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PROGRAM PREVIEW

2022 PG. A1

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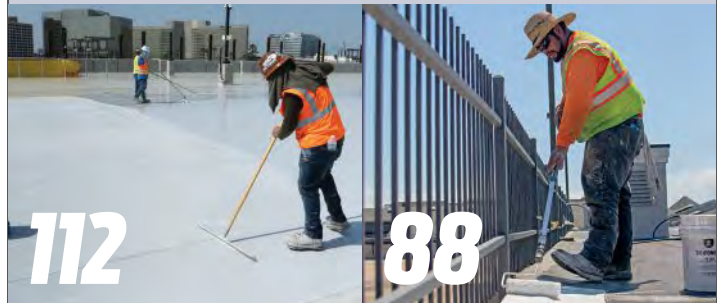
NEVER AGAIN

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ON THE COVER (A) Due to outgassing concerns with the heat, this contractor worked at night to apply traffic coatings to a new parking facility at LAX.

—Photo courtesy of Polycoat Products.

ON THE COVER (B) Working around AC units in the summertime meant paying extra careful attention to safety for this crew.

—Photo courtesy of Executive Coatings and Contracting.



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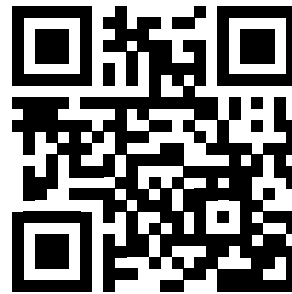
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Image - Maravilla Los Cabos in San Jose del Cabo, Mexico project which used Polycoat's waterproofing membrane system.

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We're Back!



What an exciting start to the new year we've got already! Forgive me while I talk yet again about the events that we're attending this winter. There's just something so magical about meeting and visiting with new and returning *CoatingsPro* readers, coworkers, and other supporters.

As I'm sure you know, Zoom meetings, phone calls, instant messaging, texting, FaceTiming, and beyond all have a great place in the world of communication. But nothing beats a face-to-face chat, and 2022 has brought us back to that in full force.

Good Tidings for 2022

This year is also already bringing *CoatingsPro* some special information about the inaugural event for Association for Materials Protection and Performance (AMPP) — the merged NACE International and SSPC: The Society for Protective Coatings. Check out the coatings-specific program preview on page 43. I'm really looking forward to seeing what that event brings to the coatings and greater corrosion industries.

You'll also see in this issue some exciting feature stories, including an award-winning epoxy floor (page 36), a "witch hat" steel tank with an artistic flare (page 118), and a coated spray polyurethane foam roof in Hawaii (page 94). We're sharing an overview of the differences between productivity

and efficiency (and why it matters) on page 22; recent patterns, priorities, and processes from the Occupational Safety and Health Administration (OSHA) on page 30; and another anniversary-related Industry Insight from a longtime supporter and featured contractor on page 146.

Of course, we've also got *CoatingsPro's* 20th anniversary in full swing now. If you haven't listened to one of my influential peers, Ben DuBose, chat with some of the industry veterans over on the podcast, then you're missing out! Get a good listen at www.coatingspromag.com/podcasts.

Here's to a Great New Year!

I'm hoping that the positivity that this year has started off with will continue throughout the new year. May 2022 meet you and yours with happiness, good health, great wealth, an improved supply chain, and a robust and skilled workforce.

And, as always, happy coating!

Stephanie

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CoatingsPro
MAGAZINE



Letters to the editor are always welcome. We reserve the right to edit for space considerations. E-mail responses may be sent to editor@coatingspromag.com. Or mail to: Editor, CoatingsPro Magazine, 4501 Mission Bay Drive, Ste. 2G, San Diego, CA 92109

Editor,
The article came out great ("High Voltage Job: Lead Removal and Recoating 300 Electric Transmission Towers," *CoatingsPro*, November 2021)! I am very happy with it. I really appreciate the opportunity to work with you on this.

Curt Hickcox
Queens Village, NY

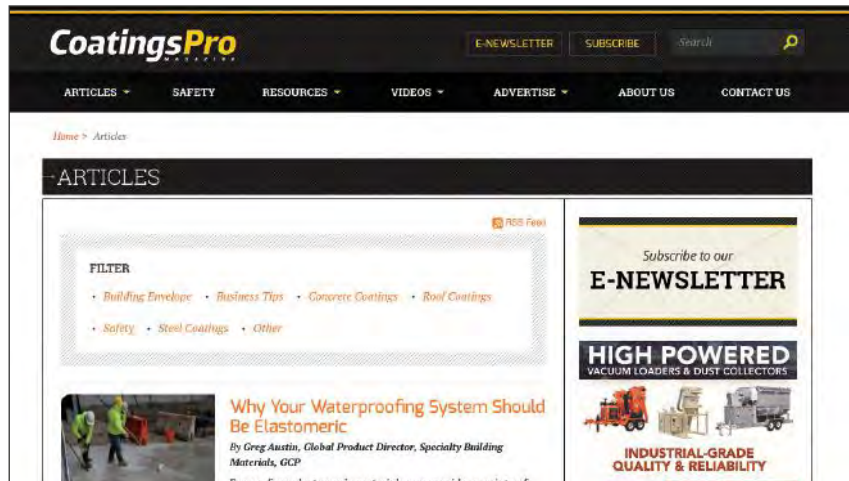


Dear Curt,
Thanks for sharing some of your knowledge with our readers! What an interesting project to be able to highlight — from the energized electric lines to the lack of man lifts and everything in between. Keep up the great work!

~Editor-in-Chief

Erratum: Two of the photos in the story "Cold-Calling Owner Offers Solutions for Facility Roofs" from the 2021 Equipment supplement were inadvertently added from another article with MRC Roofing (photos by National Coatings Corporation). We apologize for the error.

This Month On: *coatingspromag.com*



Online Only

Check out our online-only articles for January and February: anniversary-related content; recaps of this year's World of Concrete, International Roofing Expo, and SprayFoam Convention and Expo; and much more! www.CoatingsProMag.com/articles, www.CoatingsProMag.com/videos, and www.CoatingsProMag.com/podcasts

Feature: Cloud Computing 101

Are you using cloud computing at your coatings contracting company? Here are 10 things you need to know about this on-demand system.



Feature: Stop Ransomware

Cyber attacks are happening. To stop ransomware, be sure to follow three key areas: cybersecurity hygiene of your employees, proper practices by your IT department, and your data backup strategy.



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Tnemec Acquires Epoxytec for Water, Wastewater Solutions



Protective coatings and linings manufacturer Tnemec acquired Epoxytec International, Inc., an innovative manufacturer of protective and structural-grade coatings and linings. The deal brings together two family-owned companies to offer structural-grade epoxy solutions on a larger scale.

Over the years, Epoxytec has become a respected manufacturer in the trenchless rehabilitation market. The company focuses on epoxy repair as well as coating and lining technologies for construction and industrial maintenance. Its products offer protection of steel and concrete in industries such as water and wastewater, mining, energy, petroleum and gas, marine, and more. Given that success, Epoxytec recently expanded to launch separate brands. These brands include CLADLINER for manhole rehabilitation and lining systems and MCOR Products, described as a line of specialty repair materials formulated to rehabilitate and protect against the effects of heat, abrasion, and chemical attack in heavy industries. For more information, contact: Tnemec, (816) 483-3400, www.tnemec.com.

ASSP Issues New, Revised Safety Standards

As a global leader in workplace safety and health standards, the American Society of Safety Professionals (ASSP) published several new and revised voluntary national consensus standards. With regulatory requirements being slow to change and often out of date, compliance is not sufficient to protect workers, according to ASSP. As such, voluntary national consensus

standards provide the latest expert guidance and fill gaps where federal regulations don't exist.

New standards include ANSI/ASSP/ISO 45003-2021, "Occupational Health and Safety Management — Psychological Health and Safety at Work — Guidelines for Managing Psychosocial Risks"; ANSI/ASSP Z359.9-2021, "Personal Equipment for Protection Against Falls — Descent Controllers"; and ANSI/ASSP Z459.1-2021, "Safety Requirements for Rope Access Systems." Revised standards are ANSI/ASSP A10.38-2021, "Basic Elements of an Employer's Program to Provide a Safe and Healthful Work Environment"; ANSI/ASSP A10.47-2021, "Work Zone Safety for Roadway Construction"; ANSI/ASSP Z359.11-2021, "Safety Requirements for Full Body Harnesses"; ANSI/ASSP Z359.14-2021, "Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems"; and ANSI/ASSP Z590.3-2021, "Prevention Through Design Guidelines for Addressing Occupational Hazards and Risks in Design and Redesign Processes." For more information, contact: ASSP, www.assp.org.

AkzoNobel Earns Royal Seal in Sustainability Leadership



AkzoNobel recently received the Terra Carta Seal, which was launched by the Prince of Wales. The Terra Carta

Seal is a major new award, which recognizes global companies that are driving innovation and demonstrating a commitment to the creation of genuinely sustainable markets. Thierry Vanlancker, CEO of AkzoNobel, accepted the honor.

As the only paints and coatings manufacturer to receive the prestigious honor, AkzoNobel is among an

elite group of companies who have been acknowledged for holding a leadership position. In addition to a goal of reducing carbon emissions by 50 percent by 2030, the company is also targeting 100 percent renewable electricity and zero non-reusable waste, also by 2030. In addition, AkzoNobel recently became the first paints and coatings company to have science-based sustainability targets officially validated by the Science Based Targets initiative (SBTi). For more information, contact: AkzoNobel, (629) 802-3999, www.akzonobel.com.

Polyglass Joins the Metal Roofing Alliance

Polyglass U.S.A., Inc., a leading manufacturer of roofing and waterproofing systems, has announced its new membership with the Metal Roofing Alliance (MRA). As a material supplier, Polyglass is joining as an accessory member to the association. This level of membership allows for a partnership between Polyglass and the MRA, with a mutual benefit of sharing expertise within the industry.

"The MRA is the leading voice for companies and professionals involved in the residential metal roofing industry, which has experienced double-digit growth over the past several years," said Marco Sieber, Polyglass' national product manager. "Polyglass manufactures several premium metal roofing underlayments, including Polystick MTS Plus, Polystick XFR, and Polystick P, which provides the homeowners with quality and durable secondary water protection for their home." For more information, contact: Polyglass, (888) 410-1375, www.polyglass.us.

Chemours Releases Coatings Sustainability Poll Results

Global chemistry company Chemours released its coatings sustainability poll results, showing that 63 percent

of coatings professionals identify balancing sustainability and cost as their greatest challenge to advancing sustainability in coatings design. More than 220 coatings professionals completed the poll during the recent 2021 European Coatings Show (ECS) Conference and European Coatings Journal (ECJ) webinar. Other professionals cited coatings quality or performance tradeoffs, regulatory requirements and uncertainty, common goals from supply chain producers, and requirements for data and analytics — in descending order of popularity — as their greatest challenge.

“Too often, our conversations around sustainability focus solely on what’s inside the can — and while that’s critically important — we know environmental impact expands beyond the can,” said Angela Sauvage, global coatings product development manager at Chemours. “We believe a holistic view to product sustainability is the key to unlocking value — and potential cost savings — for our customers and end consumers.” For more information, contact: Chemours, (800) 441-9484, www.chemours.com.

Jones-Blair Brand Returns to North America



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Hempel announced the return of its iconic Jones-Blair brand with a refreshed brand identity, logo, and website. Jones-Blair is broadly specified across oil and gas and industrial markets and is recognized for high-performance, high-gloss, anticorrosion coatings. With more than 90 years of proven performance in the field, Jones-Blair has been a trusted partner for owners and applicators.

“We’ve been listening to our customers, heard they wanted the Jones-Blair brand to return, and today, Jones-Blair is back,” said Todd Cottrell, Hempel’s vice president for the Americas region. National Coatings & Supplies (NCS) will be the exclusive national distributor of the Jones-Blair product range.

Hempel acquired U.S. firm Jones-Blair in 2015 and integrated it into Hempel’s more extensive brand portfolio in 2017. Hempel also acquired Jones-Blair’s Neogard brand, a U.S. manufacturer of high-performance coatings to protect the building envelope through vehicular and pedestrian traffic coatings, protective roof coatings, seamless flooring, and elastomeric wall coatings. For more information, contact: Jones-Blair, (833) 433-6735, www.jones-blair.com.

Guardair Corp. Appoints New Director of Sales



Guardair Corp., known as the largest U.S. manufacturer of Occupational Safety and Health

Administration (OSHA)-compliant safety air guns and pneumatic vacuums, announced the addition of Gerald (Jerry) Bruening as director of sales. Bruening spent the past 25 years of his career in manufacturing. Most recently, he held the position of Eastern regional sales manager at Tractel Corp., a leading supplier of fall protection and safety equipment. In his new role, Bruening is responsible for developing

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sales strategies and operations for industrial distribution partners and customers to grow both revenue and market share. “Jerry’s background implementing and managing sales activities, identifying new market opportunities, and outlining actions to bring new business is a tremendous asset as we continue to grow,” said Tom Tremblay, president of Guardair. For more information, contact: Guardair, (800) 482-7324, www.guardair.com.

Elizabeth F. Whited Named to RPM Board of Directors



Specialty coatings, sealants, and building materials company RPM International Inc.

announced

that it elected Elizabeth F. Whited to its board of directors effective Oct. 22, 2021. She will serve on RPM’s compensation committee and will stand for election by the stockholders at the 2022 annual meeting.

Whited is executive vice president and chief human resource officer at Union Pacific Corp. Ranked at 153 on the Fortune 500 list, Union Pacific is one of America’s leading transportation companies. Its principal operating company, Union Pacific Railroad, is North America’s premier railroad franchise, covering 23 states across the western two-thirds of the United States. With revenues of \$19 billion, Union Pacific is publicly traded on the New York Stock Exchange. For more information, contact: RPM, (330) 273-5090, www.rpminc.com.

Makinex Appoints New President for Americas

With current and future partnerships in mind, and after a detailed extensive search, Makinex has appointed Steve



Chamberlin as president of the Americas region. In that role, Chamberlin will assume day-to-day leadership of

the company’s growth strategy. His role will be instrumental in driving operational alignment as the group’s global footprint continues to expand.

According to the company, Chamberlin has broad experience having led high-growth, small-to-medium businesses as well as much larger businesses. Most notably, he was recently president of Husqvarna Construction Products Americas for eight years. “I’m looking forward to working with the entire Makinex team to continue and accelerate our growth in the Americas,” Chamberlin said. “In addition, I am very excited to be back in the construction products industry and working with our fantastic customers.” For more information, contact: Makinex, (855) 625-4639, www.makinex.com.

Diamond Vogel Celebrates Groundbreaking for New Innovation Center



Diamond Vogel celebrated the groundbreaking for a new, \$15 million innovation center with a ceremony on Oct. 13, 2021. The facility in Orange City, Iowa, will add 36,000 square feet (3,344.5 m²) of state-of-the-art laboratory and office space, allowing up to 60 research and development scientists to collaborate on improvements and

advancements to Diamond Vogel’s extensive line of paints and coatings. Diamond Vogel partnered with the architectural firm CMBA Architects based in Sioux City, Iowa, to design the project and selected Hoogendoorn Construction from Canton, South Dakota, to manage the project’s construction. Construction is now underway, with project completion anticipated by the end of 2022. For more information, contact: Diamond Vogel, (800) 728-6435, www.diamondvogel.com.

ACI to Develop Concrete Pool and Watershape Code

The American Concrete Institute (ACI) announced the formation of a new committee whose mission is to develop and maintain code requirements for concrete pools, spas, and other recreational watershapes. The ACI Committee 322, Concrete Pool and Watershape Code, hosted its inaugural meeting on Oct. 18, 2021.

Under the leadership of chair Charles Hanskat, executive director of the American Shotcrete Association, the committee will work in direct response to an expressed industry need for code requirements that specifically address crack control, watertightness, and continuous exposure to water with wetting and drying that are essential to long-term durability and serviceability of pools. “Existing industry codes cover a massive scope of all liquid-containing structures in water, wastewater, and industrial process applications, and this new code requirement will directly address the structural design of concrete pools,” Hanskat said. For more information, contact: ACI, (248) 848-3800, www.concrete.org. **CP**

TRAINING OPPORTUNITIES

Waterborne, High-Solids, and Powder Coatings Symposium



From its inception, the Waterborne Symposium has been organized and executed by faculty, staff, and students

from the School of Polymers and Engineering at the University of Southern Mississippi (USM). Proceeds from the symposium are used for various elements of academic program development, including graduate student stipends, junior faculty development, equipment acquisition and

maintenance, and scholarships for undergraduate students majoring in Polymer Science and Engineering, most of whom enter the coatings or related polymer industries upon graduation.

The 49th Annual International Waterborne, High-Solids, and Powder Coatings Symposium will be held at the Sheraton New Orleans Hotel in New Orleans, La., from Saturday, February 20 to Friday, February 25, 2022. The event's mission is to administer the preeminent educational and technical forum in the United States directed to the science and technology of surface coatings and to provide revenue to support and advance students attending the School of Polymers and Engineering at USM. Attendance to the symposium is \$950

for regular guests and \$600 for students.

The symposium will present a Fundamentals of Coatings short course designed to provide attendees an elementary introduction to coatings. The course material will discuss fundamentals of the key ingredients used in coatings (i.e., polymers, pigments, additives, and solvents). The course, taught by Dr. James W. Rawlins, Professor of Polymer Science at USM, will also be available virtually for a limited time. This one-day add-on course can be added to any two-day short course packages, along with a 10 percent discount.

For more information, contact: The Waterborne Symposium, www.waterbornesymposium.com. **CP**



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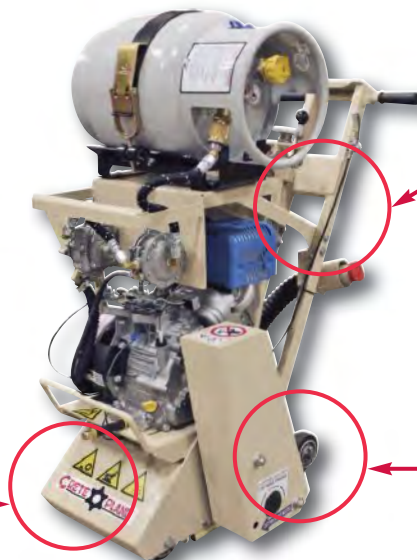
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Rust-Oleum Manager Shares His Formulation for Success

By Ben DuBose

Photos courtesy of Rust-Oleum



November 2021 marked the 20-year anniversary of *CoatingsPro Magazine*. And for coatings manufacturer Rust-Oleum, another big milestone was achieved. The company is celebrating its 100th anniversary!

In 1921, sea captain Robert Fergusson noticed that fish oil prevented rust from forming on his ship's metal deck. Working with a chemist, Fergusson developed one of the world's first rust-preventive paints — and Rust-Oleum was born.

Starting with just 24 paint colors, Rust-Oleum has since grown to be a global leader in manufacturing innovative coatings that empower both do-it-yourselfers and professional contractors. The company strives to honor the same innovative spirit that started Rust-Oleum a century ago in categories including small project paints, cleaners, primers, automotive, industrial, high-performance coatings, wood care, and more.

For about the past 10 years, David O'Bryan Jr. is one of Rust-Oleum's leaders who has played a key role in the company's ongoing success. Today, he's the technical service manager for the company, and his licenses and certifications have included being Occupational Safety and Health



Administration (OSHA) 10; a Level 3 Coating Inspector under NACE International; a Level 2 Concrete Coatings Inspector (CCI) via SSPC: The Society for Protective Coatings; and a Level 1 Architectural Coating Technologist by the Master Painters Institute (MPI). (MPI has since been acquired by what is now the Association for Materials Protection and Performance [AMPP]).

With SSPC and NACE combining in 2021 to AMPP, O'Bryan is acutely aware of the value that an association can

have to an individual, company, and the industry at large. As such, we invited O'Bryan to our *CoatingsPro* podcast series to share what he sees as keys to his personal success and beyond. Topics include the feedback he's heard from coatings contractors regarding their needs and challenges on the jobsite, how new coating technologies are changing the landscape entering 2022, and why industry associations like AMPP can help move companies and careers forward.

Read on for a Q&A transcript of select portions of that conversation, listen to the complete interview at coatingspromag.com/podcasts, and read what Rust-Oleum has been up to specific to the concrete industry in the 2021 *Concrete Covered* supplement.

Q: Tell us about your role at Rust-Oleum and your career in the industry.

I've been in the coatings industry since 1990, starting in sales as a store manager, sales representative, and commercial sales manager. I shifted my focus at the end of 2009 and took on the challenge of a new audience. At that point, I began consulting with architectural and engineering (A&E) firms in the role of A&E sales manager, which led me to Rust-Oleum and my current role.

I joined Rust-Oleum in 2012 to help re-start their architectural and engineering department, and the focus was working with A&E firms to discuss industry standards, specifications, and products. In 2018, I was promoted to manager of Rust-Oleum's technical

Member Profiles highlights various SSPC and NACE members in AMPP. Connect with our members!

AMPP News continued on page 16



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AMPP News continued from page 14

service department. This department handles all things technical for our North American business and our international business. The team functions are specifications, warranties, jobsite surveys, failure analysis, product recommendations, product application training, and the creation and revisions of technical data sheets, among other things. The technical service team members are all members of AMPP, and they hold NACE, SSPC, and other association certifications.

Q: *For anyone who does not fully know the company's scope, tell us about how Rust-Oleum serves the coatings industry. For example, I know you're celebrating your 100th anniversary, so clearly you all have been doing this for*

quite a while. What is your overall scope, within coatings?

Rust-Oleum was founded on the principle of creating innovative products, and as you mentioned, is currently celebrating its 100th year in business. In 1921, sea captain Robert Fergusson noticed that when fish were dropped on the deck of his ship, the fish oil prevented rust from forming on the ship's metal deck. Working with a chemist, Fergusson developed one of the world's first rust-preventive paints... That's how Rust-Oleum was born: a sea captain and fish oil.

Back then, we started with just 24 colors of paint, and now Rust-Oleum has grown to be a global leader in manufacturing innovative coatings that empower do-it-yourselfers and coating professionals alike. We strive to

When it comes to concrete floor projects, certain technologies are gaining speed as the industry moves into quicker return-to-service demands.

honor the same innovative spirit that started Rust-Oleum a century ago in all our categories, including consumer-based paints, cleaners and disinfectants, automotive products, industrial high-performance coatings, wood care, and more.

Q: *I know you all are in constant communication with your end users since you want to develop products that meet the current needs out in the field. What are coatings contractors telling you these days about their needs and challenges?*

One of the challenges I hear about in the coatings industry these days is the lack of skilled labor with proper industry knowledge. As a manufacturer, we work with many different trades in the architectural- and industrial-built environment, and having properly trained and knowledgeable applicators is always a key to project success. These contractors can get proper training from local union training programs, assistance from manufacturers like Rust-Oleum, and especially from associations like AMPP, NACE, and SSPC by completing programs like the QP (Qualification Procedure) series. The understanding of surface preparation requirements is critical to coating performance and life cycles, and these QP-type programs assist in gaining the education to accent what applicators are learning in the field.

Q: *From a technology perspective, what are some of the coating technologies that are at the forefront of the industry entering 2022?*

Industrial coating technologies have been fairly consistent over the past 30 years. Most of the industrial coatings for steel structures today still focus on asset protection, based on either cathodic protection with zinc-based primers or through barrier protection with high-build epoxy and urethane coatings. As the industry looks into newer technologies, the emphasis is still based on the

protection of assets for an extended life cycle for the owner. These newer technologies, like self-healing epoxy coatings and advanced urethane and polysiloxane coatings, are driving better corrosion protection, as well as expanded UV [ultraviolet] protection.

When it comes to concrete floor projects, certain technologies are gaining speed as the industry moves into quicker return-to-service demands. These are products like polyureas in place of epoxies when job environments and the service

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performance fit.

But you can't base the job on a quick turnaround and a faster return to service, if the system doesn't meet what they're going to do at the end. You've got to have a system that works for the environment that the customer is looking for. It doesn't matter how quick it's on there if it only lasts a couple weeks. You need something that fits in all places.

But over the years, on the jobs that I've been involved with — whether it's been water tanks, treatment plants, production facilities — it's always been based on proper surface prep, and with the proper type of recommendation to get the customer where they need to be and give them the expected lifecycle they're looking for. The technologies that have been out there for years still accomplish that, but I do see a drive towards extending some of these situations with these newer products that are coming out.

Q: *In terms of associations, how have organizations like SSPC and/or NACE helped both your career and that of Rust-Oleum as a whole?*

Rust-Oleum believes in membership with these associations for industry knowledge as well as for networking abilities. I manage our current SSPC Corporate Sponsor Roster, and I try to keep our employees engaged and involved in education that meets their requirements.

