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FOOD/BEVERAGE

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COMMERCIAL

Ohio Flooring Crew Hops to Success at New Brewery

BY BEN DUBOSE

PHOTOS COURTESY HARDIG INDUSTRIAL SERVICES

Located within a vacant historic site near Cincinnati, Ohio, the original “Peters Cartridge Factory” needed a lot of work to convert a portion of it from what previously served as an ammunition factory during World Wars I and II to what is now Cartridge Brewing. Fortunately, crews at nearby flooring contractor Hardig Industrial Services were ready to hop to it.

“We’ve been doing a lot of brewing work for more than four years now,” said Kevin Kipp, estimator and project manager at Hardig. “All the large breweries, the new craft breweries that are coming up in the greater Cincinnati area, we’ve been doing their floors. One of the [Cartridge] owners, Kyle, was in the industry as a salesperson selling chemicals. In his travels, he had asked about their floors, the dos and don’ts, and continually had heard our name.”

“He made a comment to me at the pre-job walkthrough with a bunch of other trades, saying he had already picked us based on reputation,” Kipp recalled. “So that was a pretty good lead-in.”

Brewing Up a Plan

One immediate priority at this 7,000-square-foot (650.3 m²) jobsite was working around and coordinating with other trades. Based on all that needed to be converted to turn the historic building into a brewery, the resinous flooring crew had plenty of company.

“Given that it was all an ammunition facility, the entire property had to be remediated because of high lead content before any general construction could ever happen,” said Kipp, who noted that other areas of the former industrial complex had been turned into high-end lofts, retail shopping, and office space.

“It’s a cool destination, right off a bike trail,” Kipp said of the location in Maineville, Ohio. “This was the one and only place they had figured for the brewery.” For Hardig, this large-scale conversion meant that teamwork and planning with other



A former ammunition factory now hosts a new craft brewery, where a resinous flooring crew from Hardig Industrial Services worked around several other trades to coat the 7,000-square-foot (650.3 m²) brewery floor, including production areas and taproom.

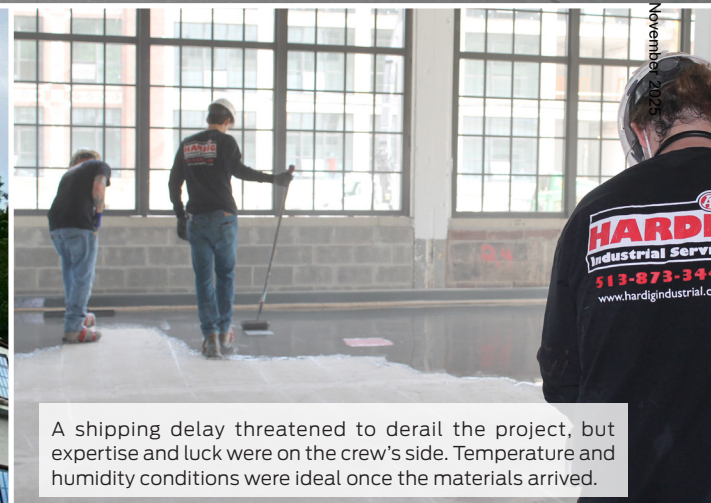


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This crew from Hardig Industrial Services took on the challenge of installing new resinous flooring in the production area and taproom at a converted brewery site near Cincinnati, Ohio.



With phased scheduling in mind, the Hardig crew of up to five workers had about one week in June 2020 to complete their portion of the project. Working during the COVID-19 pandemic meant making a few adjustments.



A shipping delay threatened to derail the project, but expertise and luck were on the crew's side. Temperature and humidity conditions were ideal once the materials arrived.

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Brewery Floor Install



Production floors were prepared using a Blastrac Model 1-15D shot blaster and a Blastrac BDC-66 dust collector to achieve the International Concrete Repair Institute's CSP 4-6 standard.

crews was essential.

"We never have anything to ourselves these days," Kipp said of the jobsite. "There were electricians, framing. We were able to get our space when we needed our space, but we were definitely working around others. It's always a lot of phasing... It all comes down to working with other trades and being somewhat flexible. Unfortunately, in our industry, once we start to get to a point, the floor has to be ours because no one can travel through it. Nobody can do what they need to do when we're shutting it down. A lot of other trades look at us as a thorn in their side," he laughed, "but we try to play nice and work with everybody — and realize that everybody has a job to do. We have to work together to get the project finished."

Hop to It!

With phased scheduling in mind, Kipp and his crew of up to five workers had about one week in June 2020 to complete their portion of the project. The Hardig team was also joined at the site by a representative from coatings manufacturer Sherwin-Williams since this was one of the first U.S. applications to utilize the company's upgraded FasTop materials line.

