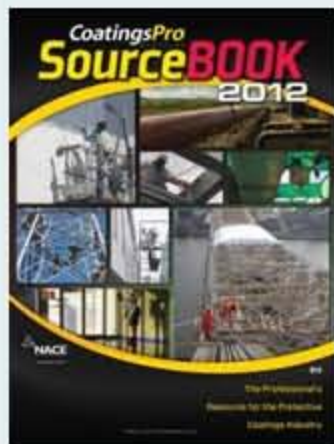
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