As far as my personal career, I fully believe that if you want to “play in a space,” you should understand the rules of engagement. Early in my career,



I worked more with architectural and commercial coatings, and I focused on associations that would provide networking and education opportunities. The same was true when I became involved with the architectural engineering community. I joined their association and became certified to better understand their project requirements when it comes to specifications and construction documents.

During my whole career, industrial coatings were always a big part of my responsibility, so the relationship with associations like NACE and SSPC became paramount. Proper education and training through the NACE Coatings Inspector Program as well as the SSPC Concrete Coatings Inspector Program helped me gain the industry knowledge that led to my NACE CIP Level 3, as well as my SSPC CCI Level 2

certifications. The knowledge attained during these courses helps me every day with my job functions.

I still try to attend conferences yearly to continue to improve and broaden my education and industry knowledge as well as the networking aspect. I am also a member on two NACE Technical Committees, the SC-02 External Coatings Committee and the SC-23 Protective Coatings for Corrosion Control Committee. I feel that being on these committees helps to understand the evolution of standards as well as offer industry product knowledge when it fits.

Q: *As a manager, what would your advice be to someone new to your company or new to the industry? How can associations like SSPC, NACE, and now AMPP help advance the careers of industry newcomers?*

As I mentioned before, if you expect to be successful in an industry, you need to have an understanding and knowledge of the requirements. Become involved and learn as much as you can to elevate your industry knowledge. Gaining those industry certifications can set you apart from others who are not as driven to move forward or do not have the opportunity.

I still try to attend conferences yearly to continue to improve and broaden my education and industry knowledge as well as the networking aspect.

There are some great mentors out there who are a wealth of knowledge. I have several who I have met and keep in close contact with for advice when needed. Always keep in mind that if you join an association and just pay dues, you are not doing anything to better yourself or the association. Get involved and learn in any capacity that you can, and you will find your way.

Q: *With SSPC and NACE merging to form AMPP, what are you hoping to see from the newly combined association? Where can we help?*

I've enjoyed being a member of both associations separately over the years — from the education side with networking and just the general knowledge and learning that you can pick up. I look forward to the combined synergies of the two of them coming together. I'm also a little concerned because I enjoyed NACE, and I enjoyed SSPC, and I'm looking forward to seeing how they come together. I'm sure this will be done appropriately and properly, and we'll all be fine. Normally when you merge some things, there can be some bumpy roads. But so far, everything that's happened in 2021, they've been very transparent and forthcoming, and I think that most of the members understand the direction we're going.

I also manage our Rust-Oleum MPI program, and with MPI now being part of this combined association, I'm working with the new MPI Task Force to help review the current MPI standards and how they address the needs of the industry. The combined focus of these three platforms, managed and focused in the same direction, can only lead to better programs, standards, training, and certifications. **CP**

CoatingsPro has been featuring legacy SSPC members each month — from coating contractors to equipment manufacturers and everything in between. If you've been an active SSPC member and would like to be featured, or if you'd like

to recommend a peer for this profile, reach out to editor@coatingspromag.com. We are always looking to showcase your hard work in the protective coatings industry.

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Bullet-Proof Marketing Your Business: The Ever-Evolving Shopper

By *Brandon Stanton, Founding Partner of 405 Media Group*

We all strive to be smart shoppers. We want the best deal for the dollars exchanged, and to get the best deal, we've been trained that we have to be smart shoppers. But are we prepared for smart shoppers when it comes to our coatings contracting businesses?

What Is a Smart Shopper?

Smart shoppers are people who:

- Have identified a problem and have explored multiple solutions to fix their problem.
- Understand what they are buying and the capacities of the product.
- Familiarize themselves with the performance expectations and price points so they are not over- or under-buying.
- Confirm their research with the contractor/installer of the product (when applicable).
- Build a scope of work that ensures apples-to-apples quotes from all contractor/installers.
- Understand the offering of each of the contractors bidding the work.
- Research the contractor/installer to make sure that that person offers installation of the product that solves their problem, that he/she has a history of satisfied clients, and that he/she offers a warranty on both the work and the product.
- Collect multiple estimates.
- Get a time commitment of job duration and an expectation of business/life interruption while the product is being installed.

If you are reading this and you say to yourself, "Wow, if they are going to do all of that, I don't know if I want



this kind of shopper as a customer," you could be in for some challenging times in the years ahead. In the future, this will be the norm more than the exception.

Why? Because research is easier than ever, and it's only going to be more accessible in the future.

Instead of viewing this type of shopper as a high-maintenance customer, let's look at where an opportunity exists to capitalize on this shift in the shopping process.

Sales of the Past

The first thing to realize is that there's an increasing trend for people to do their own research before reaching out to a company to ask for an estimate or for information. When consumers are asked why they are doing the research themselves, the most common answer is, "I wanted to come to my own conclusion versus being sold by a salesperson."

If you decode the hidden message here, what they're saying is, "I believe what I read/research, and the salesperson is full of BS trying to take my money."

For a long time, this has been the sentiment of consumers, but they had limited tools, so they had no options. As research tools are made available, the shopping process is changing.

Pre-2010, the Yellow Pages was the primary tool for finding a company to help you if you had a problem. They were made of a series of ads that would range from a couple of lines to insanely priced full-page options. Many people would hesitate to call those companies with the full-page ads because they thought they would pass on the marketing expenditures to the end customer.

On the opposite side of the spectrum, you'd find companies that took out a tiny ad that was often overlooked because of the limited visibility. Their credibility was in



question, too, because they couldn't afford anything more than a small ad.

This obviously gave the company who took out the medium-sized ads the best chances of capturing the business.

On any ad, limited information was shared: the company's name, logo, phone number, and maybe one tag line (e.g., "Family owned and operated since 1972"). Because of this, no one company was really pushing the sales process further than any of the others.

It was up to the salesperson who answered the prospect's call to move the potential client further into the sales process. Salespeople did this by listening to the customer's project scope, scheduling a time to go look at the project, and explaining why their company was a better option than the competition.

If we broke the sales process into a percentage, it would be fair to say that pre-2010, the salesperson handled about 97 percent of the sales process, and the prospect was only about 3 percent sold on the company before contacting them.

That's why "sales" was the name of the game. A great salesperson could make a business a ton of money. Great salespeople could also be a great pain in the "you know what" as well because they knew the value they brought and would often not want to operate in any other way except their own.

This would make it very difficult for the culture of the company and for the training of additional sales staff.

A Change Is Taking Place

Around 2010, huge advancements were taking place in both search engine result quality at a local level and internet capabilities on cell phones.

Pre-2010, a lot of the websites that were populating in the search engine were lead-generation sites. If you searched for a service followed by a geographic area (e.g., roof coating Minneapolis), you would run into a list of sites that would ask for your information and send it out to a number of contractors who would pay for that information.

The game changer took place in 2010 when Google Local Business Center (established in 2005) was rebranded as "Places for Business." Then, in 2011, "Get your Business Online" started up in the United States. This allowed businesses to create or claim a profile to tell Google who they were and the services they provided. It was a simple way to get Google to recognize the company.

Before this, Google was relying largely on data aggregators to furnish this information. If a business claimed its profile and filled it out properly, it was more likely to populate in the search results than a company whose information was pulled for the data aggregators. The reason for this is that it gave the users of the search engine a better experience.

In late 2013, Google announced that one-third of searches were taking place locally. This was the point at which businesses realized that the internet was going to be the go-to tool consumers were going to use to find them.

The big question here should be, "Why?" This will help us plan for the future. Why this shift to online? What is the internet providing that the Yellow Pages isn't?

It's All About Information

Think about it: Now, instead of just the company's name, number, and a tag line, as a consumer, I can search and see

if you have the service I am specifically looking for.

I can read the back story of how you got started. I can see if you have experience and a history of doing good work — in the area where I need help. I can see photos of that work. I can read testimonials from past clients. I can possibly see why my experience with your company would differ from what a competitor is offering.

It also gives me the ability to become a smart shopper and take on some of the research noted earlier. All of the items listed here previously would have had to depend on a salesperson to walk me through them. Now, I can do it on my own — *before* I come to you.

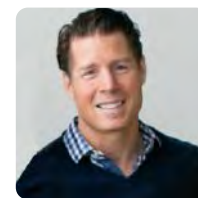
But don't confuse the importance of your website. As I gather that information, I am being sold. I am deciding on who is the best option for me, and chances are high that I already have a front runner whom I will likely choose.

Because of this, you have to recognize that the sale has already begun, and the customer hasn't even yet contacted a company! In most cases, the customer is already 40–50 percent sold before you speak to them.

If you don't view your web assets as a sales system, you're going to be missing out. **CP**

This is the first of three articles. In the second segment of this series, we will look at what your website should look like to give you the best chances of converting a searcher into a customer.

BRANDON STANTON is a founding partner of 405



Media Group, an online marketing company that specializes in fine-tuning the marketing processes for businesses. For more information, contact: Brandon Stanton,

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Productivity vs. Efficiency: They're Different and It Matters

By John Kenney, COO of Cotney Consulting Group

Often, when working with clients reviewing their operations, I am asked, "Productivity and efficiency: Aren't they the same thing?" These words have been repeatedly used incorrectly over time and are often confused because people think they mean the same thing. There are critical differences between the two that you should know to analyze your operation's performance correctly.

Productivity is the output per unit of time, while efficiency is the best possible output per unit of time (i.e., doing things correctly). When you do your tasks correctly, you will hit your maximum level of efficiency and productivity.

For example, if Joe and his six-person crew install 100 squares of a roofing system in a 10-hour day while Mike and his six-person crew install 80 squares of a roofing system in the same 10-hour day, it may look like Joe's crew is the more productive. That would be true if all things considered were equal. But if Joe's crew did not complete everything as they went and required another half day to finish the detail sections, Mike's crew would be 34 percent more efficient than Joe's. This efficiency connects directly to their actual productivity. Ultimately,



although Mike's crew finished fewer squares in the day, the team is more productive than Joe's. This would be easily missed if you only observed the raw productivity of installing the squares.

If we take the example and forecast that over one year and assume that both average crews cost the same, Mike's crew efficiency would add more than \$200,000 to the bottom line.

The message is clear: Crew efficiency is not the only area that you should be focusing on when looking to

add dollars of profit to your profit and loss (P&L) statement. The following are other areas you should be focusing on, too.

Improve Your Decision Making and Workflow

A considerable part of your projects' management is minimizing nonproductive activities that cost your company additional expenses and cause delays. These unfavorable activities include looking for missing project data, dealing with conflict resolution, and correcting mistakes that should have been able to be avoided. To improve the efficiency of your projects, here are some tips to reduce nonproductive activities:

- Review the flow of your decision-making process. Take a close look at your daily site activities and operations. Review how the decision-making flows — starting

When you do your tasks correctly, you will hit your maximum level of efficiency and productivity.



from when it first surfaces. Reviewing your current strategy will allow you to identify areas where you can improve and speed up your workflow, creating a more efficient operation moving forward.

- Measure the current level of productivity. With data, your management team can pinpoint flaws in the workflow and streamline the operation. Creating a performance-based incentive program to reward your crew members and supervisors who meet and beat project budget benchmarks encourages an efficient project workflow.
- Establish an efficient communication procedure. Slow decision making stems from a lack of a proper communication system, and it creates issues. Multiple projects spread out geographically and key decision makers often located back in the home office compound the situation. Find ways to eliminate delays in communicating with upper management in real time. Also, set regular meetings (aka huddles) where your key decision makers can ask and answer questions, brainstorm ideas, and review projects' progress.

Manage Your Worksite; Embrace Technology

The construction industry and, more specifically, roofing contractors lag behind most industries in terms of adopting new technologies. According to recent industry studies, the

construction/roofing industry is second only to agriculture in being the least digitized in technology use. Industry leaders are starting to recognize that technology can be transformational in terms of efficiency, yet more than 60 percent surveyed still use manual and paper processes.

Technology can provide a contractor with a competitive advantage — from estimating and planning your projects to managing your entire administration process. Automation will be the construction industry, and specifically roofing sectors' future, so you need to leverage them before you are left behind.

Listen to the Team and Provide Training

Compared to upper management working offsite, on-site employees will provide better insight into improving the efficiency of your project site processes. These on-site employees have a wealth of first-hand knowledge regarding which equipment works efficiently or which techniques work best. It is essential to conduct regular face-to-face meetings with your team members to ask and get input on workplace issues.

Involve your experienced workers in the planning phase. Involving them early on will allow them to detect flaws in the plan before it becomes a more significant issue.

Your managers need to ensure that employees are thoroughly and explicitly trained for the job. Training is vital for efficiency as it addresses the daily site activities that mount up, and training contributes to project delays and additional costs if done inefficiently.

Coating supervisors need the right management skills and techniques to be able to lead their foremen or subcontractors. You should train all your employees to install new systems or operate new equipment so they can perform their tasks smoothly. Most importantly, especially on roofing and other at-height jobs, companies must

train employees to do tasks most safely without exceptions.

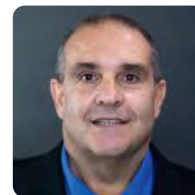
Data Management

Data is a powerful tool in the hands of someone who knows how to manage and interpret it. The roofing industry in particular is throwing away 95 percent of the information it produces. This means that valuable knowledge is thrown out of the window daily, and many mistakes will inevitably be repeated.

You must learn to collect and interpret the data and provide your field operations with valuable feedback. Using a robust data management process will allow you to understand the operational process better and ensure that your future projects will have fewer and less costly mistakes and be more profitable.

To sum it all up, boosting your efficiency on site is very challenging. However, with the right plan and steadfast effort, you can take your coating company's efficiency management game to the next level. Digital tools provide terrific assistance with that, and you can rest assured that your work will be done in a timely, precise, and more profitable manner. **CP**

JOHN KENNEY has more than 45 years'



experience in the roofing industry. He started his career by working as a roofing apprentice at a family business in the Northeast U.S. and moved in to operating

multiple Top 100 Roofing Contractors. As Chief Operating Officer of Cotney Consulting Group, Kenney is intimately familiar with all aspects of roofing production, estimating, and operations. During his tenure in the industry, he ran business units associated with delivering great workmanship and unparalleled customer service while ensuring strong net profits for his company prior to joining Cotney Consulting Group. For more information, contact: John Kenney, jkenney@cotneycl.com.

Coating Inspection Documents: Checklists and Daily Report

By *Mark McCarter, Owner of Southwest Protective Coatings, Inc.*

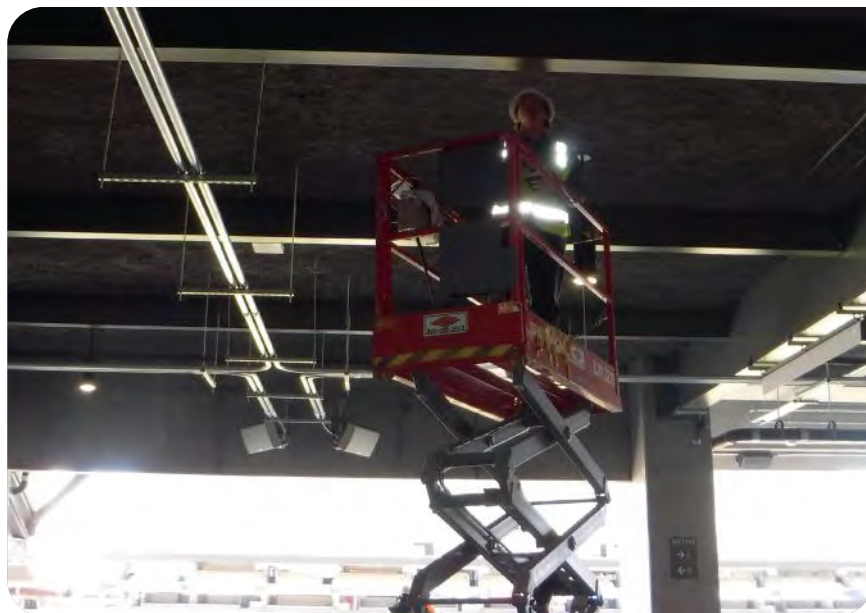
Photos courtesy of the author

Protective coatings are important for preventing corrosion in virtually all major industry sectors, and coating inspection is critical for quality management to ensure the maximum effectiveness of those protective coatings. As with other types of construction and building inspectors, coating inspectors have a broad range of technical skills and knowledge for performing complex testing and inspection tasks, which need to be formally documented.

Of the many things that construction and building inspectors have in common, one is the requirement to document findings in writing and keep daily logs. There are numerous types of inspection reports that vary in content and format, and each type of document needs to be tailored to the specific task requirements. The "Checklists" and "Daily Inspection Report" covered here are just two of the many reports needed, but they are important, and we will keep them generic in nature for the purposes of this writing.

Inspection Checklists

The origins of the modern checklist date back to October 30, 1935, at Wilbur Wright Field in Dayton, Ohio, when the U.S. Army Air Corps



NACE-certified Coating Inspector-Level 1, Special Inspector-Structural

held a competition for airplane manufacturers vying to build the next generation of the long-range bomber. The prototype Boeing B-17 (then known as the Model 299) crashed, killing two of the five crew members. An investigation found that the gust locks had not been disengaged from the cockpit prior to take off. Because the operation of the B-17 was so complex, Boeing determined it was essential for pilots to use a pre-flight checklist.⁸

"Under conditions of complexity, not only are checklists a help, they

are required for success."⁷ Inspection checklists are widely used for quality control, and some benefits include:

- Standardization of the inspection process;
- Efficient use of time and resources;
- Confidence in the accuracy of inspection results.

The most effective checklists are simple, and they focus on the specific requirements of the inspection tasks. Checklists for standard practices and test methods are useful to ensure formal compliance with the written procedures (Figure 1). Other checklists can be used to delineate shop drawings and submittals, specification requirements, condition surveys, safety procedures, and instrument calibration and operating instructions.

Checklists for inspection procedures are important because of the variable nature of the information that needs to be documented for

The most effective checklists are simple, and they focus on the specific requirements of the inspection tasks.

ASTM D7091¹ Checklist

- Verify the measuring instrument conforms to section 5.3 thru 5.6
- Check calibration of measuring instrument per section 7.1 (certificate of calibration)
- Verify accuracy of measuring instrument per section 7.7 (one-point or two-point procedure)
- Determine the size of the structure to be tested, see section 8.2
- Determine the frequency for measurements per section 8.2
- Perform thickness measurements using the determined frequency per section 8.2
- Verify accuracy of instrument after measurements have been acquired per section 7.7.2
- Record and report the results per section 9

Figure 1. Example checklist for ASTM Standard Practice for DFT measurement

different types of inspections. Two of the standards that exist for coating inspection are ASTM D3276, "Standard Guide for Painting Inspectors (Metal Substrates)" and ASTM D6237, "Standard Guide for Painting Inspectors (Concrete and Masonry Substrates)." Each standard has an Inspection Checklist in the appendix.

This example is shown for demonstration purposes only, and as you can see, the checklist should be broken into smaller groups for efficient use. Please refer to the official ASTM standard because it contains valuable information not shown here, such as the test methods and equipment needed for each task and useful commentary for each section.

Daily Inspection Report

According to SSPC: The Society for Protective Coatings' Quality Control Forms, "One of the most important responsibilities of a coatings inspector is to document the results of inspections in a clear, concise, and timely manner. Without timely, formal documentation, many of the details of an inspection may be lost or forgotten. Documenting specific, key items as the work progresses essentially tells the story of the project — what work was done on a given day and work shift, what the work conditions were, whether the work met requirements, what non-conforming work was done and how it was repaired, etc."⁵

The scope and volume of data

included in the inspection report will vary depending on the size and complexity of the project or task. Most coating inspection reports will be centered around common data elements that create the report content. There are numerous templates available on the internet, and most are generic, but some are designed for specific purposes. In my experience, the most effective reports are customized to the task, contain only data that's pertinent to the project, and are easy to interpret for the reader. I would recommend that you create reports that are also project oriented, meaning there'll be one report created each day for a specific

of background, history, observations, conclusions, and recommendations, and it is usually used for assessments, summaries, and final reports. (I'll briefly cover forms and reports in the next section.)

As you can see from the above lists, coating inspection can require the acquisition of a considerable amount of data: some of which won't change for a series of reports, some will vary according to the inspection tasks, and some will be unique for each report. There may be some need or desire to use paper forms for documentation, but let's focus a bit on electronic systems for data collection and reporting.

Data management is a big topic. There are numerous options for documenting inspection activities using both off-line devices and on-line services.

project (hence, daily report) even if multiple inspections are performed for the project. However, some jobs may require individual inspection reports for the same project or task.

The content of a typical inspection report includes technical writing, which will actually be closer to a form than a report. A report typically follows the classic outline

Digital Technology and Data

Data management is a big topic. There are numerous options for documenting inspection activities using both off-line devices and on-line services. A wide range of software applications are available for desktops, laptops, tablets, and smartphones. Test instruments, digital cameras, and

Type of Inspection(s):

Location of Beams Inspected

Itemized Location(s):

Tests:

Test	Result Summary:	Details (Page No.)
Visual Examination		
Surface Profile		
Base Metal Reading (BMR)		
Dust on Surface		
Dry Film Thickness (DFT)		
Other		

Environmental Condition:

Comments:

Inspection report excerpt showing location details, Adobe Acrobat

digital voice recorders have software for storing, transferring, renaming, and formatting data for connectivity with software programs used for documentation.

Forms are primarily used for data input, and reports are used for presenting data in a structured and useful format. Forms are designed to be used on screen; reports are designed to be printed or saved as a file. There are many options for creating and using fillable forms for data collection and designing professional-looking reports to convey the information. But the real power, in my opinion, is in storing the data in a database

management system (DBMS), which has advantages such as:

- Efficiency of data collection and report generation;
- Consistency and accuracy of the inspection data;
- Data integrity and security for multiuser systems.

The downside is in the complexity of the initial setup. There are template files available for tables, forms, reports, and databases. It's possible to convert existing software files — and even hard copies — to a database; however, extensive customization and some programming skills may be needed to fully implement a functional

DBMS. A major feature of a database is the ability to utilize the data for various purposes, including to:

- Create different types of technical reports;
- Analyze data for project management;
- Interface and share data with other management systems.

The learning curve may be steep for those wishing to upgrade from using word processing, spreadsheets, or other file-based applications, but, in my experience, it's worth the effort to understand how a DBMS works. Even a simple implementation of a database can significantly improve the efficiency and accuracy of inspection report management.

One thing that does need to be taken into consideration here is cyber security. Inspection reports, and construction documents in general, can contain confidential information that may not be allowed to be accessed or transmitted using web-based applications or methods. For large projects, the document control procedures are usually covered in the specifications. Some owners or clients may have special requirements for how information is exchanged, which makes it desirable for reporting methods to be flexible in an ever-changing digital environment.

Summary

According to *The Checklist Manifesto*, "It is common to misconceive how checklists function in complex lines of work. They are not comprehensive how-to guides, whether for building a skyscraper or getting a plane out of trouble. They are quick and simple tools aimed to buttress the skills of expert professionals."

From SSPC's point of view, "Well-prepared documentation forms provide the necessary guidance for monitoring whether the work conforms to project specifications. Forms

From SSPC's point of view, "Well-prepared documentation forms provide the necessary guidance for monitoring whether the work conforms to project specifications..."