Since it was mid-2020, everyone involved had to be mindful of the COVID-19 pandemic. However, at the time, regulations were such that it didn't prove to be a major obstacle. "This jobsite had its restrictions from a COVID standpoint," Kipp recalled. "It wasn't a 100 percent mask requirement [at that time]. It was still in that gray area. By the nature of our installations, we have to get close together. We work in tight spaces quite frequently. That has definitely created some challenges. Fortunately, this jobsite wasn't right in the height of that."

The nature of personal protective equipment (PPE) also proved helpful since crew members had already planned to wear standard PPE items such as safety glasses, hard hats, and 3M respirators during the project. While many people around the world have become more familiar with respirators in 2020, they're nothing new to coatings applicators!



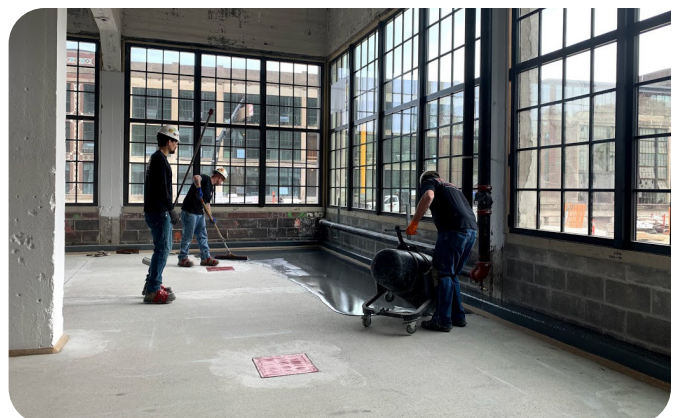
Keyways and terminations were cut around all drains and transitions. Patching was done using Hi-Tech's Spall TX3 gel. The crew also installed a perimeter cove base using a mix of epoxy and sand mortar.

Six-Pack Summer

In all, the Hardig crew's work lasted for approximately six days. The first three days largely consisted of site mobilization and surface preparation, while the second half involved laying out new flooring systems. Locations to be coated were primarily production areas, but there were also smaller, localized spots, such as the taproom and main thoroughfare areas. "Before starting any installation, they stop and define everybody's roles and responsibilities," Kipp said. "Each individual knows when to pitch in and help and when to keep production where we need it."

Production floors were prepared using a Blastrac Model 1-15D shot blaster and a Blastrac BDC-66 dust collector to achieve the International Concrete Repair Institute's (ICRI) concrete surface profile (CSP) 4-6 standard. Crew members cut keyways and terminations around all drains and transitions using Metabo grinders and Bosch SDS-max chipping hammers, and minor patching was done using Hi-Tech's Spall TX3 gel. During this period, the crew also installed a perimeter cove base

SL45 polyurethane was applied using trowels and Midwest Rake gage rakes before loop rolling. The crew broadcast sand to excess into the urethane base coat with a 20/40 mesh aggregate.



JOB AT A GLANCE



Crew members wore safety glasses, hard hats, and 3M respirators during the project. These types of safety precautions are nothing new to coatings applicators!

using a mix of epoxy and sand mortar. “Anything that we were getting ready to lead up to the installation was all done those first three days,” Kipp recalled.

For the taproom, the floor was ground with HTC DURATIQ 8 grinders and HTC 80 iD vacuums, and Hi-Tech joint pumps were used to fill construction joints with the Hi-Tech PE85 polyurea elastomer joint and crack filler.

To this point, it was so far, so good for the crew. “The initial crew consisted of a foreman, his right-hand man, and a general laborer,” Kipp said. “With that, our foreman did a lot of day-to-day site communication with other trades and the site superintendent while the other two guys did all the surface prep and detail work.” For the upcoming installation days, that’s when the crew was set to expand to five with extra manpower.

But there was an unexpected problem that threatened to spoil the formula. “The [coating] product had to be imported from Europe,” Kipp said. “As we were finishing up preparation and cove base details, we were notified of a shipping hiccup. Our material ended up 15 hours away in Florida! Knowing that we had a deadline, our vendor reacted quickly and had the material trucked in overnight. However, this delayed our project by a day that we didn’t have, because a truckload of stainless steel process tanks and brewing equipment was on its way.”

Fortunately, both expertise and luck were on the crew’s side. June is typically a hot and humid time in the Midwest, and for most of the week, that was the case. “Heat and humidity make installing urethane concrete slurries difficult because they alter the viscosity of the material and shorten the working time,” Kipp said. However, on the same night as the shipping snafu, an unexpected summer cool front swept through the area.

“The day we were set to install, we had perfect environmental conditions,” Kipp recalled. The ambient temperature was 70.3 °F (21.3 °C), the substrate was 74.3 °F (23.5 °C), the relative humidity was 59.6 percent, and the resin and aggregate temperatures ranged between 74.5 and 74.7 °F (23.6–23.7 °C). “Under those weather conditions, the FasTop Multi can accept

PROJECT:

Install resinous floor in production areas and taproom at a new brewery

COATINGS CONTRACTOR:

Hardig Industrial Services
Cleves, OH
(513) 873-3448
FB: HardigIndustrial
www.hardigindustrial.com

SIZE OF CONTRACTOR:

25 employees

SIZE OF CREW:

5 crew members

PRIME CLIENT:

Cartridge Brewing
Maineville, OH
(513) 697-3434
@CartridgeBeer
www.cartridgebrewing.com

SUBSTRATE:

Concrete

CONDITION OF SUBSTRATE:

New

SIZE OF JOB:

7,000 sq. ft. (650.3 m²)

DURATION:

1 week

UNUSUAL FACTORS/CHALLENGES:

- » The crew had to coordinate with and work around other trades.
- » The project was briefly stalled due to a shipping error.
- » Unusually perfect environmental conditions allowed for more rapid application and curing times, helping the contractor complete on time.

MATERIALS/PROCESSES:

- » Prepared production floors using a Blastrac Model 1-15D shot blaster and a Blastrac BDC-66 dust collector to achieve the ICRI CSP 4–6
- » Cut keyways and terminations around all drains and transitions using Metabo grinders and Bosch SDS-max chipping hammers
- » Completed minor patching using Hi-Tech Spall TX3 gel and installed a perimeter cove base using a mix of epoxy and sand mortar
- » Applied Sherwin-Williams FasTop SL45 at ~250 mils (6,350.0 microns) DFT using trowels and Midwest Rake gage rakes before pin/loop rolling
- » Broadcast 20/40 mesh aggregate to excess
- » Applied two coats of General Polymers 4850 polyaspartic in gray at ~20 mils (508.0 microns) DFT and ~10 mils (254.0 microns) DFT
- » Ground taproom floors using HTC DURATIQ 8 grinders and HTC 80 iD vacuums
- » Filled construction joints with Hi-Tech PE85 polyurea elastomer joint and crack filler utilizing Hi-Tech joint pumps
- » Squeegeed and backrolled two coats of General Polymers 3477 epoxy sealer to the taproom floor, each at 3–4 mils (76.2–101.6 microns) DFT

SAFETY CONSIDERATIONS:

- » Wore standard PPE, such as safety glasses, hard hats, and 3M respirators
- » Worked with distancing restrictions/recommendations due to COVID-19

Brewery Floor Install

foot traffic in three to four hours after placement,” he said. “This allowed us to install the product in the morning and come back in the afternoon to execute detail work and apply our grout coat, which would usually have had to happen the next day. In this case, we really had laboratory conditions in the field! Trust me, that never happens.”

With the ability to make up for lost time, it was generally smooth sailing. The crew mixed the FasTop materials using a Collomix Xo6 handheld mixer in Portamix Pelican mix carts. Then they applied the FasTop SL45 polyurethane at ~0.25 inch (0.6 cm) — or about 250 mils (6,350.0 microns) dry film thickness (DFT) — using trowels and Midwest Rake gage rakes before loop rolling. They broadcast sand to excess into the urethane base coat with a 20/40 mesh aggregate.

“The two guys on the jobsite from the beginning, they were kind of the lead installers,” Kipp said of the assignments. “One guy ran the gage rake to apply the coatings to the appropriate thickness while another guy ran the loop and spike roller to ensure the product was leveled out. We had another guy whose responsibility was troweling all the detail work, and we had two in the mix station. One was filling the mix station and putting it together while the other was operating the drill mixer. The guy who was filling and doing the mixing was also running the



To complete the system the crew topcoated the urethane slurry with two coats of GP 4850 polyaspartic in charcoal gray: first at ~20 mils (508.0 microns) DFT and second at ~10 mils (254.0 microns).

product and pouring it onto the floor.” Meanwhile, Kipp himself performed duties such as environmental monitoring and ensuring that film thicknesses were applied appropriately and to product specifications.