Inspector's Corner continued on page 28

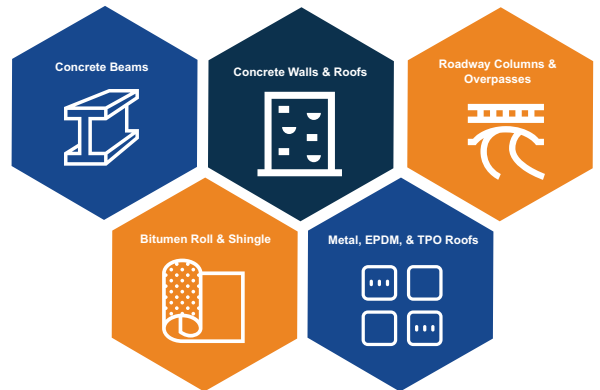


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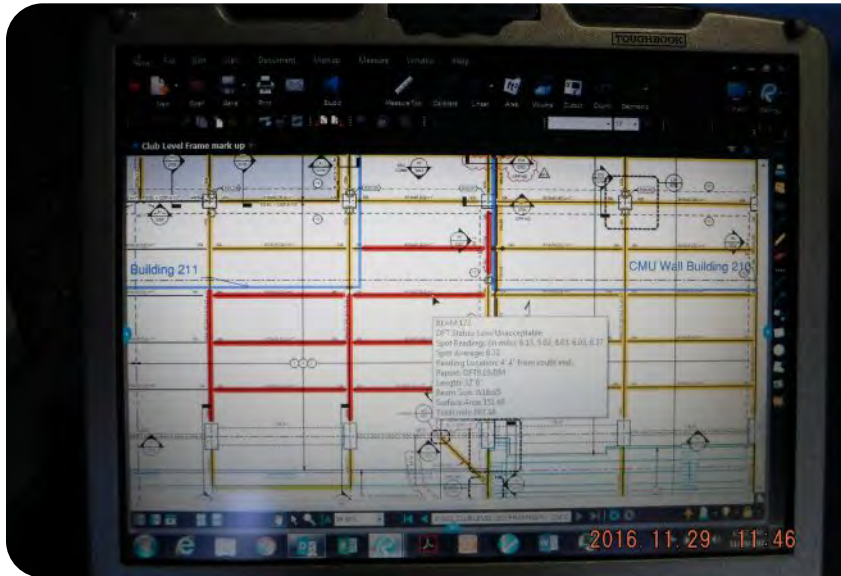


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```
VERSION 1.0 CLASS
BEGIN
  MultiUse = -1 'True
END
Attribute VB_GlobalNameSpace = False
Attribute VB_Creatable = True
Attribute VB_PredeclaredId = True
Attribute VB_Exposed = False
Option Compare Database
Option Explicit

Dim GrpArrayPage(), GrpArrayPages()
Dim GrpNameCurrent As Variant, GrpNamePrevious As Variant
Dim GrpPage As Integer, GrpPages As Integer