With the urethane slurry in place, the crew then topcoated each production area with two coats of the Sherwin-Williams

General Polymers (GP) 4850 polyaspartic in charcoal gray. The first went down at roughly 80 square feet per gallon (2.0 m²/L) for ~20 mils (508.0 microns) DFT, while the second was at about 160 square feet per gallon (3.9 m²/L) and ~10 mils (254.0 microns) DFT. “It comes down to the whole system,” Kipp said of the floor’s performance. “The urethane concrete basecoat, the quarter-inch self-leveling slurry, is where you get the true physical properties in a food and beverage environment. It’s a concrete-based material, so it’s not only a mechanical bond to the substrate, but a chemical bond as well. That product system will stand up more to thermal shock, chemical cleaning, and washdowns. When they’re shocking that floor with 150 °F-plus [65.6 °C] temperatures, this urethane concrete is going to handle the abuse you put it through, all while offering chemical resistance. The polyaspartic topcoat was chosen because, in a brewery environment, these areas are open to the public. You have stainless steel tanks. Everyone sitting in a taproom can look and watch and see the topcoat. You need UV [ultra-violet] stability. You want that floor to have great aesthetics and not stain and show well to customers and clients. That’s



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The coating system in the taproom areas again required squeegee and backroll method, this time with two coats of Sherwin-Williams GP 3477 epoxy sealer, each at 3–4 mils (76.2–101.6 microns) DFT.

where the beer is made.”

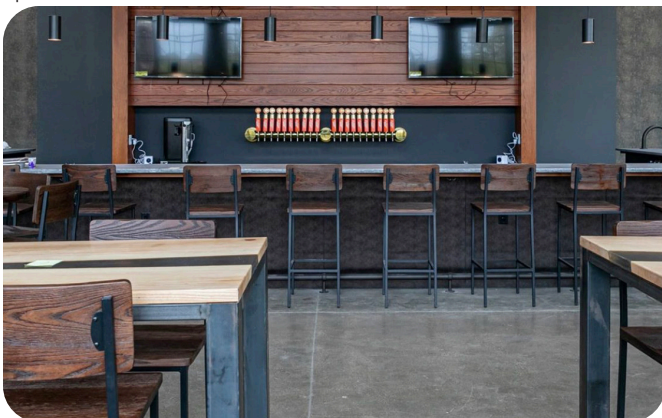
Assignments in the taproom areas were much simpler and smaller, given that the flooring requirements there weren't quite as comprehensive. In these taproom spots, crew members squeegeed and backrolled two coats of Sherwin-Williams GP 3477 epoxy sealer, each at 3–4 mils (76.2–101.6 microns) DFT, for a low-sheen, dust-proof finish.

Cheers to Success

Between fortunate environmental conditions and the crew's expertise, Hardig was able to complete the Cartridge Brewing assignment successfully on schedule. From Kipp's perspective, he gave most of the credit to his workers.

“We do a lot of food and beverage work, and many of our guys are well cross-trained,” Kipp said of their performance. “The same guy in the mixing station can be out on the floor and doing any job that anyone else is doing because that gives us more bandwidth with our crews. They're not one-trick ponies. They're pros, and they know what they're doing. They have a great team atmosphere.... Sometimes it's almost silent

Both the coatings manufacturer and client were pleased with the work that the Hardig Industrial Services crew did, and the Cartridge Brewery opened for business on Halloween 2020.



VENDOR TEAM

3M

Safety equipment manufacturer
St. Paul, MN
(888) 364-3577
@3M
www.3m.com

Blastrac NA

Equipment manufacturer
Oklahoma City, OK
(800) 256-3440
@BlastracNA1
www.blastrac.com

Collomix North America

Equipment manufacturer
Milwaukee, WI
(262) 207-4241
FB: CollomixNA
www.collomix.com

Hi-Tech Systems

Material and equipment manufacturer
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LI: hitechsystems
www.hitechpolyurea.com

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The Sherwin-Williams Company

Coatings manufacturer
Cleveland, OH
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@SherwinWilliams
www.sherwin-williams.com

communication. You can see what's going on, and as long as they're cognizant and aware of the installation, they know what is needed. They'll take over something when they need a hand.”

Most importantly, both the coatings manufacturer and client were pleased with the work. Cartridge Brewery held its grand opening on Halloween 2020, and the reviews have been smooth. “They've had no issues or complaints with the production floors or any of the taproom,” Kipp said. “They had complimentary stuff posted on their Instagram, thanking us for being part of the project.”

Based on their continued success, Hardig has since had other food and beverage application opportunities utilizing the new FasTop materials. “This project went really well,” Kipp concluded. “It was a good thing for the manufacturer to expose us to it. It's opened up more opportunities.”

Cheers to the manufacturer, the clients, and — most importantly — the crew! **CP**