Private Sub PageHeaderSection_Format(Cancel As Integer, FormatCount As Integer)
  HeaderRptNum = Me!DateReportNum
  HeaderID = Me!Event
  HeaderDate = Me!EventDate
  HeaderTime = Me!EventTime
  HeaderJobDesc = Me!JobDescription
  HeaderJob = Me!JobName
  Dim i As Integer
  If Me.Pages = 0 Then
    ReDim Preserve GrpArrayPage(Me.Page + 1)
    ReDim Preserve GrpArrayPages(Me.Page + 1)
    GrpNameCurrent = Me!Event
```

VBA code for report automation, Microsoft Access

are a simple and effective tool for documenting inspection work in an efficient manner without overlooking any of the requirements.”⁵

Coating inspectors play an important role in the construction industry, and the technical aspects of their work are enhanced by having the skills to present data in clear and concise documents that are readable and useful to the end-user and accurately detail the required

information. Thus, using checklists and standardized reports and implementing a management system should increase the quality and accuracy of the inspection process. **CP**

Coating inspectors play an important role in the construction industry.

MARK McCARTER is the owner of Southwest Protective Coatings, Inc. in Scottsdale, Ariz., which provides coating inspection and consulting services. He's been a member of NACE and a NACE Certified Coating



Inspector since 1999. For more information, contact: Mark McCarter, markmccarter@swpci.com, <https://swpci.com>.

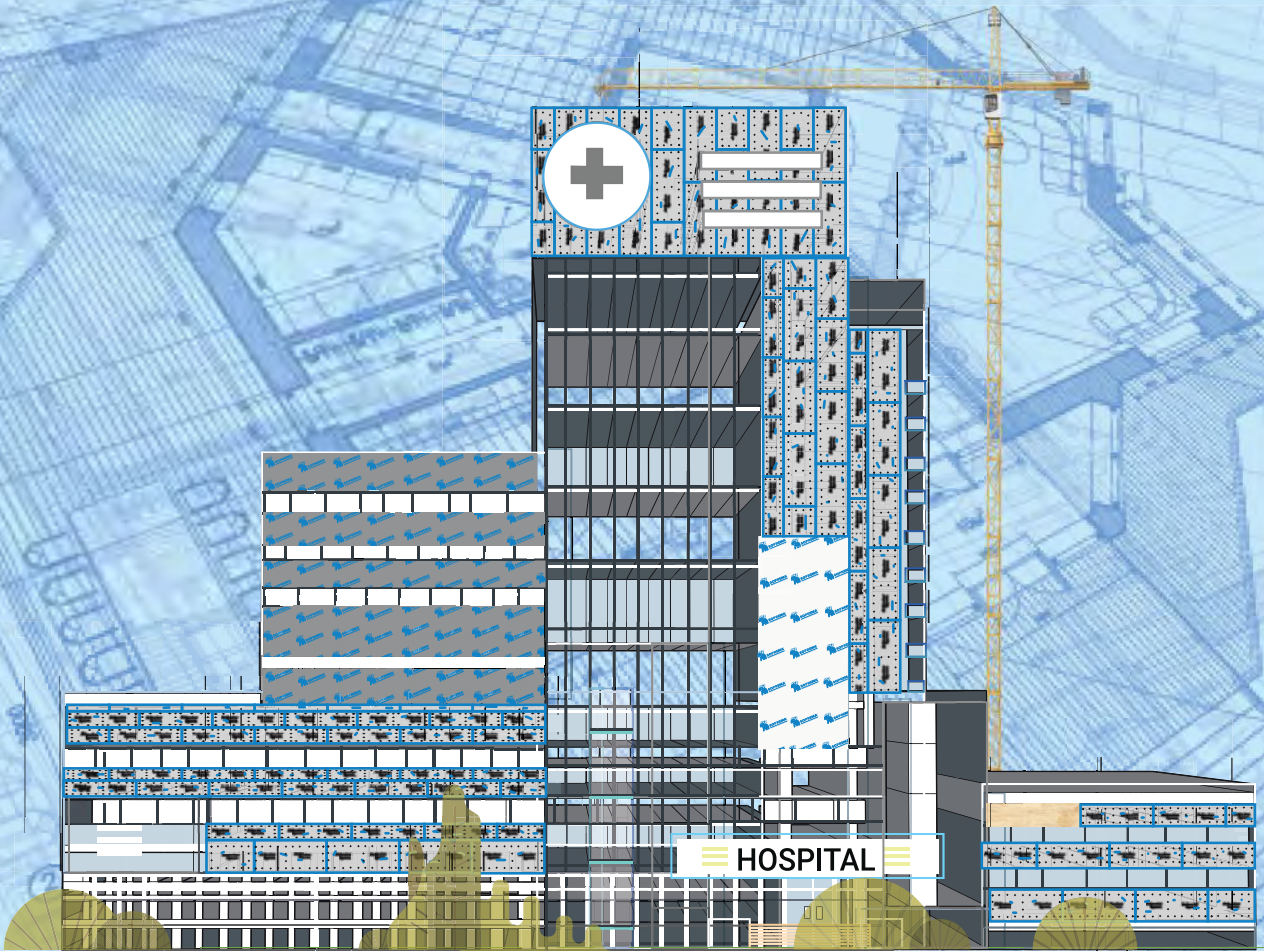
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OSHA's Recent Patterns, Priorities, and Processes

By Jack Fearing, CPEA, Managing Partner for Fearing International Group LLC

The Occupational Safety and Health Administration (OSHA) has really been under the gun, so to speak, from the previous and current administrations during the ongoing COVID-19 pandemic. Each administration has focused on different areas, but several patterns have emerged in three distinct areas. In terms of what is happening, coatings contractors need to be aware of new and enhanced regulations, aggressive enforcement, and increasing penalties.

New and Enhanced Regulations

First of all, OSHA has been using new and enhanced regulations as a result of COVID-19 to support employers' compliance efforts. The administration has been using what's called discretionary enforcement, and it has allowed a lot of us to operate without having perhaps 100 percent compliance with the new, interim, or revised standards that OSHA has promulgated.

In the past few years, there have been a great deal of both interim and temporary standards. Even more recently, the temporary standards have increased. For example, in the personal protective equipment (PPE) realm, there has been an emphasis on respirators in general and face masks in particular. There have also been significant changes in the OSHA recordkeeping interim standard, beginning in April of 2020, which includes, among other things, adding a COVID-19 log. That changed again in May of 2020, and then, of course, as a result of that, a lot of things have happened. All of that has required us perhaps to be a little bit more diligent in terms of paying attention to what's coming down the pike with OSHA



recordkeeping and other regulations.

You've also got updates on hazard communication and drug testing standards, too. And after many attempts, a heat stress standard is on the horizon for 2022. As these topics begin to emerge in terms of new, or enhanced, regulations, it's important that you recognize your opportunity to comment on them as appropriate, so keep an eye out on progressing standards that may impact the construction industry.

More Aggressive Enforcement

In fiscal year (FY) 2020, OSHA conducted more than 6,600 inspections and issued 17,000 citations. Things haven't come to a stop by any means just because of COVID-19. What has happened is that OSHA's unprogrammed inspections have pretty much dwindled down considerably, and, obviously, inspections have gone more and more to using various technology tools, such as using Zoom meetings, cell phone

calls, and other means to prevent their inspectors from perhaps being exposed to COVID-19 and other potential jobsite hazards.

In 2018, OSHA began using drones in inspections, and that changes the landscape significantly. In terms of the OSHA doctrine, this can affect the use of "plain view." If OSHA is conducting an inspection and they're going to a targeted area but they see other potential violations, they can redirect at any time. Certainly, using a drone over a construction site would open that up quite a bit.

Also, the enforcement area has expanded. The OSHA budget for 2021 and beyond has been increased by more than \$64 million, and that's to include an additional 350 new OSHA compliance inspectors. So we can expect to see more inspectors in the field, particularly as COVID-19 begins to become a little bit more manageable in terms of what

everybody's doing both as the inspectors and, of course, as the employers.

Then, of course, there's new leadership. The leadership of the Secretary of Labor is a former mayor of Boston and a former trade association president. The new OSHA administrator is a former Cal/OSHA administrator. As a result of that, we can expect that they will be looking at things perhaps a little bit differently than previous leadership as we go along.

Increasing Penalties

Every year since 2016, OSHA penalties automatically increased 2 percent. In 2020, there was more than \$60 million in penalties just in the construction industry. The top five violations alone in the construction industry resulted in almost \$5 million in penalties (the highest single penalty in FY2020 was \$1.9 million). So, again, you can expect to see more and more of that type of increase in the future.

The OSHA Inspection Process

So how should you be proactive before and

during an OSHA visit?

OSHA inspections are unannounced. Even though advance notice is typically never done unless there is an unusual circumstance, you are required to allow them to enter without delay; however, you can push back in terms of requesting a warrant or some other official clearance. I would recommend against that, though. In fact, I would verify their credentials, make them comfortable, alert your team, and then go from there.

It is the OSHA inspector's responsibility to investigate all of the pertinent conditions of the complaint and request a litany of related information such as injury & illness logs, emergency response procedures, and other related compliance documents. They will question the employees that they are going to be interfacing with privately. It's very important that you understand that if an employee has a complaint that results in an OSHA inspection, OSHA can interview that person privately. The affected employee can also remain anonymous or

not, and either way should not fear any retaliation.

One of the key components of an inspection is that the scope of the inspection will certainly expand as appropriate, based on what the inspector sees. This means that the tour route you select to accompany them to the site of the alleged violation is important.

Preparing for an inspection is something that you should be thinking of already, and if you haven't, I strongly recommend that you do. It's very important that you have a team of employees available to participate in an OSHA inspection should one occur. As a result of putting that team together, you should also develop some procedures and provide some training to help them understand what their role would be.

The nature of the inspection will dictate what the inspection team makeup should look like and who would be involved. Like most teams, depending on the situation, not all members would be involved in the inspection. You can choose

WORK IT SAFE

WORK AND FATIGUE

Fatigue has been broadly described as "a feeling of weakness, tiredness, or lack of energy."¹ In workplace settings, it is commonly associated with nonstandard schedules, such as night shift work and extended work hours, which disrupt or shorten sleep. Fatigue can also be associated with other workplace factors such as stress, physically or mentally demanding tasks, or working in hot environments. It can stem from a number of different factors, and its effects extend beyond sleepiness. Fatigue can slow down reaction times, reduce attention or concentration, limit short-term memory, and impair judgment.

High levels of fatigue can affect any worker in any occupation or industry with serious consequences for worker safety and health. Learning the risks for fatigue-related events, identifying the sources of fatigue, and using strategies to manage fatigue will help keep workers safe and healthy.

The mission of the National Institute for Occupational Safety and Health (NIOSH) Center for Work and Fatigue Research is to expand on established work on health and safety risks related to nonstandard schedules to include other sources of fatigue. Examples include physically and mentally demanding work, co-morbidities,

hot environments, and other co-exposures. The center works to develop practical, effective solutions to mitigate these risks through collaboration with researchers, policy makers, employers, workers, and health and safety professionals.

In addition, the NIOSH Director's Seminar Series addresses health and safety risks associated with workplace fatigue, evidence-based strategies to reduce these risks, and future directions for research. Among the related seminars presented in 2020: "Reducing Fatigue-Related Work" and "Fatigue Mitigation in EMS – Let's Talk About Evidence, Tailored Recommendations, and Worker Health." Recordings of these archived presentations are currently available on the NIOSH website.

For more information, contact: www.cdc.gov/niosh.

¹ I.A.D.A.M. Medical Encyclopedia [Internet]. Fatigue: [reviewed 2019 Apr 16; cited 2020 Dec. 12]. Available from: <https://medlineplus.gov/ency/article/003088.htm>

who is involved in the opening conference depending on the complaint, but you may want to have everyone involved in a closing conference so there's no mistake of what you're expected to do. You might include safety personnel, operations, maintenance, human resource people, and even legal. Not everyone will be on the jobsite, but you should make them aware that there's an inspection taking place. Welcome any guidance these jobsite experts can provide, and if there is a violation, they can be involved along with the bargaining unit. You will probably have multiple contractors on the site, and if one is involved in an alleged violation, then you can drill down and have other people get involved as needed.

Inspection preparation is a perpetual task that you should be doing to ensure compliance with all applicable standards. Know what you're doing. If you're a typical construction site, you know the big issues are fall protection, safety around powered industrial tools, personal protective equipment, excavations, scaffolding, ladders, and any other hazards specific to the site.

Pay close attention to training. What are you doing to prepare your employees? Look at the current OSHA Top 10 periodically and ask, "Do we have any of these issues on our site?" If so, are you addressing the issues and providing proper training? (Check out Part 1 of Fearing's OSHA discussion on the Top 10 in the November 2021 issue of *CoatingsPro*.)

COVID-19 Implications

One of the big changes is the Emergency Temporary Standard (ETS) related to COVID-19. For example, any injury or illness associated with work-related COVID-19 requires a separate log beyond the traditional OSHA 300 Log. Always know what your recordkeeping metrics are, understand the National Emphasis Programs (NEPs), and ensure you are meeting all requirements.

Unless you're in general industry, the OSHA Site-Specific Targeting (SST) program does not apply to your



operations. However, it may still be included in your organization's written guidance regarding OSHA compliance inspections. Compliance inspection information is often included in the emergency action plan along with other functional responsibilities, and this is a good place for it to be housed.

Assigning Responsibility

Generally, compliance inspections fall under the safety umbrella, but it should be a team effort. If you're going out to an excavation site, you need to talk to the most competent person who can answer questions. The safety representative may not be the right person to give OSHA the answers to preventive maintenance questions. Participating in or managing an OSHA inspection can be a daunting experience, and it helps to have a team familiar with the process and your company's operations.

OSHA Reporting

If you get that knock on the door from OSHA, it may have come through an employee or a third-party complaint. Work-related fatalities must be reported within eight hours of you being notified. And, of course, any serious, work-related injuries that include hospitalizations,

loss of an eye, and amputations must be reported within 24 hours. The key is work-related.

For example, amputation in the OSHA vernacular is a very broad term. Take the time to look up OSHA definitions. Find out how "loss" is defined. When an injury occurs, that's when your investigation should begin, and you have at least 10 different things you must include in your report to OSHA. Remember, you have three different ways to report, including in person, online, and by phone.

Also, you have seven calendar days to enter the incident on your OSHA 300 Log. If it's a work-related incident, the numbers are probably up due to COVID-19 cases. Referrals can also occur, which may come from visitors, salespeople, other federal agencies, or local or state agencies.

NEPs are temporary programs that focus OSHA resources on particular hazards, or high-hazard industries. Construction is a high-hazard industry. The COVID-19 NEP is the newest one. Silica obviously is on the list as well. Amputations is another relatively new one. But excavations, including trenching, has been on NEP's list the longest — since 1985. It's supposed to be a temporary program, but it continues to be an issue as

a result of inspections data.

What to Expect

When a compliance officer shows up at the door, the inspection process will have four steps. First, the officer will tell you why he/she is there and will provide you with identification. Always verify the officer's identity. Shady practices and industrial espionage do happen in real life. Recently, in California, there was a high-profile case of a masquerading compliance officer at a particular site.

Once you have the verification, contact your OSHA compliance team members and conduct the opening conference. The opening conference will set the stage for what happens over the next hour, day, week, or longer.

Prior to the opening conference, the inspector will allow you at least up to four hours to get your team together. Keep in mind that the inspectors are trained professionals, and they do homework before they get there. They arrive ready to go, so you want to be courteous and professional, but you don't want to give them more information than they've requested. They will ask for a great deal of information, including injury records and protective equipment hazard assessments.

We've talked a lot about PPE, and you probably know a lot about it, but anytime an employee wears PPE, there should be a documented risk assessment indicating why he/she is wearing it. You must provide written documentation stating why you determined that the employee needed to wear a mask, gloves, a shield, etc. versus eliminating the hazard involved or using engineering controls to reduce the hazard.

Once you've gone through the opening conference, you will begin what's called the inspection tour or walk around. OSHA uses a Plain View Doctrine, and their plan is to go where the complaint occurred. However, they will deviate as other issues develop during their tour. It's very important that you accompany them and that you have the right people with you as appropriate to answer questions. It's a bit more difficult in construction

than it is in general industry, but if they say it's an excavation issue or scaffolding issue, you need the competent person in attendance. If it's a training issue, you need the authorized trainer, human resources, or whomever conducts and keeps your training records.

Inspectors will look at a variety of related issues. They'll take pictures, they'll interview employees, and if the employee is hourly, it's confidential. If they interview a salaried employee or management team member, they will do that in your presence. They'll take measurements. They'll make observations. A team member should try as best as possible to duplicate whatever they do.

The walk around generally is a one-time event, but it could take multiple days. Once it's completed, you'll have a closing conference. This is where the inspector will tell you what he/she saw

but not whether it's going to result in a citation. Inspectors will give you their view of what they saw, and they may ask you more questions. This is the perfect time to ask your questions.

Whether it's the opening conference or the closing conference, never give the inspector more information than what he or she requests.

In the final step, the OSHA Area Director (AD) will speak with the compliance officer, and they will determine whether or not there will be a citation and related penalty. They will also inform the employer of his/her rights.

Depending on what happens, you can request an informal conference with the Area Director that may or may not include the inspector. They will allow you to provide additional information, but the AD has up to six months to issue the final summary of what's going to take place. The

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AD can also negotiate with the employer regarding penalty amounts during this time.

Potential Penalties

With any OSHA violation, there's a minimum penalty and a maximum penalty. OSHA provides a table that will give you those ranges. This goes up about 2 percent every year. In 2016, the maximum for a serious violation was \$7,000. Now, it's almost double that. And, of course, the same exponential increases are reflected in willful citations and in failure to abate citations.

Failure to abate is when you agree on an item, a process, and a timeline to correct an issue, and you have not made the correction at the time of the follow-up inspection. OSHA can cite you up to \$13,000 per day until it is corrected. Willful and repeat violations are violations indicating that you knew that what you were doing was not correct or not consistent with the standard or with good industrial practices. The circle never stops, if you will, and a repeat violation is clearly a repeat item of the same issue, even at a different one of your locations. These violations could result in what OSHA refers to as egregious violations and a much stiffer penalty.

The penalties on the maximum side can be reduced depending on circumstances. For example, the smaller your company, the greater the reduction. If your company has more than 250 employees, there'll be no reduction. However, your historical good faith, your legacy with OSHA, and if your violations are other-than-serious citations, OSHA will take that into consideration.

General Duty Clause Citations

The OSHA "It's the Law" poster should be prominently displayed to inform all employees about their rights. OSHA also emphasizes your responsibilities in terms of safety and health in the workplace. The General Duty Clause, or 5(a)(1), allows OSHA to cite you when a standard does not exist, providing certain conditions exist. These would include items such

as housekeeping and excessive manual lifting, which could cause a muscular-skeletal disorder injury or illness.

Another frequent offense is the multi-employer citation policy. On a typical construction site, there's an employer on the site, a subcontractor who may create the hazard, other subcontractors that are exposed, and those whose responsibility it is for correcting the hazard. In other words, there's a general contractor, the creating contractor, the exposed contractors, the controlling contractor, and so forth. OSHA considers which is which very carefully before determining which one is liable.

After an OSHA inspection, you have a lot of responsibilities for correcting the violations cited, informing your employees, and posting any citations. Information in this regard is available to you in OSHA's "Know Your Rights After an Inspection" resource guide. Remember, you must post any citations for three working days. You can no longer post it on a Friday afternoon and take it down on a Monday morning.

Hazard Communication

There is also a revised health standard coming, and we'll need to have more emphasis on the communication of hazardous chemicals, or "right to know," at worksites. This includes OSHA's Hazard Communication Standards (HCS) standard, aka HazCom, which has a proposed rule that brings the existing HCS standard up to version seven of the Global Harmonization System (GHS) of Classification and Labeling of Chemicals.

For example, in the construction industry, there are new requirements, particularly in terms of container sizes, and also for aerosols. With container sizes, we had the bulk shipments, and then we had transfer containers. Now we have various sizes — small, very small, and so forth. That's going to create a lot of additional labeling and training requirements for employers.

Inspection Notice Criteria

A question that frequently arises

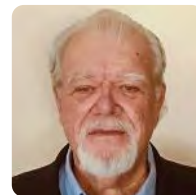
regarding OSHA inspections is: Why doesn't OSHA announce its intention to conduct an inspection in advance? That's a good question. The simple answer is that the OSHA Act does not allow them to. If we dig deeper, it's not difficult to see how that could lead to problems. If you knew that an OSHA inspection was coming tomorrow, this afternoon, or next week, there would probably be a lot of things in place that perhaps wouldn't have been in place if you didn't know OSHA was coming.

Keep in mind that the purpose of an OSHA inspection is to gain a snapshot of the reality of your jobsite or workplace. It probably wouldn't be an accurate representation if you knew the OSHA inspector was coming and you made changes solely for the purpose of the inspection.

Good luck with your inspection preparations, and remember to keep your eye on OSHA's Top 10 and your employees' best interests in mind. **CP**

Note: This is the second article of a two-part series (part one was published in the November 2021 issue of CoatingsPro). The content in this article is from a webcast originally presented by Jack Fearing. Watch it on demand at www.coatingspromag.com/webcasts.

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Membership News



Finding the Hidden Innovators in Your Company: Leonardo da Vinci, Thomas Edison, and the Rest of Us

By Susan Robertson, Instructor at Harvard, Senior Faculty Member at the Creative Problem Solving Institute

Most people who work in a team-based environment are familiar with some type of personal style indicator — Myers-Briggs Type Indicator (MBTI); Strengths Finder; Dominance, Influence, Steadiness, and Conscientiousness (DiSC) profile and many others. However, there's a less well-known one that's particularly relevant and useful in innovation, and it is specific to your creative thinking style.

At the heart of creativity and innovation is problem-solving. Since all humans problem solve, by definition, all humans are creative. However, we each go about our problem solving in our own preferred style, and society has come to label only one style as being “creative.” In this personality indicator, there are two extreme kinds of people: the Innovator and the Adaptor.

The Two Extremes

Think of Leonardo da Vinci as an extreme example of having the creative label called the Innovator style. He was an idea machine, constantly jumping around in numerous disciplines, including art, cartography, anatomy, botany, astronomy, geology, and others. Many of his ideas were truly groundbreaking. He conceptualized a helicopter, a tank, a calculator, and concentrated solar power. He even outlined a rudimentary

theory of plate tectonics.

Thomas Edison is a great example of a creative thinker with an Adaptor style. He held more than 1,000 U.S. patents, but many of the products that he patented, perfected, and commercialized were not originally conceptualized by him. For example, he did not actually invent the light bulb; he developed a light bulb that was practical. He was able to improve, fix, optimize, and operationalize ideas better than perhaps anyone else in history.

Creativity Style Characteristics

Your thinking style is an indicator of preference, not of ability. Any of us can think and behave in another style — and we all do it effectively when we recognize it's needed. But we go back to our preferred style as soon as we can. It's where we're most comfortable and probably where we're most consistently successful.

The table illustrates some key traits of extreme Adaptors and extreme Innovators. The important question then becomes which of your crew members should you have running your innovation projects? And which should you have adopting them?

Extreme Innovators are great at coming up with ideas, and their energy and passion for ideas may get other people excited

EXTREME ADAPTORS	EXTREME INNOVATORS
Finds rules and structure helpful in solving problems.	Finds rules and structure limiting in solving problems.
Solves the stated problem.	Redefines the problem.
Finds a few workable solutions within the existing paradigm.	Thinks of many varied ideas inside and outside of existing systems. Some ideas may seem unacceptable to the group.
Accepts change in the interest of improvement.	Likes change simply because it's different.
Uses more methodical, disciplined approach; more likely to document work.	Uses approach that may seem undisciplined and disorganized to others.
Focus on getting things done efficiently and methodically on a day-to-day basis.	Spontaneous and unplanned. Can be efficient when extreme circumstances require massive change, because willing to throw out existing systems.
Dislikes ambiguity.	Regularly creates ambiguity.
Is aware of and concerned with group norms.	Has difficulty conforming to group norms.

Table 1. Extreme Adaptors vs. Extreme Innovators

about them, at least at the beginning. But then their greatest strength — their zest and constant quest for new ideas — becomes a weakness that starts to create problems. In short, they'll drive everyone on the team crazy and jeopardize the success of the project. So, an extreme Innovator may not be the person you want to run the show. They're one of the actors, and probably a lead actor, but they shouldn't be the producer.

So, if the Innovators aren't the ones who should be running the show, the next logical conclusion might be that the extreme Adaptors should manage the process. They're organized, disciplined, and efficient. But similarly, their strengths can also become weaknesses at the extremes. High Adaptors' discomfort with ambiguity will likely result in attempting to define the scope of projects too early, or kill projects altogether if the ambiguity can't be resolved quickly. And their focus on the stated problem may prevent them from seeing solutions or opportunities outside their day-to-day world.

The Rest and Best Solution

So now what? If you've ruled out extreme Innovators and extreme Adaptors as the best candidates for managing the process, where does that leave you? With everyone else. Here's the great news: Everyone else is most of us. In fact, 67 percent of the population is in the middle of these two extremes.

If you want someone who may be naturally inclined to manage an innovation process, pick someone more in the middle who can be what we'll call a Bridger. The benefits of a Bridger in this role are numerous because they naturally exhibit moderate traits of both adaption and innovation. That means that with a Bridger, you get the best of both worlds.

Bridgers understand the vision of the big idea that the extreme Innovator came up with. They'll get excited

and energized about ideas. They can live with ambiguity for a while. But they also see the need for organization and documentation. They'll understand the challenges that will have to be solved to implement that big idea. They can stay focused and see projects through to the end. They'll understand group norms and will bridge the communication gap between the high Innovators and the high Adaptors on the team.

The problem may be in getting these Bridgers to understand that they are the ones who should be running the innovation process. Since they're not high Innovators, they haven't had people telling them their whole lives that they're creative thinkers. They may not think of themselves as a good fit for innovation. The role of those responsible for innovation in your company should be to convince everyone else in between the two extremes that they're needed in the innovation process — and help them see how their unique contributions can be incredibly valuable in this arena.

SUSAN ROBERTSON empowers individuals, teams, and organizations to



adapt to change more nimbly by transforming thinking from "why we can't" to "how might we?" She is a creative thinking expert with more than 20 years of experience speaking and coaching at Fortune 500 companies. As an instructor on applied creativity at Harvard, Robertson brings a scientific foundation to enhancing human creativity. For more information,

contact: Susan Robertson, <https://susanrobertson.co/>.

AMPLIFY: AMPP QP Accreditation Programs Overview

By *Dave Evans, Director of QP & Coatings Credentialing and Business Development for AMPP, and Jim Kunkle, Business Development Manager at AMPP*

The SSPC: Society for Protective Coatings' Qualification Procedure (QP) program began in 1986 as a certification program with "industrial paint." The industry wanted to come up with consensus standards on how to qualify what field contractors were performing on marine and industrial structures.

Over time, the QP program has developed and continues to be kind of the flagship program for quality in this industry. Today, there are roughly 10 QP-related programs:

1. SSPC-QP 1, Field Application to Complex Industrial and Marine Structures
2. SSPC-QP 2, Field Removal of Hazardous Coatings
3. SSPC-QP 3, Shop Painting Accreditation Program
4. SSPC-QP 5, Accreditation for Coating and Lining Inspection Companies
5. SSPC-QP 6, Contractor Metallizing Accreditation
6. SSPC-QP 7, Painting Contractor Introductory Program
7. SSPC-QP 8, Installation of Polymer Coatings and Surfacing on Concrete and Other Cementitious Surfaces
8. SSPC-QP 9, Standard Procedure for Evaluating the Qualifications of Commercial Painting and Coating Contractors
9. Bonus: SSPC-QN 1, Nuclear Coating Supplement
10. Bonus: SSPC-QS 1, Standard Procedure for Evaluating a Contractor's Advanced Quality Management System

Some of those go through consensus standards, and they go through periodic reviews. The key ones really originated in the beginnings of the '90s as we moved into lead regulations, especially domestically here in the United States. Again, I know hazardous coatings are an issue globally, but definitely domestically here, when we start getting into the '92/'93 timeframe, there were lead lawsuits, so QP 2 was born. That was dealing with the qualification of contractors who would remove hazardous coatings, such as lead paint, and then also how they would contain that, how they would protect the workers, the general public, and then also the environment as well.

That particular program was very monumental, because again, it tied in the regulations that were coming out. And, as regulations change, the programs and standards can be very dynamic to adjust with new technologies with current trends in the industry, best practices, and the like.

The key ones that I'd like to focus on are QP 2 and QP 3. The latter deals with the blast and paint shops. It is based



off the joint industry standard with the American Institute of Steel Construction (AISC), which has improved quality performance in shops.

Accreditation programs are critical for the industry; they have quality in mind. But they're also there to protect the asset owner, the facility owner, and, generally overall, the whole industry.

This works out very well for the asset owner and for the facility owner. Now, they have a process and a procedure that they can integrate when it comes to the qualification of contractors or blast and paint shops. But now, also, they can tie in the inspection firm and weave into a total package when it comes to project work with QP 5.

QP 5 gives asset owners a heightened level of assurance that the coatings job is going to be delivered in accordance with the specification that they've had developed. It offers a degree of documentation and a paper trail that is almost unprecedented in the industry.

QP 6 deals with metallizing, or thermal spray, that can be done in shops or in the field. We're seeing a lot of the combination of the two being done.

QP 8 deals with the qualification of concrete coatings and other kinds of cementitious types of preparation and surface treatments.

QS 1 deals with the quality system, and that accreditation really requires a little bit more in-depth auditing of processes, the procedures, and also looking at the acceptance in the culture within the organization that the quality is sound. It establishes a higher level of excellence for the standard, so that an owner who specifies or has a project or a need for a QS 1-quality type

standard is expecting a different level of excellence out of the applicator than what you normally would on a project not requiring it.

When we look at the Accreditation Program, we're looking at process paperwork procedures, but we're really watching, observing, inspecting, documenting, and then making sure that the practice is done properly in the field.

Let's equate it to the medical industry: If you have a cold or the flu, you may go see a general practitioner, but if you need a surgeon, you're probably going to go see a specialist. And so the QS standard takes it one step further and specifically audits items that are pertinent to our industry. Whereas a QP 1 audit might not be as focused, we're looking at things that are specifically purposed in the industrial coatings business in a QS 1 audit.

When it comes to working with owners, engineers, and specification firms that work in and around coatings specifications and project requirements, we educate and provide information to them to let them know that they need to consider looking at their entire corrosion and coatings strategy and looking to integrate multiple QP requirements.

For example, if a contractor has QP 1, they should consider looking at the aspect of the QP 5 inspection firm. And again, tying everything together.

It is a partnership. It requires the contractors, the owners, the asset owners, and AMPP to collaborate and work together. Our auditor's position is one of being not a guide through the process, but certainly to advise them in what they could do to help achieve the accreditation if they needed to make an improvement. We're collaborative in our nature because that's the way that everybody's going to grow together. We're firm believers that it takes a village to accomplish the movement of the accreditation program and make it valuable for everybody.

Disciplinary actions seldom mean a positive thing, but the QP accreditation programs have built in discipline since the '90s. They are revised with changes in the industry and with ethics and other best practices. The disciplinary action criteria, or DAC as we like to call it here at AMPP, are not viewed as sledgehammers on a contractor. Rather, the DAC is really an effective tool to let contractors know that they need to adhere to the program. It also provides the owners with an opportunity or a vehicle to communicate with AP if they're having any issues, challenges, or concerns.

If there are any types of ethics violations, if there are any major safety or environmental regulatory issues that might come down through that review, it is an opportunity to work with our customers for improvement. We see it as more of a collaborative effort on AMPP's part to help rectify a situation that's been identified — to the benefit of both the owner and the contractor as we work through it to make it in compliance with the program.

If there's an ethical complaint, that's investigated by a completely separate arm from QP. That applies to the whole



AMPP organization. But if there's a finding, the QP program is going to work diligently with the contractor to try to get those things resolved in a timely basis so that they're resolved forever.

The idea here is not to remove an accreditation if we don't have to; that is absolutely a last resort. There's a long and very detailed communication process that occurs long before that ever happens. So to be perfectly clear, it's certainly not one strike and you're out. That's not it at all. It's very fair. The program is about continuous improvement.

We operate on the premise that you're innocent till proven guilty. There are so many things that you hear in the marketplace about this, that, and the other thing. We take a posture that we're going to investigate everything, that there's two sides to every story, and probably the truth is somewhere in the middle. What we do is work diligently to achieve that by communicating with the contractor, getting all the facts, and then putting together an improvement program that works to clear the issue. There are some things that are certainly out of our hands, but with the majority of them, where we can have an influence to make things better, we're absolutely going to take that posture.

Value-Added Benefits for Asset and Facility Owners

When you take a look at the long-term performance of a bid that included QP requirements, chances are that the length of that coating's extended service life received by the owner is going to be much greater than on projects where they don't require a QP-accredited contractor. We certainly understand the low-bid principle. The owner should think twice about accepting the lowest qualified bidder because that will make a real difference in the quality of the project — more so than if he or she gets a QP-accredited contractor. Achieving the QP accreditation by a contractor indicates that he or she has met a standard that certainly defines a high level of quality and has met the requirements of any one of the QP standards. Meeting these requirements allows them to differentiate themselves against other operations that have not been able to achieve that accreditation. It's really important to consider both of those items.

The other benefit that is very powerful for facility owners and asset owners is the qualification when they're looking at not only the training of the craft workers but also the qualification and the certification — not only when it comes to surface prep coating application, or even on the quality system, but also when they're looking at the quality assurance work that is done.

As far as what the auditor is looking for, there are two things that either the applicator or the blaster has met:

1. Certain qualifications that are listed within the standard — that they're verifiable and that they have a proven degree of performance when it comes to meeting the standard;
2. That they look at the complexity of the crew, meaning that within the various QP standards, there are requirements for the number of qualified workers that have to be present on the crew.

The auditor is making sure that the contractor is providing trained individuals on the specific project that they're working on to make sure that the requirements of the QP standard are met as are those of the specifications.

Now, for the facility and asset owners, AMPP is not an association to just put in the spec and then go through and do the process. AMPP works with the facility owner and the asset owner when it comes to writing their specifications. They are given some sample language that they can put into their specifications and into their job notifications when it comes to contractors.

When it comes to specifications and project bid work, owners should incorporate language first and foremost. Especially in North America, what goes into a specification has to be very exact. A lot of times, when writing in something like one of the QP standards, having that verbiage correct can be difficult. AMPP is more than happy to provide sample verbiage that an engineer owner or contract specifier can write into a spec, each step of the way, to make sure that the verbiage is correct and that what's being specified is exactly what is wanted.

Also look at this on a global basis. For example, we might have international owners for whom the language might need to be different because of their regulations and business laws. It's not a one size fits all, but having the basics and making sure that the standard is specified and that the program requirement is specified, that's key.

Look at how to communicate within your organization so that everyone knows that the asset owner is requiring QP and understands what it entails. We're here to help; that's what we do.

Advantages for Contractors, Paint Shops, and Inspection Firms

There are a high number of contractors in shops and inspection firms that obtain QP accreditations because they need to be in compliance with the owner's or the asset owner's specification to have QP. In addition to being compliant, a lot of contractors

want to differentiate themselves against their competitors.

The QP process can be an arduous one. Initially, it's a lot of looking at your company and looking at the QP standard and the audit criteria, and making sure all the parts and pieces are in place, and then actually practicing it for a while to make sure that your operations work that way. But what happens is that you find that a lot of contracting companies take it one step beyond and say, "You know, initially I wanted to do it because I wanted to chase that kind of work; it was opportunistic. Now, it's turned into that we want our companies to achieve those kinds of quality standards, so we operate that way." And then, in turn, what these contractors see is that they're able to bid a lot of different kinds of work because, essentially, the doors are open to them.

Looking at achieving accreditation gives contractors an opportunity to really look internally at improvements they can make. There is going to be some investment; they're going to have to invest some time, money, and resources into craft workers, into their inspection team when it comes to quality and quality control, and then into business practices internally.

But achieving a QP accreditation may help contractors impact their bottom lines by gaining efficiencies due to the process. And that relates directly to the hours saved avoiding safety, training, and quality issues. It helps them to become much more efficient, and their profitability improves dramatically.

Note: The content in this article consists of excerpts from a podcast episode. Listen and watch it on demand at www.coatingspromag.com/podcasts.

JIM KUNKLE, PCS, manager, Business Development, at AMPP, holds both a master's in communication and Information Systems and a BSBA in Communications Management from Robert Morris University. Kunkle is a qualified SSPC Level 1 Inspection Technician for Protective Coatings Inspector and Concrete Coatings Inspector. In 2017, he earned his Protective Coatings Specialist Certification.



DAVE EVANS, director of QP and coatings credentialing and business development for AMPP, currently manages the QP accreditation program in addition to being heavily focused on business development. He has been working collaboratively across AMPP to drive greater momentum to its core coatings certifications and educational programs. Evans holds NACE CIP III and SSPC PCS credentials, and has been a NACE CIP instructor for 33 years. For more information, contact: Dave



Evans, dave.evans@ampp.org.

AMPP Membership News: January 2022



Kirk R. Shields, Remembered

Kirk R. Shields, loving husband, father, brother, and son, died suddenly November 16, 2021, at Cleveland Clinic Hospital, Weston, Fla. at age 62. He was born June 6, 1959, in Pittsburgh, Pa., to the late

Patsy June Falconer and Richard Shields. Kirk was a graduate of Springdale High School in Springdale, Pa. He studied at Temple University and obtained a bachelor's degree in Civil Engineering.

Kirk went on to become an accomplished principal coating and corrosion consultant, great mentor, and teacher. He loved to share his knowledge with colleagues and young professionals following his steps. Kirk was a world-renowned engineering expert and well respected in his field. His quick wit, subtle sarcasm, and kind heart were endearing, and he was loved by so many. Kirk was an avid Steelers fan, and he enjoyed playing golf and music and traveling. The holidays were always a special time for him to decorate, bake, and prepare holiday dinners for family and friends.

Kirk was a loving and devoted husband. His patient, kind, smart, confident, witty nature will be missed. Survived by his devoted wife Tracy Shields, son Nathanael Shields, son Samuel Shields (and wife Melody), stepson Zachary Voigt, father Richard Shields (and wife Victoria), brothers Dan Shields (and wife Stephanie), brother Doug Shields (and wife Melody), and sister Kimberly McLaughlin. To plant a memorial tree in honor of Kirk, contact: www.fredhunters.com.

Coatings+ Honors 2021 SSPC Award Recipients



At the 2021 Coatings+, SSPC: The Society for Protective Coatings honored its 2021 individual award recipients at a special awards lunch on Dec. 13, 2021.

The SSPC Honorary Life Member Award, which recognizes the extraordinary contributions and

long-term activity on behalf of SSPC, went to Bob McMurdy, business development consultant. McMurdy has more than 40 years of experience in the protective coatings industry, including time as an SSPC member for more than 30 years. He has spent the past 16 years on the SSPC Board of Governors and is an SSPC Past President. The majority of McMurdy's career was spent with Schmidt Manufacturing, a global leader in the manufacturing and distribution of surface preparation equipment. The

training, education, and advancement of industry craft workers, technicians, and contractors has always been a focus and passion of McMurdy — and that continues today.

Meanwhile, the Women in Coatings Impact Award recognizes women who have contributed to creating a positive impact on the culture of the coatings industry. In 2021, this award went to Joyce Wright of Huntington Ingalls Industries-Newport News Shipbuilding (HII-NNS). Wright's career literally began in the bilge of a ship as a painter's helper, and she has been a leader in numerous aspects of the coatings business during her 42-year tenure. At HII-NNS today, Wright continues to seek out new technologies and support the transformation of coating processes and training needs across all programs. She has been part of SSPC for more than 20 years; has conducted training, certification, and education courses; and was voted on the board as a Director in 2015. She was the first woman to serve as President for the SSPC Board of Directors and also the last, as she continues to be part of the newly merged organization, AMPP. Wright is currently Chair for the AMPP Global Center Board of Directors.

Finally, the John D. Keane Award of Merit is named for SSPC's executive director from 1957 to 1984 and is intended to acknowledge outstanding leadership and significant contribution to the development of the protective coatings industry and to SSPC. This year, the award goes to Mark Ingle, P.E., technical warrant holder for coatings and corrosion control at the U.S. Naval Sea Systems Command (NAVSEA). He has 24 years of experience working for NAVSEA in coatings, corrosion control, and non-metallic materials. Before joining NAVSEA, Ingle worked for the U.S. Environmental Protection Agency as the metal products and machinery project manager and was a senior engineer for Corrpro Companies, Ocean City Research. He is a registered professional metallurgical engineer in Pennsylvania, and he previously received the Hileman Award at 2017 MegaRust. He was also the U.S. Army Corps of Engineers' Federal Engineer of the Year in 2011. Ingle holds degrees in materials science and metallurgical engineering from Lehigh University and Lafayette College, respectively.

For more information on 2021 individual and structure awards recipients, visit sspc.org/coatings-2021-awards.

AMPP's Bob Chalker Comments on U.S. Infrastructure Bill

Bob Chalker, CEO of the Association for Materials Protection and Performance (AMPP), issued a new statement regarding the signing of H.R. 3684, which is known best as the "Infrastructure Investment and Jobs Act." The legislation was signed into law on

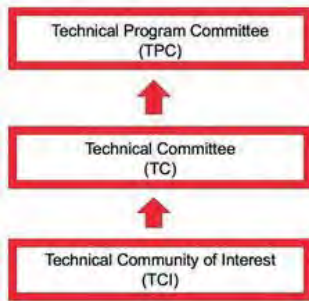
Monday, November 15, 2021, by President Joe Biden.

In his statement, which was released through AMPP, Chalker said, “This bipartisan legislation makes a historic investment into infrastructure programs throughout the country and has the opportunity to fundamentally transform how we ensure asset integrity, promote sustainability, and protect the environment.

“As the process of implementation begins, AMPP urges policymakers to engage industry experts and stakeholders to ensure best practices are utilized throughout the design, build, and maintenance of these critical assets. AMPP’s members nationwide look forward to being a resource in this process and helping rebuild lasting national infrastructure.”

A summary of the new infrastructure legislation, along with its complete text and amendments, can be accessed via the official congress.gov page. For more information, contact: AMPP, (800) 797-6223, www.ampp.org.

AMPP TPC Updates



AMPP announced the recent formation of the Technical Program Committee (TPC), which oversees the AMPP Global Center’s programs and initiatives to provide or enhance technical understanding by way of technical information exchanges, white papers, workshops, conference

papers, etc. AMPP’s education, training, and standards programs will reside under other AMPP program committees.

The TPC will introduce and oversee 11 technical subcommittees, known as Technical Committees (TC), which oversee the new Technical Communities of Interest (TCI). The TCIs are a subset of the TPC’s 11 TCs, and each one is a group of members who share a common technical interest. The eleven TCs are:

- | | |
|-------------------------|------------------------|
| 1. Coatings | 7. Process Industries |
| 2. Cathodic Protection | 8. Utilities |
| 3. Oil and Gas | 9. Defense |
| 4. Transportation | 10. Pipeline and Tanks |
| 5. Corrosion Management | 11. Materials |
| 6. Infrastructure | |

Technical Committee responsibilities include:

- Approving new TCIs within their respective technical subject matter
- Making workshop recommendations to the TPC for consideration
- Appointing TCI managers who will lead each TCI
- Tracking the progress of associated TCIs
- Identifying subject matter gaps for possible new TCIs

Each TC will have a chair who is appointed by the TPC, and the TC chair may appoint up to 14 additional voting members and determine the serving term for each.

TCIs will report to each TC and include opportunities for:

- Discussion at-will on the selected topic
- Presentation of information among participants
- Sharing of information via an online resource (i.e., a committee workspace)
- Connection via meetings hosted on a collaboration platform, via teleconferences, or at in-person conferences (either regional or global events)
- Each TCI will have a TCI manager (no term limit) and no limit on membership

How do legacy NACE’s Specific Technology Groups (STGs) and Technical Exchange Groups (TEGs) fit into this structure (something new for legacy SSPC: Society for Protective Coating members!)? The Technical Program Committee created a task force to map legacy NACE technical committees to this new structure. The TPC has found a home for each legacy technical committee and will be reaching out to the former membership of each legacy committee to let them know where the committee will reside within the new structure. Technical Committee and TCI leaders will be announced in the near future.

It is important to note that while the structure has changed, the subject matter will still exist within the new structure. There will be opportunities for technical exchanges and contributions to symposia (e.g., symposia requests, symposium officers, paper reviewers). This new structure was created to drive more engagement, eliminate redundancy and inactivity, and, most importantly, provide a framework for organic growth within AMPP.

Kat Coronado of AkzoNobel and Dawn Eden of Hempel are the AMPP Technical Program Committee Chair and Vice Chair, respectively. For more information, contact: TechnicalProgram@ampp.org.

Standard Committees 04, 11, and 20 Launch New Projects

04: Linings & Internal Coatings

A new project has been assigned to AMPP Standard Committee (SC) 04 designated as *GUIDE 21531 — Guidelines for Selection & Testing of Downhole Internal Liners and Coatings*.

This document outlines comparative testing programs for internal tubular liners and coatings used for protection from corrosion and wear. It is intended to evaluate the entire mitigation system, including the pipe body and connections. The testing program should be a holistic review that represents actual expected field service conditions, and it can be used to screen or ultimately select competitive products. Due to the inherent differences between internal liners and coatings, this guide makes distinctions between the appropriate tests that

should be performed on each product.

This guide is not intended to be comprehensive for all applications. It also does not address chemical inhibitors, metallurgical coatings or surface treatments, flow assurance, or the prevention of surface deposits.

The document project manager (DPM) of *GUIDE 21531* is Robert Davis. The expected publication date is assigned as May 9, 2023. If you have any questions, please contact Standards and Technical Business Developer Laura Feix at (281) 228-6295, Laura.Feix@amp.org. After completion of the launch and onboarding process for this new project, Trudy Schreiner is assigned as staff liaison.

SC 11: Electric Utility Generation, Transmission & Distribution
SC 11's new project is designated as *SP21533 — Remote Inspections for Nuclear Spent Fuel Integrity*.

This standard practice will communicate the benefits, approaches, and recommended actions for remote inspections of nuclear spent fuel storage casks as an asset integrity management activity undertaken by the power industry.

The DPM of *SP21533* is Carl Kempkes. The expected publication date is assigned as May 11, 2023. If you have any questions, please contact Standards and Technical Business Development Manager Laura Feix at (281) 228-6295, Laura.Feix@amp.org. After completion of the launch and onboarding process for this new project, Rick Southard is assigned as staff liaison.

SC 20: Internal Corrosion Management

A new project is assigned to SC 20 designated as *GUIDE 21532 — Guideline for Materials Selection for CO₂ Transport and Injection*.

This guideline/standard will provide guidance for carbon, capture, and storage projects addressing the relation between the selected materials and the CO₂ purity (maximum content of impurities) as well as potential degradation/failure mechanisms, operating scenarios, etc.

The DPM of *GUIDE 21532* is Hans Sonke. The expected publication date is assigned as May 11, 2023. If you have any questions, please contact Everett Bradshaw at (281) 228-6203, Everett.Bradshaw@amp.org. **CP**

AMPP Events Calendar

JANUARY 2022

51st OMAHA SHORT COURSE 2022

January 18–19, 2022

Embassy Suites
La Vista, Nebraska, USA

More info: John Gormley, (402) 398-7494,
john.gormley@nngco.com

AMPP ROCKY MOUNTAIN CHAPTER ANNUAL SHORT-COURSE

January 19–21, 2022

Doubletree
Colorado Springs, Colorado, USA

More info: Candy Balerio, (303) 859-1253,
candy.balerio@mesaproducts.com

FEBRUARY 2022

10,000 LAKES CORROSION CONTROL SEMINAR

February 8–9, 2022

The Graduate — Minneapolis
Minneapolis, Minnesota, USA

More info: Rachel Devereaux, (763) 784-9144,
rdevereaux@gccmn.com

LIBERTY BELL CORROSION COURSE

February 9–10, 2022

Normandy Farm Hotel and Convention Center
Blue Bell, Pennsylvania, USA

More info: Dave Krause, (610) 868-9352,
Dave.Krause@isfieldservices.com

MARCH 2022

AMPP ANNUAL CONFERENCE + EXPO 2022

March 6–10, 2022

San Antonio, Texas, USA

More info: Lesley Martinez, AMPP, (281) 228-6413,
Lesley.Martinez@amp.org

APRIL 2022

NORTHERN AREA WESTERN CONFERENCE 2022

April 11–14, 2022

Edmonton, Alberta, Canada

More info: <https://amppedmonton.com>

JULY 2022

20th INTERNATIONAL CONFERENCE ON ENVIRONMENTAL DEGRADATION OF MATERIALS IN NUCLEAR POWER SYSTEMS

July 17–21, 2022

Snowmass Village, Colorado, USA

More info: <http://envdeg.nace.org/>

AUGUST 2022

DoD CORROSION PREVENTION TECHNOLOGY AND INNOVATION SYMPOSIUM

August 8–11, 2022

Tucson, Arizona, USA

More info: www.dodcorrcon.org

BETTER SAFE THAN SORRY

Ergodyne Provides Helmet Solution to Angled Impacts

Ergodyne announced the launch of its Skullerz safety helmets, which come complete with built-in Mips (multi-directional impact protection system) technology to protect workers from dangerously overlooked angled impacts. Available in Class C and Class E, the helmets are integrated with Mips Elevate — a low-friction layer that slides multi-directionally to redirect rotational energy that otherwise could be transferred to the head upon falling or impact. The integration fills a protection gap left by traditional hard hats, which have typically been designed to provide protection from direct impacts only.

“Over 18,000 workers suffered traumatic brain injuries in 2019,” said

Tim Gallant, product manager. “By adding Mips technology to our best-selling Skullerz safety helmets, we are taking a step to help reduce the risk of brain jarring and tearing that can ultimately lead to lifelong brain damage.” For more information, contact: Ergodyne, (800) 225-8238, www.ergodyne.com.

New Connected Work Platform From MSA Safety



MSA Safety has introduced the MSA Connected Work platform. The system is a hardware-software combination with a new cloud-ready wearable gas detector, which enables a broad new range of capabilities not previously available with a standalone detector. Working in concert

with the company’s new MSA+ safety subscription offering, the ALTAIR io 4 Gas Detection Wearable device was designed from the ground up as a fully connected and intuitive solution.

The system represents MSA’s first direct-to-cloud gas detector to feature out-of-the-box global cellular connectivity and a GPS location to transmit real-time data, like critical gas detection readings and location information, directly to the MSA Grid platform. Other benefits include access to MSA’s Grid software services to enable fleet management, as well as real-time remote monitoring and incident reporting, and compatibility with a new ALTAIR io Dock calibration test stand. For more information, contact: MSA, (800) 672-2222, us.msasafety.com.

CP



FINALLY, THERE IS A **COMPLETE SOLUTION** TO PROTECTIVE COATINGS TESTING



CONCRETE

FLOOR

EPOXY

INDUSTRIAL

Factory Gets Quick Turnaround on Epoxy Mortar Floor

BY KAREN D. OSTRANDER

PHOTOS COURTESY C.A. REED ASSOCIATES, INC.

BITZER Scroll manufactures scroll compressors for heat pumps and air conditioners. Over time, their Syracuse, N.Y., factory's concrete floor had undergone plenty of wear and tear in the harsh manufacturing environment — to the point where the floor needed to be recoated.

In March 2020, just as the COVID-19 pandemic was beginning in the United States, BITZER Scroll enlisted the installation arm of coatings manufacturer C.A. Reed to recoat a 35,000-square-foot (3,252.0 m²) section of their factory floors. Fortunately for both businesses, they were declared essential, and the job could proceed as originally planned.

Getting Started

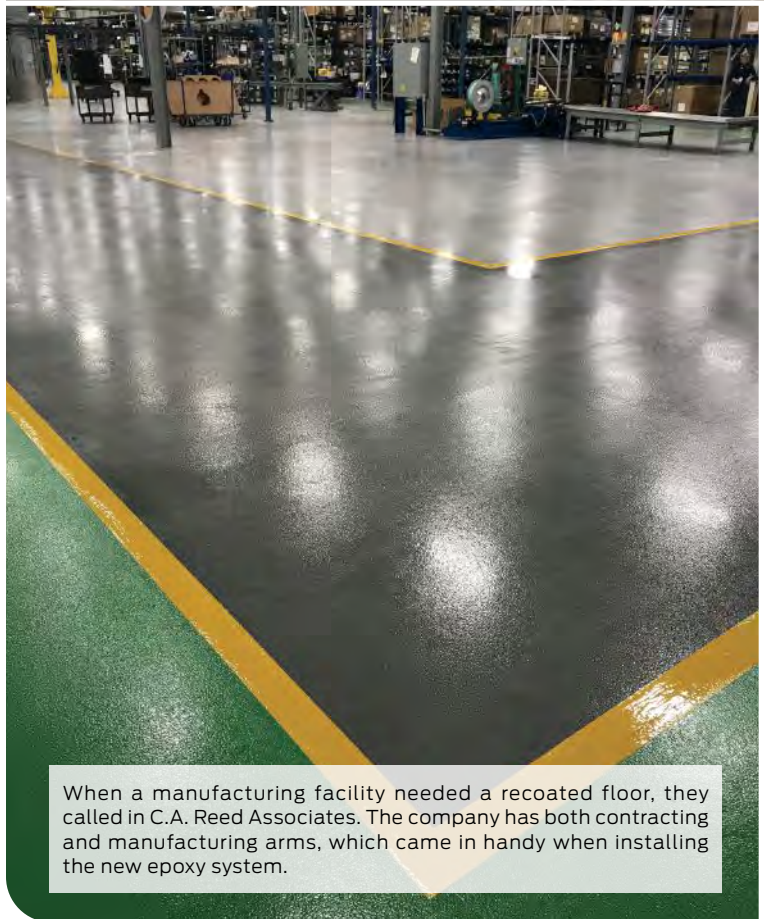
“The project engineer that brought us into this facility knew us from his previous place of employment where we worked for him and did a number of flooring projects for him,” said Rob Park, vice president of C.A. Reed Associates. “When this project came across his desk, he contacted us, and we provided a proposal.”

C.A. Reed's contracting division employs 30 individuals, and 10 of those were sent as crew members to this job in Syracuse — about 70 miles (112.7 km) from the contractor's headquarters. Project superintendent Ron “Chick” Cichinelli drove C.A. Reed's 53-foot (16.2 m) Peterbilt tractor-trailer to the site, and he was onsite throughout the six-day project. BITZER Scroll needed a fast turnaround because the plant had to be shut down for the coatings work, and during this time, C.A. Reed provided a new epoxy mortar coatings system.

According to C.A. Reed, their Industrial Epoxy Topping is a resinous flooring system consisting of 100 percent solids epoxy resin and selected aggregates that provide heavy-duty protection at 3/16” to 1/4” (4.8–6.4 mm) thickness or more. The product data sheet reads, “When grouted and sealed, the Industrial Epoxy Topping eliminates porosity and produces

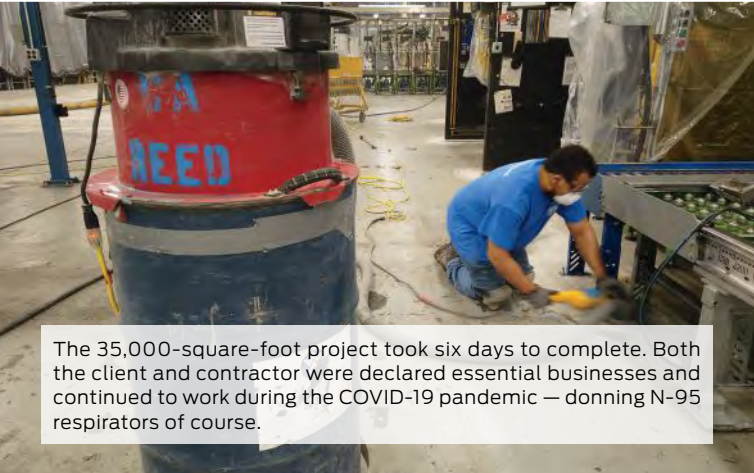
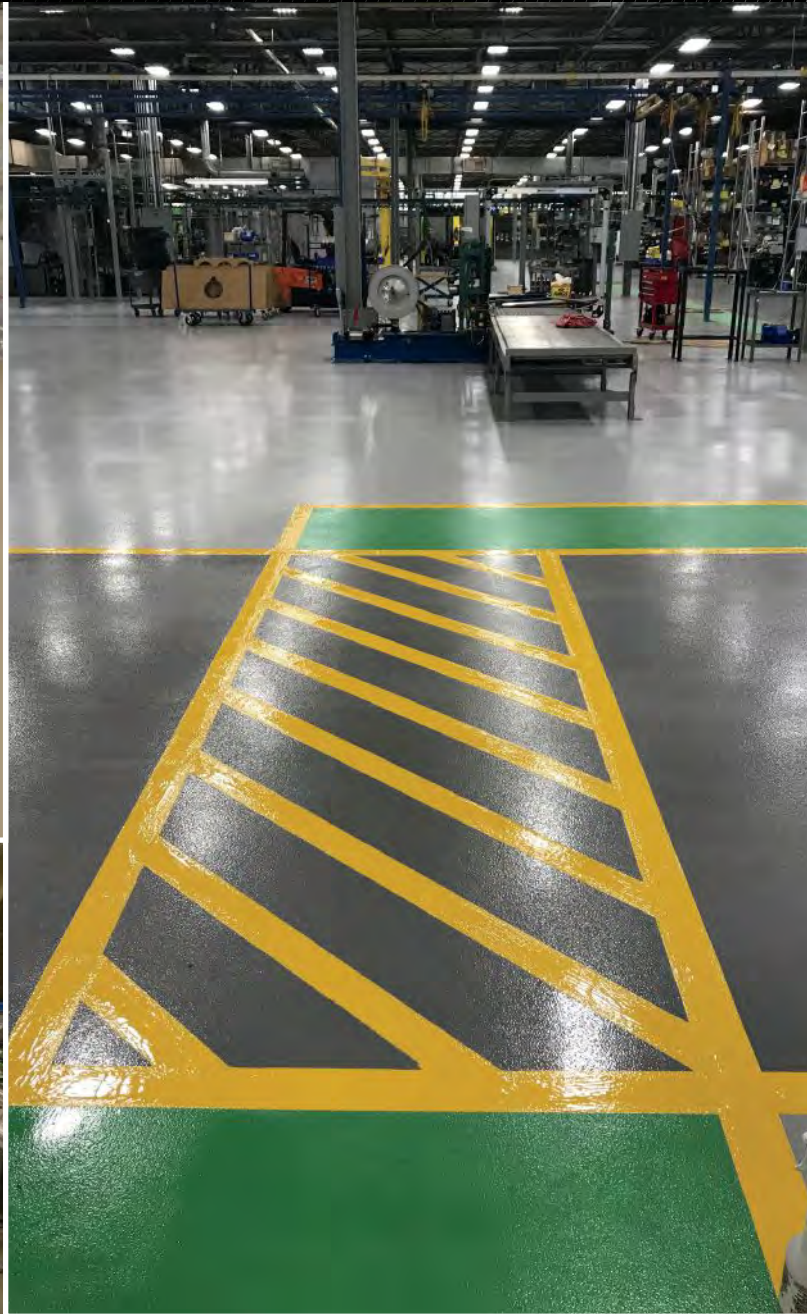


The work took place during COVID-19, and because of the connection within C.A. Reed, there were no delays. The company was able to get materials and equipment to the jobsite themselves.



When a manufacturing facility needed a recoated floor, they called in C.A. Reed Associates. The company has both contracting and manufacturing arms, which came in handy when installing the new epoxy system.

Epoxy Mortar Factory Floor



The 35,000-square-foot project took six days to complete. Both the client and contractor were declared essential businesses and continued to work during the COVID-19 pandemic — donning N-95 respirators of course.



To install the new coating, the company used a crew of 10 people. They wore proper PPE, including steel-toed boots, gloves, and safety glasses. They also used dust containment in some areas.



Epoxy Mortar Factory Floor

a dense, skid-inhibiting finish that will minimize dirt and chemical penetration.”

C.A. Reed had another benefit going for them on this project at BITZER Scroll: Acting as both the coatings manufacturer and coatings contractor, they could avoid any potential supply chain hiccups. “The nice thing about having that large tractor-trailer is the ability for us to arrive onsite at the beginning of that project, or the night before, with absolutely everything that we need,” explained Park. “We’re not reliant on some other trucking company. We’re not reliant on a manufacturer of coating materials to be shipped.... We’re the manufacturer of the coating materials, we’re the contractor, we’re the trucking company, so having that tractor-trailer allows us to pack our men and our equipment and our materials all in one package and have control over our own destiny.”

The tractor-trailer also allowed the crew to bring with them the aggregate filler for the troweled mortar system. “It’s really kind of a necessity,” said Park. “In this particular job, you’re talking about 70,000 pounds [31,751.5 kg] of aggregate.”

Existing Conditions

The area to be recoated was where some general metal machining and fabrication occurs in the factory. “It’s a pretty heavy-duty manufacturing environment,” said Park. “Also, in the areas where they do some of the grinding and some of the abrasive stuff goes on the floor, there was more damage to the concrete in those manufacturing cells and in the heavy-duty traffic areas.” In fact, the old coatings were as thick as 30 mils (762.0 microns) in some areas, but they were worn off, peeling, or flaking in other areas.

The first step of the job was to remove those previous coatings. Park described these as “several layers of epoxy paint, the best that I could tell. There might have been a layer of urethane on the top, which further complicates removals.”

The C.A. Reed crew came prepared with a full arsenal of

The harsh environment of the facility had caused wear and tear on the floor, so the crew started by removing existing coatings. They also fixed any spalling and cracking with epoxy binder and polyurea joint filler.



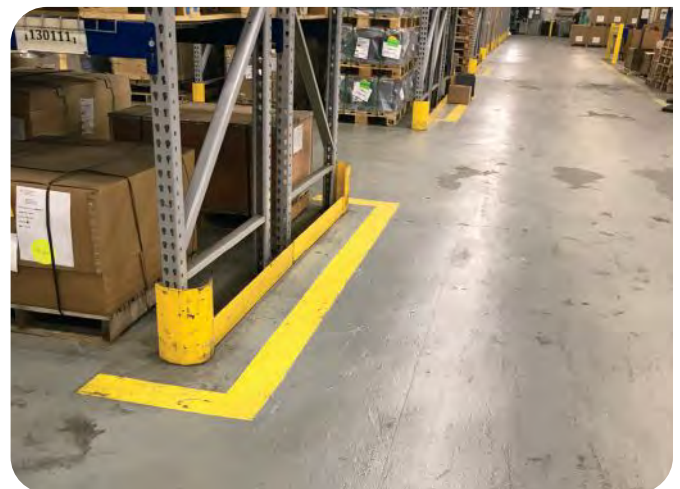
surface preparation equipment, including two Terrco 3100 Series terrazzo grinders and three Blastrac 1-15D shotblasters, plus several DEWALT 7-inch (17.8 cm) angle grinders to get under the myriad in-place equipment that could not be moved.

For coatings removal, Cichinelli and his team used the Terrco grinders with Diamond Speed’s 3-inch (7.6 cm) Metal Bonded 5-Segment Diamond Arrow Plug in 30 grit (medium) as well as the 3-inch Metal Bonded 10-Segment Diamond Plug in 18–20 grit. The 7-inch grinder cups used on the hand grinders came from the same manufacturer. With the preexisting coatings removed, the concrete was abraded to a medium-grit finish, International Concrete Repair Institute (ICRI) concrete surface profile (CSP) 3 or 4, using the Blastrac machines.

During surface prep, dust containment was a major consideration. “Even though this was not a pharmaceutical or a food plant or a beverage processing facility,” Park said, “they still have some very clean manufacturing requirements.... It was a bit of a challenge because the removals required some pretty aggressive grinding.” Even though high-efficiency particulate air (HEPA) filtration was used with all the grinding equipment — including Ruwac USA HEPA vacs hooked up to the angle grinders — the facility owner still put up some poly sheeting between the work area and other areas of the building. “There’s always going to be dust kicked up,” commented Park, “even by simply passing a broom across the floor.”

In most places, the underlying concrete was in good condition, but there was some spalling and cracking in the heavy-wear areas. C.A. Reed recommended their 1/4” (6.4 mm)-thick Industrial Epoxy Topping because the system can resurface areas of spalled concrete in one pass. Of course, there were some cracks and joints that had to be detailed and repaired. Cracks were filled with C.A. Reed’s #5100 epoxy binder, and VersaFlex’s SL/75 polyurea joint filler was used to fill expansion joints and for other dynamic, moving joints.

To work around the facility’s in-place equipment, the crew needed to use grinders from Terrco and DEWALT. The use of an e-cart helped to provide a safe, central source of electrical power for tools.



JOB AT A GLANCE

PROJECT:

Install a ¼-inch-thick industrial epoxy topping on a manufacturer's floor

COATINGS CONTRACTOR:

C.A. Reed Associates, Inc.
Canandaigua, NY
(800) 462-6149
LI: c-a-reed-associates
<https://careed.com>

SIZE OF CONTRACTOR:

30 employees

SIZE OF CREW:

10 crew members

PRIME CLIENT:

BITZER Scroll Inc.
Syracuse, NY
(315) 436-2101
@BITZERGroup
www.bitzerus.com

SUBSTRATE:

Concrete

CONDITION OF SUBSTRATE:

Good with spalling and cracking in heavy-wear areas

SIZE OF JOB:

35,000 sq. ft.

DURATION:

6 days

UNUSUAL FACTORS/CHALLENGES:

- » This job took place at the beginning of the COVID-19 pandemic.
- » Removal of the prior coatings required aggressive grinding in some places, and dust containment was a major consideration.
- » The crew had to apply multiple colors, work around in-place equipment, and have the floor ready for service within a 1-week shutdown.

MATERIALS/PROCESSES:

- » Removed existing coatings using grinders and hand grinders
- » Abraded the concrete using Blastrac 1-15D shotblasters to achieve CSP 3-4
- » Filled cracks and joints with C.A. Reed's #5100 epoxy binder and VersaFlex's SL/75 polyurea joint filler
- » Applied C.A. Reed's #5100 clear 100 percent solids epoxy primer at an average of 8 mils thickness using squeegees and 18-inch backrollers
- » Applied C.A. Reed #5100 pigmented epoxy mortar layer with aggregate filler at an average of 250 mils thick
- » Ground the floor again with the Terrco 3100 machines using a fine 120-grit stone, followed by a quick vacuum of the surface
- » Used squeegees and backrollers to apply C.A. Reed's #5200 Epoxy Coating to an average thickness of 10 mils each, while broadcasting a 54-grit white aluminum oxide into the topcoat

SAFETY CONSIDERATIONS:

- » Wore appropriate PPE, including steel-toed shoes, and 3M N-95 respirators
- » Utilized a Hammond Power Solutions NMK030KB e-cart
- » Employed HEPA filtration on all surface preparation equipment



To achieve an ICRI CSP 3-4, C.A. Reed's crew abraded the concrete with three Blastrac shot blasters. HEPA filtration was used on surface prep equipment as a safety consideration.

Powering the Tools Safely

All told, surface preparation took a day and a half, with lots of equipment running at once. Therefore, like nearly any coatings job, the surface preparation phase required a safe, convenient power solution. C.A. Reed found that in a Hammond Power Solutions NMK030KB e-cart.

While describing the e-cart, Park said, "What's great about these power distribution carts is that you can get your 480-volt connection through the plant electrical service and...from that cart, we can operate our 480-volt 3-phase-powered grinders and shotblasters. We can also run up to 10 or 12 different circuits of 110-volt power in order to run the hand grinders and the vacuums for the hand grinders."

A centralized location for power can provide a much-needed safety factor on a jobsite. Park elaborated: "Anybody in this industry knows that you can only run a grinder on one standard

"Even though this was not a pharmaceutical or a food plant or a beverage processing facility," said Rob Park, VP of C.A. Reed Associates, "they still have some very clean manufacturing requirements..."



Epoxy Mortar Factory Floor



The 100 percent solids epoxy primer, #5100 clear from C.A. Reed, went down at an average of 8 mils using squeegees and 18-inch backrollers.

110 circuit and a vacuum on another.... Not only does this [e-cart] provide all of that additional 110 service amperage, but it does it safely. Instead of having wires all over the place, extension cords running everywhere, you've got one nexus where you've got the power safely wired and everybody is pulling off of this little spider situation in the center. It's a much safer arrangement. Of course, if there is some sort of problem with the power, you've got the centralized unit of this design to shut down safely."

And speaking of safety, the C.A. Reed crew wore proper personal protective equipment (PPE) throughout the job. In addition to maintaining social distance to account for COVID-19 regulations, they wore steel-toed shoes, NSI N-Spec safety glasses from Northern Safety, hearing protection, gloves, and 3M N-95 respirators. "The men are generally wearing respirators as needed when doing surface preparation work, but we now are wearing them all the time in and around the work environment" due to the pandemic, said Park. "We were awfully proud of our crew. They worked safely and executed a number of projects for essential businesses all throughout the East Coast, starting here with BITZER Scroll."

Coating the Floors

When the surface was properly prepared, the coating process began with C.A. Reed's #5100 clear 100 percent solids epoxy primer applied with squeegees and 18-inch (45.7 cm) backrollers at an average of 8 mils (203.2 microns). "We use Wooster Super Doo-Z roller covers and Haviland red rubber squeegees to apply the primer, grout coat, and topcoat," Park said.

The primer coat was given about an hour to tack up; meanwhile, the crew was setting up the mixing station — a Stone Equipment SM2000 silo mixer (now under the Toro product umbrella) — for the epoxy mortar. This process entailed mixing C.A. Reed #5100 pigmented epoxy mortar layer with aggregate filler material supplied through Fairmount Santrol (now Covia). Once blended to a mortar, it was screeded out onto the tacky

primer, raked, and power troweled with 48-inch (121.9 cm) Wacker Neuson CT48-AV power trowels. The mortar layer was applied at an average thickness of 1/4", or approximately 250 mils (6,350.0 microns), over the course of two days.

"So we're mixing up our mortar — basically the A and the B of the epoxy along with the bags of the aggregate blend," Park elaborated. "That gets mixed up in that large mixer, and then we apply that. On this particular job and on all our large jobs, we'll apply the mortar, we'll carry it out to the application area on the floor, and do the first screed with our skid steer, our Bobcat with a bucket on it."

As the material was dumped with the Bobcat, the crew raked it out more precisely at the 1/4" depth using S550 Professional "Scarifier Lute" gaged rakes from Seymour Midwest. A crew member then took the power trowel over the surface to smooth it out. "That took us to the end of day 4," Park said.

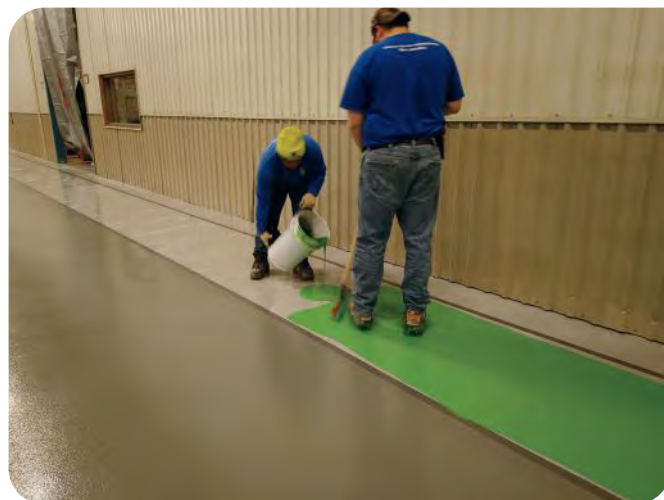
The mortar cured overnight, and on day 5, the crew lightly ground the floor one more time with the Terrco 3100 machines using a fine 120-grit stone. This process, along with vacuuming, took off any slight imperfections prior to applying the grout coat.

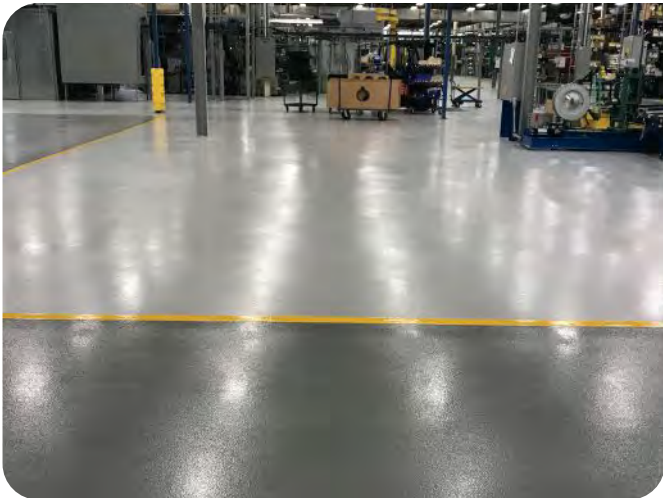
The grout coat, consisting of C.A. Reed's #5200 Epoxy Coating, is "basically a paint coat that goes on top of the mortar that seals it in. It's essentially the first topcoat," said Park. "We apply two coats on top of the mortar. That first coat is often referred to as the grout coat in the industry. The second coat that we apply is our topcoat. Both coats are applied at an average 10 mils [254.0 microns] of thickness."

A 54-grit white aluminum oxide was broadcast into the topcoat lightly, at a rate of about 20 pounds per 1,000 square feet (9.1 kg/92.9 m²), then backrolled evenly to provide non-skid properties. The mortar layer was applied in one uniform gray color, while the grout coat and topcoat were done in Dark Gray in the aisle ways and Medium Gray in the field. Safety green was used in some of the walkways, along with safety yellow lines.

Saving Money and Time

The epoxy mortar with aggregate filler went down at an average of 250 mils using a Bobcat skid steer, Seymour Midwest gaged rakes, and 48-inch Wacker Neuson CT48-AV power trowels.



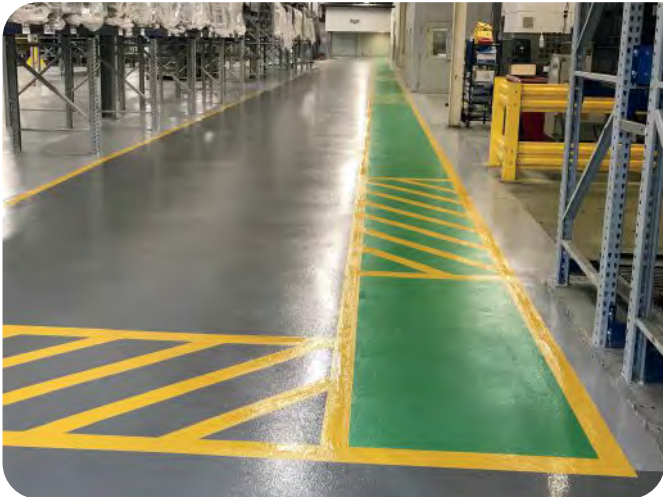


After grinding and vacuuming the floor again, the crew applied two coats of #5200 Epoxy Coating with squeegees and backrollers at 10 mils each with white aluminum oxide broadcast into the topcoat.

Park noted that clients can benefit from the installation of C.A. Reed’s Industrial Epoxy Topping because it’s a quick process. “When downtime is of critical importance, that seems to be where our particular niche is,” he said. “The biggest hurdle that we’re able to jump over for this customer — and all our customers — is the speed at which we can execute a project. Very few contractors can put down a 1/4”-thick epoxy mortar system with multiple colors in a 6-day period. We’re able to do this time and time again. That’s something that I think really separates us from most of our competition.”

The contractor’s speed made for a winning combination for both client and contractor. Not only did BITZER Scroll get a fast return to its manufacturing operations, but C.A. Reed also won second place in the Industrial Concrete category in *CoatingsPro Magazine’s* 2021 Contractor Awards! **CP**

The crew left the jobsite after only a one-week shutdown. They had applied a colorful epoxy mortar system and then went on to win second place in Industrial Concrete for the 2021 Contractor Awards Program!



VENDOR TEAM

3M
Safety equipment manufacturer
St. Paul, MN
(800) 364-3577
@3M
www.3m.com

Northern Safety Co., Inc.
Safety equipment manufacturer
Utica, NY
(800) 571-4646
@NSafetyInc
www.northensafety.com/

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

Ruwac USA
Equipment manufacturer
Holyoke, MA
(800) 736-6288
@Ruwac
www.ruwac.com

Bobcat by Doosan
Equipment manufacturer
West Fargo, ND
(701) 241-8700
@BobcatCompany
www.bobcat.com

Seymour Midwest
Equipment manufacturer
Warsaw, IN
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@MidwestRake
www.seymourmidwest.com

Covia Holdings
Material manufacturer
Independence, OH
(800) 243-9004
@CoviaCorp
www.coviacorp.com

Terrco Inc.
Equipment manufacturer
Watertown, SD
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FB: Terrco-
Inc-191529174263063
www.terrco.com

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Equipment manufacturer
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@DEWALTtough
www.dewalt.com

Toro
Equipment manufacturer
Bloomington, MN
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@TheToroCompany
www.toro.com/en/profession-
al-contractor

Diamond Speed Products Inc.
Equipment manufacturer
Franklin Park, IL
(866) 406-3100
FB: DiamondSpeedProduct
https://diamondspeed.net

VersaFlex
Material manufacturer
Kansas City, KS
(913) 321-9000
FB: versaflexinc
www.versaflux.com

Hammond Power Solutions
Equipment manufacturer
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com

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Message from the Chairs



On behalf of the board of directors of AMPP and the AMPP Global Center, it is our pleasure to invite you to AMPP's inaugural Annual Conference + Expo in San Antonio, Texas, USA. From informative programs and workshops to exhibits and networking, this conference brings you the very latest information on materials, corrosion and coating trends, best practices, and products.

AMPP's conference will be our industry's largest event after nearly two years, and a wonderful occasion to reconnect with old friends and network with industry peers. Whether you are focused on corrosion, coatings, materials, or seeing new technologies from around the world, you will find everything you need in one place.

An AMPP Annual Conference + Expo registration includes entry to:

- Informative Symposia and Standard Committees Groups Led by Industry Experts
- Lectures from Industry's Leading Authorities
- Hundreds of Exhibits
- Practical Learning Workshops
- Hands-on Coating and Cathodic Protection Experiences
- Targeted Professional Development Programming
- A Career Fair Featuring Companies from Several Industry Sectors
- Topical Theater Presentations in the AMPPiTheaters
- Standards Development Meetings
- Numerous Networking Opportunities

No matter what part of the world you live in, these past two years have been challenging. We all have missed so much both personally and professionally, yet through it all our industry has been resilient. There is a lot that has happened and a lot to catch up on and we hope to bring it to you in-person and virtually next March.

Along with the boards and staff of AMPP, we look forward to welcoming you to AMPP's Annual Conference + Expo 2022!

Sincerely,

Timothy Bieri
Chair, AMPP

and

Joyce Wright
Chair, AMPP Global Center

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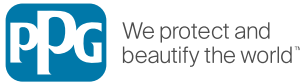
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General Conference Information

AMPP Annual Conference + Expo 2022 Location

Henry B. Gonzalez Convention Center
900 E. Market St.
San Antonio, TX 78205, USA

Getting to San Antonio

San Antonio International Airport
9800 Airport Blvd.
San Antonio, TX 78216, USA



MARCH 6–10, 2022 | SAN ANTONIO, TEXAS

Visa Application and COVID-19 Restrictions for International Delegates

Any individual traveling from an international location into San Antonio will need to check the U.S. Department of State web site to identify their specific country Visa requirements and COVID-19 related restrictions.

For detailed listings of your country's travel requirements in order to attend AMPP Annual Conference + Expo 2022, please visit travel.state.gov.

Official Conference Language

The official conference language is English.

Professional Development Hours (PDHs) Stations

Earn PDHs in technical meetings, forums, and symposia you attend. Print out your personalized PDH certificates at the PDH Station located near Registration. Certificates are based solely on the information provided to AMPP at the time of printing.

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AMPP Annual Conference + Expo 2022 Conference Papers

The AMPP ANNUAL CONFERENCE + EXPO 2022 conference proceedings will be available on USB and online. Please see below for pricing details.

Register before January 17, 2022—Complimentary USB or Online Access
Advanced registrants—Full and Students
Full Advanced Exhibitor Comp Registration
Register after January 17, 2022—\$149 USB or Online Access
Conference attendees—Full, One Day, Two Days, and Students
Full Exhibitor Comp Registration
Booth Attendants
Exhibit Hall Only
Not attending AMPP Annual Conference + Expo 2022

Convention Center Accessibility

Henry B. Gonzalez Convention Center is committed to accommodating the needs of individuals with disabilities. The Center complies with all federal ADA laws. If you have any special requirements, please contact AMPP (customersupport@ampp.org) for additional assistance.

Corporate Lounge

The Corporate Lounge offers qualifying corporate member representatives specialized services and an oasis for conducting business while at conference. Guests can reserve meeting rooms, check their email, or just relax between meetings.

To learn how you can become a Corporate Member, please contact our Membership Engagement Specialist via email at corporate@ampp.org or by phone: +1 281-584-6693.

Registration Information

REGISTRATION TYPE	Member Rates (USD)		Nonmember Rates (USD)	
	Advance	Regular	Advance	Regular
Full Conference ^(A)	\$815	\$960	\$915	\$1,130
One-Day ^(B)		\$450		\$550
Two-Day ^(B)		\$620		\$750
Virtual		\$495		\$595
Student	No cost	\$100	No cost	\$100
Guest ^(C)		\$155		\$175
Exhibit Hall Only				\$150
Spring Golf Tournament				\$250 Individual
				\$1,000 Team
				\$1,200 Tournament Package
EMERGING Leaders Bash				\$75
Honoree Night				\$75 Individual
				\$1,500 Table Sponsor ^(D)
				\$2,500 VIP Lounge Sponsor ^(D)
Fellows Meeting Breakfast				\$25—by invitation only ^(E)
Crew Brew				\$25

^(A) Full conference registration includes access to on site social activities, Tuesday lunch, and a Wednesday drink ticket.

^(A) Full conference advance registration includes complimentary proceedings.

^(B) One-day and two-day passes include full access to conference activities on selected day(s) only.

^(C) Guest registration includes access to social activities and Exhibit Hall only.

^(D) Sponsorship packages available: contact sales@ampp.org for more information.

^(E) For Fellows Breakfast, please contact ingrid.furtado@ampp.org.

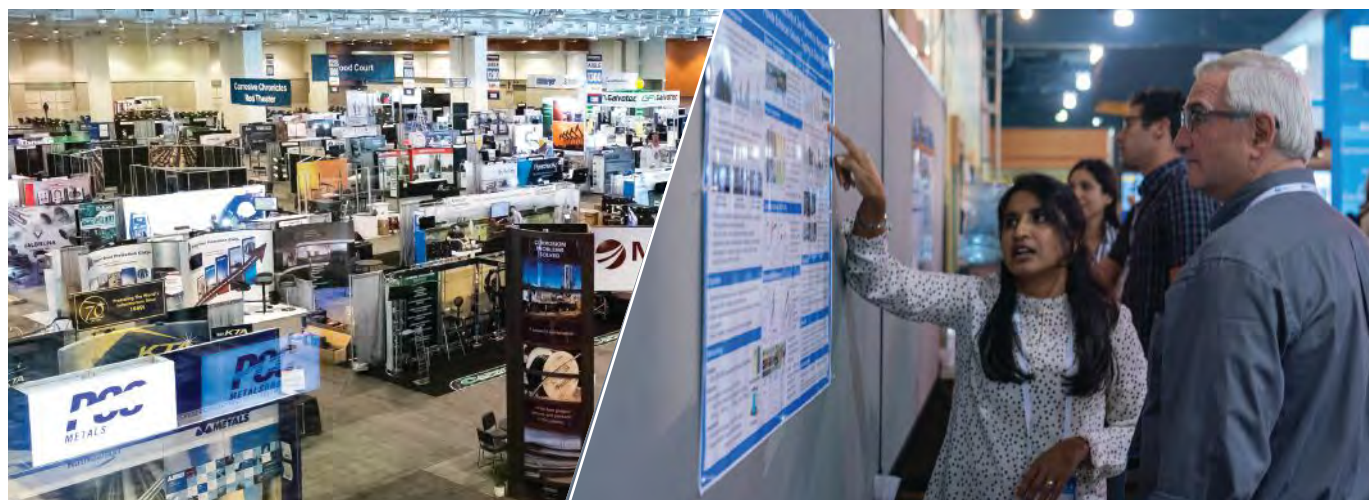
For the most up-to-date pricing and details, please visit ace.ampp.org.

General Registration Information

Registration is available online from November 1, 2021 to March 4, 2022. On site registration will be for in-person conference attendees only. On demand conference registration will continue online after conference begins. Advance registration rates will be available from November 1, 2021 to January 17, 2022. After January 17, 2022, regular registration rates will apply.

Express Pass and On Site Registration

AMPP Annual Conference + Expo 2022 registration will be located in the Henry B. Gonzalez Convention Center.



Registration and Housing

Important Dates and Information

NOVEMBER 1, 2021

Housing opens	We recommend that you select your hotel early to ensure you are able to book a room at your preferred hotel.
Registration opens	Register online at ace.amp.org .
	Mail: AMPP 15835 Park Ten Place Houston, TX 77084
	Fax: +1 281-228-6329
	Phone: 1 800-797-6223 (U.S. and Canada) or +1 281-228-6223 (worldwide)
Payment information	AMPP accepts checks, money orders, or credit card payments. Invoices will not be issued.

JANUARY 17, 2022

Advance registration closes	After January 17, registrations will be processed at the regular price.
-----------------------------	---

FEBRUARY 11, 2022

Housing closes	All changes, cancellations, and reservations must be handled directly by the hotels, not the housing bureau.
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MARCH 4, 2022

Online registration for in-person conference closes	After March 4, registrations for in-person conference attendees will only be accepted at the Henry B. Gonzalez Convention Center.
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MARCH 6, 2022

AMPP Annual Conference + Expo 2022 begins	For times and locations of on-site registration, please visit ace.amp.org/registration .
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MARCH 10, 2022

Registration closes	noon
AMPP Store closes	1 p.m.
Exhibit Hall closes	noon
AMPP Business Center closes	5 p.m.

Conference Registration Payment and Information

Registration will not be processed without payment. Registration and payment date determine price. Payment must be made in U.S. dollars from a U.S. financial institution.

If you have a disability that may hinder your participation, please email a written description of your needs to customersupport@amp.org and an AMPP staff member will contact you.

Registration Policies

Check refunds are processed after the conference. There are no refunds on exhibit visitors or networking tickets. Mailed in registrations received after March 3, 2022 will be processed on site. Sponsored by



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Cancellation and Refund Policy

Paid registrations cancelled in writing at least 60 calendar days or more prior to the start of the event will receive a full refund, less a 10% service fee. Paid registrations cancelled in writing 59 to 30 days before the starting date of the event will receive a refund of 50% of the registration fee. No refunds or credits will be issued on cancellation requests received less than 30 days before the event begins. Transfer of registration is permitted one time at a fee of \$100.00 USD. Transfers may not be made less than 14 days before the event begins. This policy supersedes any previously published policy regarding the cancellation process for AMPP conferences.

All requests for transfer or cancellation must be submitted in writing to customersupport@ampp.org. No refund will be processed if the registrant is a no show.

Important Contacts Information

IMPORTANT CONTACTS	U.S.	INTERNATIONAL	EMAIL
Registration and General Questions	1 800-797-6223	+1 281-228-6223	customersupport@ampp.org
Housing Information	1 866-470-7778	+1 571-549-4542	AMPPHousing@spargoinc.com
Membership Services	1 800-797-6223	+1 281-228-6223	customersupport@ampp.org
AMPP Conferences	+1 281-228-6413	+1 281-228-6413	lesley.martinez@ampp.org
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Learn more about AMPP. www.ampp.org



Official Conference Hotels

Official Conference Hotels List

	HOTEL	S/D RATE	T/Q RATE	ADDRESS	PHONE
1	Grand Hyatt San Antonio*	\$219	\$239	600 E. Market St.	+1 210-224-1234
2	San Antonio Marriott Riverwalk	\$230	\$250	889 E. Market St.	+1 210-224-4555
3	San Antonio Marriott Rivercenter	\$230	\$250	101 Bowie St.	+1 210-223-1000
4	Hilton Palacio del Rio	\$225	\$245	200 S. Alamo	+1 210-222-1400
5	Hotel Contessa	\$229	\$249	306 W. Market St.	+1 210-229-9222
6	La Quinta Inn & Suites SA/Riverwalk	\$189	\$209	303 Blum St.	+1 210-222-9181
7	The Westin Riverwalk, San Antonio	\$257	\$277	420 W. Market St.	+1 210-224-6500
8	Homewood Suites SA/Riverwalk/ Downtown	\$205	\$225	432 W. Market St.	+1 210-222-1515
9	SpringHill Suites San Antonio— Alamo Plaza	\$169	\$189	411 Bowie St.	+1 210-222-2121
10	Hampton Inn San Antonio— Downtown	\$183	\$203	414 Bowie St.	+1 210-225-8500
11	Fairfield Inn & Suites—SA/Alamo Plaza/Convention Center	\$159	\$179	422 Bonham St.	+1 210-212-6262
12	Sonesta ES Suites SA Downtown	\$189	\$189	425 Bonham St.	+1 210-212-5555
13	Tru by Hilton DT/SA Riverwalk	\$189	\$209	901 E. Houston St.	+1 210-348-2924

*AMPP Headquarters Hotel

Ways to Reserve Your Room

Online Reservations

To secure your reservation online, please visit ace.ampp.org. You will receive an automatic acknowledgement email from our housing bureau, SPARGO. Acknowledgements will be emailed within six hours of your reservation being processed directly online. If you do not receive your acknowledgement in this time frame, please contact the AMPP Annual Conference + Expo 2022 Housing Bureau at 1 866-470-7778 or +1 571-549-4542 (international), or email AMPPHousing@spargoinc.com.

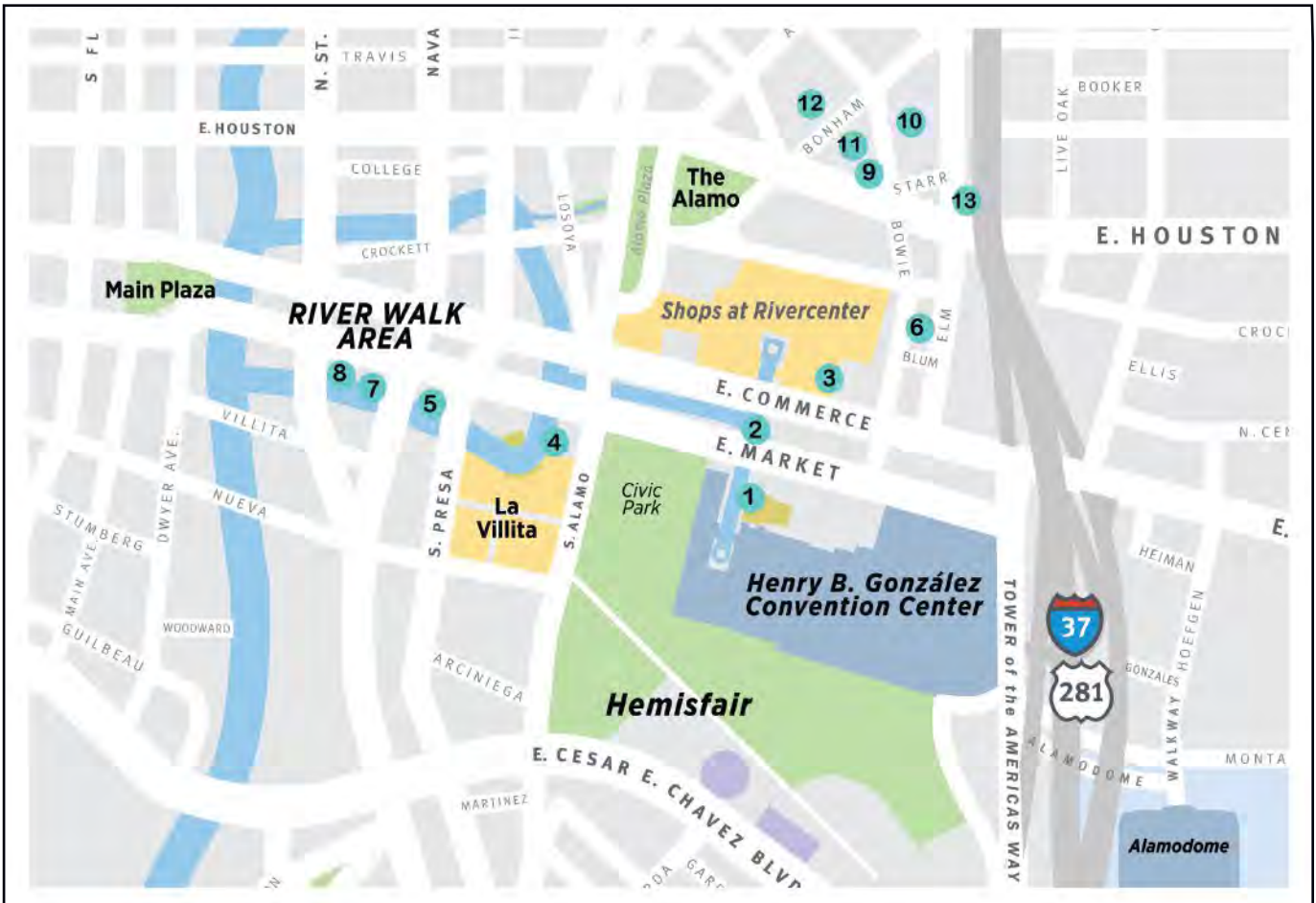
Reservations at the official conference hotels in San Antonio may also be obtained through AMPP during the AMPP Annual Conference + Expo 2022 registration process online. The deadline to reserve a room through online registration is February 11, 2022. After February 11, 2022, hotel reservations and conference registration will no longer be available through the AMPP web site.

ALERT!

SPARGO is the ONLY APPROVED HOUSING AGENCY for AMPP Annual Conference + Expo in San Antonio.

If you are contacted by anyone other than SPARGO, please note they are not endorsed by AMPP. Despite their claims, they do not have access to our negotiated discounted rates. For accurate information regarding reservations or availability, please contact our official housing bureau, SPARGO, or call 1 866-470-7778 (U.S. and Canada), +1 571-549-4542 (international).

Official Conference Hotels Map



Minor Policy for AMPP Conferences

Children under the age of 15 are not permitted in the Expo, meetings, and symposia. Children over the age of 15 must be registered as guests and wear a badge at all times while in the Convention Center. To accommodate nursing mothers, the following will apply:

1. Expo attendance: Nursing infants will be allowed in the exhibit hall during show hours only and must always be carried in arms or front baby carrier (NO STROLLERS PERMITTED), by a registered AMPP attendee. Everyone who attends the exhibition must be registered and have a badge. Badges for minors 15 and older are free and available on site at the registration desk. Minors between 15 and 18 years of age must be accompanied by an adult at all times. Guardians are asked to help maintain a professional, disturbance-free exhibition environment.
2. Meetings & symposia: To provide all AMPP attendees an optimal learning environment, minors and guests are not permitted in technical meetings or the symposia. Those attending these sessions must be registered for the conference and show the appropriate badge.
3. Exhibitors: Exhibitor booth staff must be registered as such and be 15 years of age or older. The nursing infant rule does apply to exhibitors. No child under the age of 15 may be in an exhibit booth during set-up, tear-down, or show hours. Anyone in violation of these rules will have their booth closed and will not be provided a refund.
4. Strollers and rolling carts are not allowed in the exhibit hall at any time.
5. Childcare is not available at the Convention Center; however, your hotel concierge may be able to assist you. Please note that AMPP has no affiliation with these services.

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Learn more about AMPP. www.ampp.org

Meetings

Schedule is subject to change. Please refer to ace.amp.org for the most up-to-date schedule.

PROGRAM COLOR LEGEND

● Administrative/Other

▲ Standards Committee Meetings

ADMINISTRATIVE MEETINGS

NAME	DAY	LOCATION
● AMPP Board of Directors Meeting	Friday	Grand Hyatt San Antonio
● AMPP Global Center BOD Meeting	Saturday	Grand Hyatt San Antonio
● Conference & Events Planning Committee (CEPC)	Sunday	Henry B. Gonzalez Convention Center
● Standards Committee Informational Meeting	Sunday	Henry B. Gonzalez Convention Center
● Membership Program Committee	Sunday	Henry B. Gonzalez Convention Center
● MP Editorial Advisory Board	Sunday	Henry B. Gonzalez Convention Center
● Publications Program Committee	Sunday	Henry B. Gonzalez Convention Center
● Standards Committee Officer Training	Sunday	Henry B. Gonzalez Convention Center
● Annual Member Meeting	Sunday	Henry B. Gonzalez Convention Center
▲ SC 05 - Surface Preparation	Sunday	Henry B. Gonzalez Convention Center
▲ SC 18 - Water & Wastewater	Sunday	Henry B. Gonzalez Convention Center
● CORROSION Journal Editorial Board	Monday	Henry B. Gonzalez Convention Center
● EMERG Student Outreach Committee	Monday	Henry B. Gonzalez Convention Center
● Speakers' Breakfast	Monday	Henry B. Gonzalez Convention Center
● Student Poster Orientation	Monday	Henry B. Gonzalez Convention Center
● Student Panel Meeting	Monday	Henry B. Gonzalez Convention Center
▲ SC 04 - Linings & Internal Coatings	Monday	Henry B. Gonzalez Convention Center
▲ SC 24 - Environmental Health and Safety (EHS)/Regulatory	Monday	Henry B. Gonzalez Convention Center
● CEPC Symposium Officer Training	Tuesday	Henry B. Gonzalez Convention Center
● Speakers Breakfast	Tuesday	Henry B. Gonzalez Convention Center
● Career Fair	Tuesday	Henry B. Gonzalez Convention Center
● International Licensee & Partner Meeting	Tuesday	Henry B. Gonzalez Convention Center
▲ SC 25 - Accreditation Standards	Tuesday	Henry B. Gonzalez Convention Center
▲ SC 02 - External Coatings - Atmospheric	Tuesday	Henry B. Gonzalez Convention Center
● Speakers' Breakfast	Wednesday	Henry B. Gonzalez Convention Center
● EMERG Student Camp	Wednesday	Henry B. Gonzalez Convention Center
● Chapter Officer Meeting	Wednesday	Henry B. Gonzalez Convention Center
● AMPP Eagle Ford Chapter Meeting	Wednesday	Grand Hyatt San Antonio
▲ SC 03 - External Coatings - Buried & Immersed	Wednesday	Henry B. Gonzalez Convention Center
● Speakers' Breakfast	Thursday	Henry B. Gonzalez Convention Center
▲ SC 23 - Coating System Application, Maintenance, and Inspection	Thursday	Henry B. Gonzalez Convention Center

Standards Committee Information

Welcome to AMPP Standards Committees!

AMPP invites you to participate in AMPP Annual Conference + Expo 2022. There has never been a better time to have your voice heard at AMPP, and all full conference registrants are welcome to participate! If you're new to Standards Committees at AMPP, do not miss the Standards Committees Informational Meeting on Sunday, March 6 from 9 to 11 a.m. During this meeting, you'll learn about AMPP's Standards Committees and their functions. The matrix structure of AMPP Standards Committees is designed to bring together experts from various industries who are concerned with a specific subject matter and want to contribute to the development of standards that meet the needs of industry.

General AMPP Standards Committees Information

Standards Committee meetings are where you can learn about the projects assigned to a Standards Committee, meet the standards developers, contribute to the draft, and follow the progress of each standards project. AMPP Standards Committees scheduled to meet during AMPP Annual Conference + Expo 2022 are listed on the following pages. For the most up-to-date Standards Committee meeting listing with the exact meeting times and locations, visit the AMPP Annual Conference + Expo 2022 web site at ace.ampp.org.

Persons interested in joining a Standards Committee may do so at www.ampp.org/standards. AMPP membership is encouraged but not required. An AMPP profile is required.

For more information, visit ampp.org/standards.



Program

Schedule is subject to change.
Please refer to ace.amp.org for the most up-to-date schedule.

Session Types

- **FORUM**

Forums are an opportunity to discuss information that is relevant to the industry but does not require a technical paper. The topic and information must be technically accurate and must be relevant to AMPP's mission. Forums may include: Case Studies, Hands-on Demonstration of Tools and Instruments, and Panel Discussions. Forums shall address topics for varying levels of experience including beginner, intermediate and advanced topics.

- **SYMPOSIA**

Symposia is a way to hear the latest industry knowledge and methods before it's available in popular literature. Authors explain how this work will help advance and provide innovative technologies to the coatings and corrosion industries and/or will serve to introduce new information to the existing body of literature. A technical paper is required and will be published in the conference proceedings.

- **AMPPiTheater PRESENTATION (Exhibit Hall)**

Theater Presentations are an alternate option to reach audiences in the exhibit hall. They feature technical presentations in two semi-private theaters on the exhibit hall floor.

- **WORKSHOP**

Workshops provide useful member services such as training and skills or professional and employment development and support.

PROGRAM COLOR LEGEND

● Forum

▲ Symposia

● AMPPiTheater
Presentations

▲ Workshops

SUNDAY, MARCH 6

- **Understanding the Proper Use of Coatings Inspection Equipment Workshop**

Presented by Lake Barrett and Bill Corbett, KTA-Tator Inc.

This workshop is modeled after the successful coatings inspection instrument workshop presented at SSPC Coatings + conference. This workshop introduces the attendee to the major instruments utilized in a typical coatings inspection project and allows everyone the ability to use the instruments on sample tanks, pipes, building facades, etc.

MONDAY, MARCH 7

- **Coating Failure Investigations, Why Did This Happen?**

A minimum of three coating failures will be reviewed to determine the cause and who is at fault. Audience questions and participation apply current knowledge to the science of determining the cause, assigning blame if there is a sole source, and possible methods to decrease the reoccurrence of the failure.

- **Leadership From The Inside Out**

Presented by Stephanie Biagiotti Corey, Xcel Energy, Kailey Dharam, Dairyland, Jim Williams, IUPAT, Kelsey May, MESA, and Nick D'Angelo, Cleveland Water

It's tempting to view leadership through a results-driven mindset, focusing only on outcomes. But successful leadership relies on more than metrics. Diversity, inclusion, social responsibility, and ethical decision making are all crucial to a strong leadership culture. Leadership is not just a numbers game – it's a people project. By challenging ourselves to be better leaders, we can change the world... from the inside out. This forum will provide tools to learn how you can make a difference in your own leadership for yourself and your teams.

● Premature Coatings Failures Forum

Presented by Mike O'Brien, Mark 10 Resource Group, Inc.

Premature coating failures continue to cost asset owners, paint manufacturers, fabricators, contractors, shipbuilders, and others substantial amounts of unbudgeted money each year. Most of these failures are preventable if the proper principles are employed for selecting, applying, and inspecting the coatings. This tutorial is based on hundreds of real-life coating failures investigated by the presenter during his 40 years in the coating industry. This practical and informative tutorial is presented using many real-life case histories. It addresses coating failures that occur on steel, concrete, hot-dip galvanizing, and ductile iron substrates and explains the important properties for each of these substrates to consider when selecting and applying coatings to them. Failures involving most of the commonly applied coatings, including, but not limited to, inorganic zinc, organic zinc, epoxy, polysiloxane, polyurethane, water-based acrylic, and polyurea are discussed and pictures of the actual failures with these coating types are shown. **NEW** - When a premature coating failure occurs, it is important to investigate it using proper principles, techniques, and procedures.

During the presentation this year, the tutorial will include a new section on some basic principles to employ when investigating a premature coating failure, including how to prepare for a coating failure investigation, how to conduct the on-site investigation, how to determine the laboratory testing to perform, and how to analyze the results and write the report.

▲ Advanced Protective Coating Technology – Day 1

This symposium features technical papers that cover the following themes: (1) rust creepage mechanism, (2) cathodic disbondment mechanism, (3) coating blister mechanism, (4) CUI coatings, (5) salt decontamination chemicals, (6) offshore coating evaluation methods, (7) offshore windmill coatings, (8) nanotechnology, and (9) passive fire protection.

Chair: Benjamin Chang Vice Chair: Matt Dabiri.

▲ Coating Failures

This symposium features technical papers on protective coating failure analysis and guidance for diagnosing protective coatings failures for the industry.

Chair: Robert Lauer Vice Chair: Mohamed Ahmida

▲ Coatings and Corrosion Control for Storage Tanks

This symposium features technical papers on the inspection, monitoring, coating, cathodic protection, VCI, and other innovative methods of corrosion management for aboveground storage tanks.

Chair: Khalil Abed Vice Chair: Mohammed Alrudayni

▲ Marine Coatings and Corrosion

This symposium features technical papers on marine coatings along with other protective measures for marine structures such as sea ports, off shore oil rigs, wind mills, commercial ships and oil tankers.

Chair: Abdulhameed Al-Hashem Vice Chair: Moavin Islam

▲ Multi-Functional Coatings – Research in Progress

This RIP symposium will feature presentations on sustainable corrosion protection provided by multi-functional corrosion-resistant coatings. A multifunction/multiscale design of such coatings requires working out elaborate processing (manufacturing), internal structures and chemical compositions. Surface coatings enhance the material performance and lifetime by providing protection from harsh environments such as high temperature, oxidizing and corrosive species, and/or erosive environments. This session includes presentations on the processing, materials characterization, and performance of coatings produced by a wide variety of functionalities (barrier, sacrificial, inhibition, self-healing, hybrid, etc.) that encompass different manufacturing routes (including traditional and additive manufacturing).

Chair: Homero Castaneda

PROGRAM COLOR LEGEND

● Forum

▲ Symposia

● AMPPiTheater
Presentations

▲ Workshops

TUESDAY, MARCH 8

● Facility/Asset Owners Forum and Reception

Facility/asset owners are invited to attend an open forum to discuss best practices and solutions related to industrial coatings, surface preparation, new technologies, assets life-cycle extension, and budget efficiencies. A panel of owners and operators will address the most pressing issues that they face today. Insights regarding AMPP's quality programs for industrial coating projects will also be discussed. Complimentary beverages and appetizers will be served following the discussion to provide an opportunity for facility owners to network and continue the discussion with peers

● Galvanizing, Metalizing, and Duplex Coatings for Bridge Preservation Forum

Presented by Kevin Irving, International Zinc Association, Sudhir Palle, University of Kentucky, Dr. Tom Langell, American Galvanizing Association, and Derrick Castle, Sherwin Williams

TCorrosion of steel is a worldwide problem. This workshop will discuss the corrosion protection measures of galvanizing, metalizing, and Duplex coatings that describe both DOT's and paint manufacturers' experiences in dealing with them. This will include hands on demonstrations of adhesion tests of duplex coating on galvanized and metalized panels. There will be discussions from three different paint manufactures on using duplex coating for new steel. They will discuss measures on what needs to be taken in consideration for coating the galvanized/metalized steel. Slip and creep of faying surfaces will also be discussed. We will be able to show current cast studies of galvanized bridges over 50 years old with no maintenance to date. Meaning the first cost is still his same cost. We have case studies of metalized bridges over 20 years old with no maintenance. Duplex bridges will also be highlighted, with current case study as well. If allowed, we could also do a live small outside demo of the metalizing process. This workshop will educate the beginner as well as the experienced AMPP members. They will learn of the cathodic protection of zinc and how it protects the steel substrate. These presentations will be very informal so the audience will be able to ask questions directly to the presenters.

● Zinc Coatings for Asset Protection by Land and Sea Forum

Presented by Bernardo Duran, International Zinc Association, Alana Fossa, American Galvanizers Association, Mike Stroia, Commercial Metals Company, Chad Martin, Great Western Joint Venture

Specifiers and asset owners have used zinc coatings for corrosion protection for structures, vessels, and infrastructure on land and marine applications for many decades due to their proven performance and cost-effectiveness. This presentation will discuss the different coating technologies from application and performance perspectives. This forum is designed for both beginners and seasoned AMPP members. Professionals new to the protective coatings world will learn about proven technologies, including the basics of electrochemical corrosion and how corrosion engineers utilize zinc to protect against it. Experienced industry professionals will learn the breadth of applications and new developments in the zinc coatings world and how to specify and inspect them. The speakers, who have more than sixty years of combined experience in zinc coatings, will discuss steel and concrete substrates and reinforcement steel in concrete. The presentations will demonstrate the versatility of the application methods and provide new coating options for these structures.

▲ Advanced Protective Coating Technology – Day 2

This symposium features technical papers that cover the following themes: (1) Rust Creepage Mechanism, (2) Cathodic Disbondment Mechanism, (3) Coating Blister Mechanism, (4) CUI Coatings, (5) Salt Decontamination Chemicals, (6) Offshore Coating Evaluation Methods, (7) Offshore Windmill Coatings, (8) Nanotechnology, and (9) Passive Fire Protection.

Chair: Benjamin Chang Vice Chair: Matt Dabiri

▲ Coating Application

This symposium features technical papers on various application methods that include coating concrete, electrostatic spray,

pipeline coatings, plural components, powder coatings, thermal spray and waterjetting.

Chair: Ahmad RK Rana Vice Chair: Mohamed Ahmida

▲ **Military Coatings and Corrosion**

This symposium includes technical papers and research on identification, causes, and control of corrosion and materials degradation for military air, ground, and ship systems, as well as electronic systems, support equipment, and infrastructure.

Chair: Patrick Cassidy Vice Chair: Charles White

● **Corrosion Is Wide Awake...Dreams or Nightmares for Industrial Hygiene?**

Presented by Sylvia Fontes, CIH, Forensic Analytical Consulting

This session will cover some of the basic health hazards associated with the coatings industry. This includes silica, lead, beryllium, and methylene chloride. The basic OSHA regulations regarding health and safety will be reviewed to give the beginner in the coatings industry a basic foundation to ensure a safe and healthy work environment.

● **In-Ground Service Performance of 2-Layer Polyethylene Corrosion Coatings Including Laboratory Aging and Exposed Coatings**

Presented by Samuel Thomas, Liberty Coating Company

service gas distribution pipelines. The presentation will also share results of laboratory aging of 2-Layer Polyethylene coatings for thermal and hydrolytic aging and include documented coating properties that were exposed to UV from 1 year to 21 years.

● **Shop Painting Vs Field Painting of Steel Bridges the Pros and Cons**

Presented by Charles Brown, GPI

The author looks at the recent trend of applying all three coats of paint in the shop versus painting just the primer in the shop and touching up the primer and applying the other 2 coats in the field. The paper reviews the pros and cons of shop versus field painting and touches on costs, underlying issues of shop versus field painting, quality control and repairs. The paper will also go over a recent job done in the shop and the problems that arose and what corrective action had to be taken in the field on a Maryland State Highway project.

WEDNESDAY, MARCH 9

● **Bridge Coatings - How to Address a Coatings Program from Design, Inspection to Maintenance Forum**

Presented by Antonios Serdenes, GPI and CoatingsPro

This round table discussion will include the basic principle for developing a bridge painting program from its inception to completion. This round table format will be the discussion on the key requirements needed during the design, inspection and maintenance of bridge coating projects. It will be an interactive discussion with audience members and the panelist to address their challenges faced their agencies.

● **Coating Application and Corrosion Mitigation on United States Coast Guard Cutters Forum**

Presented by Ross Markham, USCGC TAHOMA (WMEC-908) and Nick Paisker, USCG - SFLC- LREPL

Ever wonder how the United States Coast Guard (USCG) approaches corrosion prevention in their newly built and 50+ year old multi-mission marine assets? This session will expand on the current preservation practices and corrosion mitigation strategies used to extend the operational lifecycle of numerous new and aging USCG vessels. The various approaches to shipboard temporary repairs and commercial level renewals based on asset class, crew outfit and operational schedule as well as geographic induced obstacles, etc... will be explored. Congressional appropriations, national interests and public affairs of the sea-going service also play a large factor in this sustainment process. Additionally, the planning and maintenance feedback loop from corrosion assessments/inspections will also be discussed. USCG specific technical documentation/references and their parallel with commercial subject matter expertise and industrial societies will likewise be integrated throughout the presentation.

Program

Schedule is subject to change.
Please refer to ace.amp.org for the most up-to-date schedule.

PROGRAM COLOR LEGEND

● Forum

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● Coatings 101 Workshop

Presented by Charles Brown, Chris Farschon, and Michael Baase, Greenman-Pedersen, Inc.

The workshop will provide an overview of an industrial protective coatings project, including design considerations, material selection, surface preparation guides, ambient conditions, and basic quality control techniques. What participants will attain out of this course is a basic understanding of how protective coatings are specified and applied to meet the goals of a project. We will discuss Corrosion, Good Design, Good Paint, Good Specifications, Good Contractors, Good Inspection and Good Maintenance. We will review and present typical inspection instruments used on a paint project, surface preparation guides, how to read a product data sheet and how to measure ambient conditions.

● Thermal and Cold Spray Coatings Forum - Processes, Applications and Challenges

Presented by Shiladitya Paul, TWI, Jim Weber, James K. Weber Consulting LLC, Dave Harvey, TWI, Frank Prenger, Grillo-Werke Aktiengesellschaft

This session will cover discussions on thermal and cold spray coatings for mitigation of corrosion and wear with a specific focus on (but not limited to) surface preparation, coating consumable selection, spray method selection, spray parameter development, in-line quality and inspection, testing and qualification, operational experience, cost reduction, maintenance and repair. The subjects to be covered include latest research and field experience on thermal spray coatings, materials, processes

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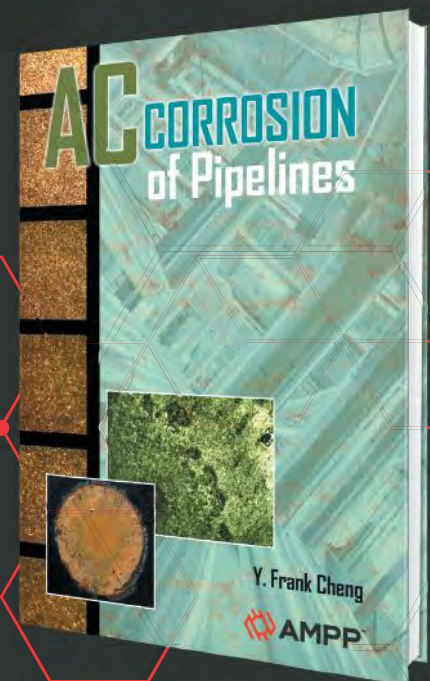
By: Y. Frank Cheng

This print-on-demand book provides information on the:

- Basic principles of AC interference induced by adjacent AC power lines and other sources,
- Adverse effects of the interference on collocated pipelines, including corrosion and pitting corrosion, coating degradation, deviating of cathodic protection potentials,
- Ineffectiveness of cathodic protection systems and effective management measures to this problem,
- DC interference and DC corrosion of the pipelines, as compared to the AC corrosion phenomenon.

Product number: 37656

Grab your copy at store.nace.org/ac-corrosion-of-pipelines





GAIN VALUABLE CRAFTWORKERS SKILLS AND BECOME EMPLOYABLE

The coatings industry is a highly technical field that requires skilled personnel to perform quality surface preparation and protective coatings application. Gain those skills by learning from the experts. Our craftworker education programs contain resources to use on the job and prepare you for certification exams.



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Additional Certification Available

Industrial Coatings Application (ICA)

This program is a series of online modules based on the NACE No. 13/SSPC-ACS-1 standard that sets the criteria for a qualified workforce, meeting contractors' and facility owners' need for consistent, quality work completed accurately, safely, and at a reasonable cost. More information at nace.org/ICA



Abrasive Blaster Certification Program

While working towards certification, you will learn how to recognize the basic principles of surface preparation, proper blast cleaning equipment set-up, blasting techniques, and various abrasives and their uses. More information at sspc.org/C7



Spray Application Certification Program

This program assesses the skills of sprayers who have a minimum of 800 hours applying protective coatings with airless/conventional spray in an industrial or marine environment. More information at sspc.org/C12



Coating Application Specialist Certification Program

Designed to certify those individual craftworkers who have experience and training in all aspects of hands-on surface preparation and coating application of complex industrial and marine structures. More information at sspc.org/CAS



Why take a course with AMPP?

Both NACE and SSPC training and certification programs have come together under AMPP, The Association for Materials Protection and Performance. Several NACE and SSPC courses are specified by name for employment requirements within the coatings industry.

Program

Schedule is subject to change.
Please refer to ace.ampp.org for the most up-to-date schedule.

PROGRAM COLOR LEGEND

● Forum

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and strategies for corrosion control, etc. The group will also discuss conventional and novel thermal and cold spray coating systems used to prevent corrosion and wear in offshore, onshore, oil and gas, subsea, marine, construction, chemical industry, refinery, construction, automotive, power, aerospace, etc.

● **What Does a Facility Owner Look for in a Quality Coating Contractor?**

Presented by Bernardo Duran, International Zinc Association, Alana Fossa, American Galvanizers Association, Mike Stroia, Commercial Metals Company, and Chad Martin, Great Western Joint Venture

Join this panel discussion to hear from leaders in the coating industry to see what facility and equipment owners look for in a quality coating job and in a contractor. The importance of quality work and correct specifications are hard to over-state given their impact on the life of the structure, facility, pipeline, etc. Use of proper surface preparation, application and inspection techniques lead to the work of highest quality work and extends the asset life (or life of the asset...either way is good) while reducing project costs during the process by avoiding rework and other job non-conformances.

▲ **Bridge and Infrastructure Coatings & Corrosion – Day 1**

This symposium includes technical papers and research on identification, causes, and control of corrosion and materials. This symposium features technical papers on methodologies to improve the service life of materials and structures in infrastructure, transportation and utilities industries. Work that covers new developments and solutions for pre-stressed and post-tension reinforced concrete structures as well as updates to existing systems are encouraged.

Chair: Eyad Alhariri Vice Chair: Christopher Alexander

▲ **Coating Inspection**

This symposium features technical papers on the proper methods of inspection for surface preparation and installation of protective coatings and lining systems on an array of industrial structures and facilities.

Chair: Lake Barrett Vice Chair: Charles Brown

▲ **Soft Skills Workshop**

Presented by IUPAT

Soft Skills are the Key! You deal with People every day starting with YOURSELF! There are all kinds of people both inside and outside your organization. When you are dealing with people who are your customers you need to build a good and lasting relationship keeping in mind that you are in the business of serving them. This Seminar will help you understand what soft skills are, learn more about you, and conclude with your next steps to help you achieve success in your work and career. And the bonus is what this all means to your personal happiness!

Topics we will cover include:

Soft Skills / Hard Skills – Why we need to practice both every day * It starts with understanding yourself – your personality is what people see *

- Emotional Intelligence – what it means and why is it so valuable *
- Communication – the Ultimate Core Competency everyone needs to improve *
- Differences – understanding them and embracing them as an opportunity *
- Influence and Authority – why is this so important *
- Managing, Leading, following – what you need to know to succeed *
- Mentorship – a critical responsibility we all must make part of our day-to-day

● AMPP Credentialing and Certification Forum

During this forum, information will be presented about AMPP credentialing, the certification development process, and how you can get involved. The presenters will cover topics such as:

- Differences between education and certification/credentialing
- Credentialing standards, development process for certification exams
- AMPP's multi-tiered credentialing strategy, how you can get involved
- AMPP certification exam resources, benefits of computer-based testing
- Q&A

We are excited about this opportunity for discussions about credentialing at AMPP!

● Benefits & Characteristics of Recyclable Abrasives

Presented by Kumar Balan, Ervin Industries

Recyclable abrasives such as steel shot and grit have been effectively used for cleaning and preparing steel surfaces. This discussion will focus on desirable characteristics of such abrasives and their proper use.

● CoatingsPro's 2022 Contractor Awards Program Celebration

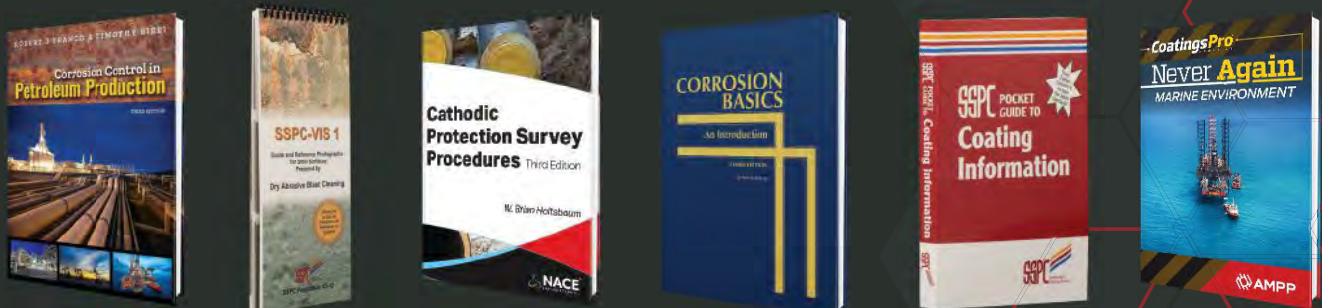
CoatingsPro's Contractor Awards Program is designed to showcase and recognize the projects and crews that demonstrate excellence in the field of high-performance commercial and industrial coatings. Award winners in seven categories — Commercial Concrete, Commercial Roof, Industrial Concrete, Industrial Steel, Specialty Project, Work It Safe, and Contractor/Crew MVP — will be announced on Wednesday, March 9th during the annual AMPP Conference + Expo.

● Intelligent Blasting - Where the Internet Meets the Blast Nozzle

Presented by Jim Gooden, BlastOne

Never before have you been able to sit in the office and see how much media is being used by each blaster, in real time. Now you can make adjustments and dial the media consumption so that you can keep the project on track, from your phone.

Stock up on your corrosion and coatings resources **TODAY!**



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PROGRAM COLOR LEGEND

● Forum

▲ Symposia

● AMPPiTheater
Presentations

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● **New Nozzle Developments to Massively Reduce the Noise from Blasting**

Presented by Jim Gooden, BlastOne

drawbacks in nozzle design, which creates massive shocks and turbulence in the air flow as it travels through the nozzle. New imaging and photographic equipment allowed researchers to study the air flow and abrasive movement in real time at a level never undertaken before. This has allowed an entirely new technology to reduce blasting noise, with some additional unexpected, but very positive effects.

THURSDAY, MARCH 10

▲ **Bridge and Infrastructure Coatings & Corrosion – Day 2**

This symposium features technical papers on methodologies to improve the service life of materials and structures in infrastructure, transportation and utilities industries. Work that covers new developments and solutions for pre-stressed and post-tension reinforced concrete structures as well as updates to existing systems are encouraged.

Chair: Reyad Alhariri Vice Chair: Christopher Alexander

▲ **Characterization and Performance of High Temperature Materials/Coatings for Industrial Applications in Refining, Petrochemical and Power Generation Industries**

This symposium features technical papers on the characterization and performance of high temperature materials and coatings for industrial applications in refining, petrochemical and power generation industries. Work on material development, properties, testing & characterization, corrosion and performance is encouraged.

Chair: William L. Valerioti Vice Chair: Bingtao Li

▲ **Surface Preparation**

This symposium features technical papers on the appropriate tools and preparation methods prior to coatings application. Topics may include solvent cleaning, hand-tool cleaning, power-tool cleaning, abrasive blast cleaning, waterjetting, recognizing and repairing surface imperfections, recognizing and removing surface contaminants and assessing surface cleanliness. Work that covers water-soluble salts and their impacts at the substrate/coating interface that can cause premature failure are also encouraged.

Chair: Loren Hatle Vice Chair: Taylor Nguyen

▲ **Thermal and Cold Spray Coatings**

This symposium features technical papers on all aspects of thermal and cold spray coatings used to mitigate corrosion of metallic and reinforced concrete structures with a specific focus on (but not limited to) surface preparation, coating consumable selection, spray method selection, spray parameter development, in-line quality and inspection, testing and qualification, operational experience, cost reduction, maintenance and repair. The subjects to be covered include results of basic and applied research on thermal spray processes and coating materials including field experience on thermal spray coatings, materials, processes and strategies for corrosion control. Papers on thermal spray coatings of zinc, aluminum and their alloys for corrosion mitigation with relevant field applications would be of great interest to the symposium. Contributions on conventional and novel thermal and cold spray coating systems used to prevent corrosion on metal and reinforced concrete structures in all offshore and onshore environments will be considered.

Chair: Shiladitya Paul Vice Chair: Martin Gagne

Protective Coatings Workshop

Protective Coatings Workshop

Tuesday, March 8 • 10 a.m. - 5 p.m. • Exhibit Hall

Want to stay current on the latest coatings developments and technologies available? AMPP is excited to announce the return of the Protective Coatings Workshop. This interactive workshop, designed for coatings applicators, inspectors, and contractors of all experience levels, will feature engaging discussion and presentations from coatings industry leaders, an introduction to new emerging technologies and techniques, and highlight best practices from experts. In addition, you will get the opportunity to network with fellow contractors, inspectors, and suppliers.

10:15 - 10:45 AM	Safety Presented by TBD
10:45 - 11:15 AM	Labor Shortages Presented by Ken Seal and Anton Ruesing, IUPAT
11:15 - 11:45 AM	The Importance of Performance Standards and Quality Programs in the Architectural and Commercial Painting Industry Presented by John Whalen, Master Painters Institute
11:45 AM - 1:00 PM	Lunch
1 - 1:30 PM	Corrosion Under Insulation (CUI) Presented by David Hunter, Hempel
1:30 - 2 PM	Inspection of Intumescent Fireproofing Presented by Russell Norris, Sherwin Williams
2 - 2:30 PM	Inspection of Steel Substrate Presented by Tony Serdenes, GPI
2:30 - 3 PM	Break
3 - 3:30 PM	How to Do Business with the DOTs Presented by TBD
3:30 - 4:00 PM	Concrete Presented by Steven Reinstadtler, Covestro
4:00 - 4:30 PM	Marine Coatings Presented by TBD
4:30 - 5 PM	Aerospace Presented by TBD

Don't miss this unique opportunity expand your coatings knowledge and earn PDHs!

The Protective Coatings Workshop is supported by CoatingsPro Magazine, and the Master Painters Institute.

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Networking Activities

SATURDAY, MARCH 5

AMPPCares Volunteer Day

8:30 a.m. to 3:30 p.m.

AMPP's members team up to volunteer at St. Jude's Ranch for Children (SJRC Texas), providing the local community with a sustainable activity to its development and care. St. Jude's Ranch for Children in San Antonio, TX, cares for children and families who have been affected by trauma, abuse and neglect, and have been removed from their homes by the Department of Family and Protective Services.

AMPP Volunteers may assist the institution in two ways:

On March 5th a group of volunteers will perform gardening services at SJRC Texas and, throughout the week, members and sponsors will be able to donate items needed by the institution. The items will be collected in strategic locations at the conference and, by the end of the week, staff and volunteer members will be donating the items to SJRC. Check out our Volunteer Page at www.nace.org/get-involved/volunteeropportunities for more details.

Crew Brew

6 to 10 p.m. • Pat O'Brien's

Welcome to San Antonio and the first AMPP Annual Conference + Expo! Join your fellow attendees at Pat O' Briens, located near the famous San Antonio Riverwalk. This popular networking event is a great way to make connections before the conference starts and have some fun. A limited number of tickets can be purchased in advance for \$25 and includes a drink ticket, heavy hor d'oeuvres, and exciting entertainment. Tickets can be purchased when you register online.

Sponsored by



SUNDAY, MARCH 6

Spring Golf Tournament

8:30 a.m. to 3:30 p.m. • The Quarry Golf Course

On the heels of the Darrel D. Byerley Memorial Golf Tournament and the Phil Calvo Memorial Golf Tournament, AMPP is excited to announce the continuation of an annual golf event!

Start your busy week off with a fun and relaxing round of golf, while networking with other conference attendees and industry professionals. Chiseled from stone, this historic course boasts amazing playing conditions, a natural wildlife habitat, and one of the most unique golf experiences in the U.S.

Teams or individual players can sign up with their conference registration. For questions or information on sponsorship opportunities, please contact Heather Lowry at +1 281-228-6205 or heather.lowry@ampp.org.

Guest Reception

2 to 5 p.m. • Grand Hyatt San Antonio

This networking reception for registered Guest Program participants is a great opportunity to connect with other Guest Program participants over light hor d'oeuvres and drinks.

Opening Reception

5:30 to 7 p.m. • Henry B. Gonzalez Convention Center

The Opening Night Reception kicks off AMPP's Annual Conference + Expo, as attendees and exhibitors interact over drinks and hors d'oeuvres. Drink tickets will be provided at registration. This reception is cosponsored by Carboline and AMPP. The two organizations are bound together by a common vision of corrosion prevention, environmental preservation, and education.

Sponsored by



DARREL D. BYERLEY



MEMORIAL GOLF TOURNAMENT

SPONSORED BY TINKER & RASOR

MARCH 6, 2022 | THE QUARRY GOLF COURSE | SAN ANTONIO, TX

JOIN US FOR THE 2022 DARREL D. BYERLEY MEMORIAL GOLF TOURNAMENT

Don't miss this chance to network with colleagues and other industry professionals, while enjoying one of Texas' premier golf courses, and helping to further the initiatives of the AMPP EMERG Student Outreach Program.

Teams or individual players can sign up when registering for the AMPP Annual Conference + Expo 2022.

For complete event information, including details on sponsorships, visit www.nace-foundation.org/events.

RESERVE YOUR SPOT TODAY!

Benefitting our
EMERG Student Outreach Program

 **AMPP**[™]
ANNUAL CONFERENCE + EXPO
MARCH 6-10, 2022 | SAN ANTONIO, TEXAS



Networking Activities

MONDAY, MARCH 7

EMERG Student Meeting

3:30 to 5 p.m. • Henry B. Gonzalez Convention Center

Discuss career development opportunities, current industry topics, innovations, issues, and trends while networking and making connections with a diverse group of students and young professionals from around the world.

Silent Auction

Monday, March 7—Wednesday, March 9

Exhibit Hall, Henry B. Gonzalez Convention Center

Take a break from the action in the exhibit hall and browse the wide variety of items and collectibles available at the silent auction. Items will be on display and open for bidding during conference hours through 4 p.m. on Wednesday, March 9.

Proceeds will benefit the EMERG Student Outreach Program in our efforts to open doors to new opportunities for students and veterans through a variety of new engagement programs. This new program is designed to raise awareness of career paths in the materials protection field.

TUESDAY, MARCH 8

Fellow's Breakfast

7 to 8:30 a.m. • Henry B. Gonzalez Convention Center

Fellows will have a work meeting breakfast to network and welcome the 2021 Fellow Honor recipients during the 2022 AMPP Annual Conference + Expo. If you are a Fellow and are interested in participating, please contact Ingrid Furtado at Ingrid.furtado@ampp.org for more information.

Headshot Station

8 a.m. to 5 p.m. • Henry B. Gonzalez Convention Center

Did you know that LinkedIn profiles with headshots get 21 times more views than profiles without a photo? A professional headshot doubles your chances of getting noticed or hired! Stop by the Headshot Station to update your look and professional profile.

This is your opportunity to update your LinkedIn profile or web page bio (personal, corporate, non-profit) and make a lasting first impression!

Sponsored by



Career Fair

8 a.m. to noon • Henry B. Gonzalez Convention Center

Whether you are a student, new to the industry, or a corrosion expert, take advantage of the Career Fair. Our goal is to assist you with your career and recruitment needs.

Job seekers—find your dream job and connect with registered employers.

Employers—register for an exhibit booth today to recruit your dream candidate.

For more information, or to register for a table, contact Christine Lajzo at christine.lajzo@ampp.org.

Scholarship Awards and EMERGING Leaders Bash: Celebrating Generation Next

7 to 8 p.m.—Scholarship Awards Ceremony

8 to 11 p.m.—The Grooves Band/Dancing

Aztec Theater

Continuing the traditions of two great organizations, AMPP supports the future of our industry with an evening of recognition and celebration, acknowledging the accomplishments of our 2022 scholarship and award recipients.

Individual tickets are \$75 and may be purchased with your conference registration. For more information on sponsorship opportunities, contact Heather Lowry at +1 281-228-6205 or heather.lowry@ampp.org.

* To attend the Scholarship Awards Ceremony, you must have an EMERGING Leaders Bash ticket. Student registrants for AMPP receive a complimentary event ticket with their conference registration. Conference shuttles will be available for guests' transportation needs. Limited hosted bar.

Signature Sponsor



Scholarship Awards Ceremony Sponsor



Silver Sponsor



WEDNESDAY, MARCH 9

EMERG Student Camp

10 a.m. to 3:30 p.m. • Henry B. Gonzalez Convention Center

A day-long mini-camp for local high school students will be held in conjunction with AMPP 2022. Local students from San Antonio area high schools will participate in hands-on, coatings and corrosion-related activities using cKits™ (Corrosion Toolkits). They will learn basic scientific principles of corrosion in topics such as oxidation, thermodynamics, and electrochemistry. Students will also have the opportunity to learn about research and career opportunities from industry professionals and university students while touring the AMPP 2022 show floor.

Volunteers are needed. For information on how you can get involved, contact Brandy Adams at +1 281-228-6478 or brandy.adams@ampp.org.

cKit™ Training for Chapters

3:30 to 5 p.m. • Henry B. Gonzalez Convention Center

Chapter leaders and members are invited to a drop-in event to be introduced to the cKit™ (Corrosion Toolkit) and the experiments included in it. There will be experiments on display, along with two master instructors to help guide you through the kits, how they can be used locally in your community, and how to help conduct the experiments. Please reserve some time on your AMPP 2022 calendar! For more information, contact Brandy Adams at +1 281-228-6478 or brandy.adams@ampp.org.

Honoree Night

6 to 10 p.m. • Grand Hyatt San Antonio

AMPP invites you to an evening of celebration as the association's awards are presented in recognition of members who have made outstanding contributions to AMPP and the corrosion control industry. Taking place at Grand Hyatt in San Antonio, guests will enjoy a relaxing evening of networking, heavy hors d'oeuvres, and entertainment. Please contact us about sponsorship opportunities. Tickets are available online or by contacting customersupport@ampp.org. Space is limited, so it is recommended that you purchase your tickets in advance.

Thank You

NACE—Diamond Corporate Members

as of 9/7/2021

AB Sandvik Materials Technology	J.H. Fletcher & Co.
Accurate Corrosion Control	Kuwait Oil Co.
BP Exploration & Production Operating Co., Ltd.	Lake Superior Consulting
BSS Technologies	Marathon Pipeline, LLC
Bureau Veritas Services	MATCOR, Inc.
Carboline Co.	MESA
Colonial Pipeline Co.	National Grid
Corrpro	Oneok Partners
Dalian IMAOKA Shipbuilding Co., Ltd.	Pacific Gas & Electric Co.—Bollinger Canyon
Denso North America	Polyguard Products, Inc.
Dunn-Edwards Corp.	PPG Coatings (Kunshan) Co., Ltd.
E2G The Equity Engineering Group, Inc.	PPG Industries, Inc.
Elcometer	Rabigh Refining and Petrochemical Co.
Element Material Technology	Research Institute of Lanzhou PetroChemical Co.
Enable Midstream Partners	Shanghai PT Painting Technology Co., Ltd.
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Enbridge Pipelines, Inc.	Shinko Co., Ltd.
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Element Material Technology	Rabigh Refining and Petrochemical Co.
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Gecko Robotics	Shinko Co., Ltd.
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J.H. Fletcher & Co.	Transocean Coatings
JT Thorpe & Son, Inc.	

HIGH ROLLIN' FOR A HARLEY!



 **AMPP**TM
ANNUAL CONFERENCE + EXPO

MARCH 6-10, 2022 | SAN ANTONIO, TEXAS

How the contest works:

1. Attendees will have to visit all High Rollin' for a Harley Sponsors' booths to collect a playing card from each sponsor.
2. Once they have collected all of the cards from all of the sponsors, they will submit the entry form to the location of the Harley on the show floor.
3. The drawing will be held on Wednesday at 4 PM.

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 **AMPP**TM

The Exhibition

Expo Schedule

Monday, March 7	5 to 7 p.m. (Expo Grand Opening)
Tuesday, March 8.....	10 a.m. to 5 p.m. (noon to 2 p.m.)
Wednesday, March 9	10 a.m. to 5 p.m. (3 to 5 p.m.)

*Times in parentheses indicate unopposed hall hours.

Expo Events

Monday, March 7

Cathodic Protection (CP) Field.....	5 to 7 p.m.
Coatings Experience.....	5 to 7 p.m.
Expo Grand Opening*.....	5 to 7 p.m.
Silent Auction Bidding.....	5 to 7 p.m.
Student Poster Session	5 to 7 p.m.

Tuesday, March 8

CP Field.....	10 a.m. to 5 p.m.
Coatings Experience.....	10 a.m. to 5 p.m.
Complimentary Lunch (full conference attendees only)	11:45 a.m. to 1 p.m.
AMPPiTheaters.....	10:30 a.m. to 5 p.m.
Silent Auction Bidding.....	10 a.m. to 5 p.m.
Protective Coatings Workshop.....	10 a.m. to 5 p.m.
Student Poster Session	noon to 2 p.m.

Wednesday, March 9

CP Field.....	10 a.m. to 5 p.m.
Coatings Experience.....	10 a.m. to 5 p.m.
EMERG Student Camp	10 a.m. to 4 p.m.
AMPPiTheaters.....	10:30 a.m. to 5 p.m.
Silent Auction Bidding	10 a.m. to 4 p.m.
Student Poster Session Winners Announced.....	12:30 p.m.
Harley Giveaway	4 p.m.

*Please note: Due to laws/liabilities, no one under the age of 18 will be given access to the Exhibit Hall during the Expo Grand Opening on Monday, March 7.

Cathodic Protection Field

Check out the field testing exhibit on the show floor—an actual representation of a cathodic protection (CP) field with the opportunity for hands-on activities. Perform several CP-related tests at the field testing exhibit and learn from industry experts who will be available to answer questions or discuss CP problems you may have.

This is your opportunity to gain hands-on experience by performing tasks such as:

- CP interference
- Alternating current voltage mitigation
- Electrical isolation testing and short locating

The Coatings Experience

Join us on the Exhibit Hall floor for The Coatings Experience. This interactive area will introduce those interested in coatings to the ins and outs of application, surface preparation, inspection plans, and coatings selection in a fun and interactive way!

Protective Coatings Workshop

 Tuesday, March 8 • 10 a.m. to 5 p.m. • Exhibit Hall

Want to stay current on the latest coatings developments and technologies available? AMPP is excited to announce the return of the Protective Coatings Workshop. This interactive workshop, designed for coatings applicators, inspectors, and contractors of all experience levels, will feature engaging discussion and presentations from coatings industry leaders, an introduction to new emerging technologies and techniques, and highlight best practices from experts. In addition, you will get the opportunity to network with fellow contractors, inspectors, and suppliers. For more information, see page A23.



Dairyland Lounge

Get this year's hottest souvenir—a commemorative t-shirt that is printed live in the Dairyland Lounge (#2563). While you're there, learn how Dairyland is working to make the world a safer place through their Live Engaged initiative. Don't miss out!

Sponsored by:



High Rollin' for a Harley Giveaway

We are giving away a Harley Davidson, and this is YOUR chance to win! Visit each High Rollin' for a Harley sponsor at AMPP Annual Conference + Expo to collect a playing card from each sponsoring booth. Once all playing cards have been collected, hightail it over to the Harley on the Exhibit Hall floor, and complete the submission card to enter to win. The winner will be announced Wednesday in the Exhibit Hall.

Sponsored by:



Product Showcase

Be sure to stop by AMPP's Product Showcase to see the latest innovations and new products from our exhibiting companies. The Product Showcase is your first look at the industry's cutting-edge technology and includes product descriptions along with the exhibiting company's booth number. The Product Showcase will be located at the entrance to the Exhibit Hall.

For interested exhibitors, please contact Roberta Arnold by phone at +1 281-228-6286 or email roberta.arnold@ampp.org.

Student Poster Display

To encourage student involvement in the field of coatings and corrosion technology, the AMPP Research Program Committee sponsors a Student Poster Session at AMPP 2022. Posters will be on display in the Exhibit Hall on Monday evening through Thursday, and the display will be staffed by students on Monday from 5 to 7 p.m. and Tuesday from noon to 2 p.m.

Winners will be announced on Wednesday at 12:30 p.m.

AMPPiTheaters

The new and expanded AMPPiTheaters will give conference attendees access to a variety of unique presentations on materials protection through corrosion control and protective coatings. This mini auditorium in the Exhibit Hall will feature industry leaders and AMPP staff who will facilitate interactive discussions on infrastructure and asset protection that are relatable to your own field of expertise. AMPPiTheaters will be open to conference attendees and exhibit visitors on Tuesday, March 8 and Wednesday, March 9. Please see the AMPP Annual Conference + Expo Final Program for more information and for theater assignments.

Heavy Equipment Area

The new AMPP Annual Conference + Expo will have a designated area for heavy equipment that will allow companies to display large appliances. This will allow attendees to see equipment such as skid mount vacuums, blasting systems, combination of dust collectors or high-performance vacuum power units, and more up close and in an indoor setting.

CoatingsPro Magazine Annual Contractor Awards Program

CoatingsPro's Contractor Awards Program is designed to showcase and recognize the projects and crews that demonstrate excellence in the field of high-performance commercial and industrial coatings. Award winners in seven categories—Commercial Concrete, Commercial Roof, Industrial Concrete, Industrial Steel, Specialty Project, Work It Safe, and Contractor Crew MVP—will be announced on Wednesday, March 9th during the annual AMPP Conference + Expo.

Floorplan Henry B Gonzalez Convention Center, San Antonio, TX • Exhibit Halls 2-4





Exhibitors

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● 10X Engineered Materials

Web site: www.10xem.com
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Abrasives, Inc.

Web site: www.abrasivesinc.com
Booth Number: 929

Abriox, Inc.

Web site: www.abriox.com
Booth Number: 2657

Access Plug Flange, Inc. (APF)

Web site: www.inspectionplug.com
Booth Number: 2012

● Accurate Corrosion Control, Inc.

Web site: www.accuratecorrosion.com
Booth Number: 1035

Advanced OEM Solutions

Web site: www.aos-ndt.com
Booth Number: 549

● Advanced Polymer Coatings

Web site: www.adv-polymer.com
Booth Number: 1517

Advanced Polymeric, Inc.

Web site: www.api-smartcoat.com
Booth Number: 2452

Advance Products & Systems, Inc.

Web site: www.aponline.com
Booth Number: 2009



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● Aegion Corp.

Web site: www.aegion.com
Booth Number: 1637

Agru America, Inc.

Web site: www.agruamerica.com
Booth Number: 2022

● Air Systems International

Web site: www.airsystems.com
Booth Number: 1108

● Allied Corrosion Industries, Inc.

Web site: www.alliedcorrosion.com
Booth Number: 1913

●● American Innovations

Web site: www.aiworldwide.com
Booth Number: 2021

ANOTEC

Silicon Iron Anodes

Anotec Industries

Web site: www.anotec.com
Booth Number: 1147

Applied Graphene Materials UK, Ltd.

Web site: www.appliedgraphenematerials.com
Booth Number: 1416

Arista Materials & Consulting

Web site: www.aristaus.com
Booth Number: 1320

Arkema, Inc.

Web site: www.arkema.com
Booth Number: 457

ARK Engineering

Web site: www.arkengineering.com
Booth Number: 1046

Armacell Energy

Web site: www.armacell.com/oilandgas
Booth Number: 2236

● ARS Recycling Systems

Web site: www.arsrecycling.com
Booth Number: 1863/1762

● Asbury Carbons

Web site: www.asbury.com
Booth Number: 1616

● Atmospheric Corrosion Specialists

Web site: www.acspecialists.us
Booth Number: 2137

Axess-Corrosion

Web site: www.axess-corrosion.com
Booth Number: 2162

● Axiom Manufacturing

Web site: www.schmidtabrasiveblasing.com
Booth Number: 1917

BAC Corrosion Control, Ltd.

Web site: www.bacgroup.com
Booth Number: 2653

●● Baker Hughes, a GE Co.

Web site: www.bakerhughes.com
Booth Number: 1647

● Barton International

Web site: www.barton.com
Booth Number: 2747

● Bass Engineering

Web site: www.bass-eng.com
Booth Number: 2015

Bayou Companies/The

Web site: www.bayoucompanies.com
Booth Number: 1755

Bedford Reinforced Plastics

Web site: www.bedfordreinforced.com
Booth Number: 1032

● BGH Edelstahlwerke GmbH

Web site: www.bgh.de
Booth Number: 1112

Bio-Logic USA

Web site: www.bio-logic.net
Booth Number: 2934

Biosan Laboratories, Inc.

Web site: www.biosan.com
Booth Number: 2013

● BK Corrosion, LLC

Web site: www.bkcorrosion.com
Booth Number: 1923

● BlastOne International

Web site: www.blastone.com
Booth Number: 1553

● Borchers CHLOR*RID

Web site: www.chlor-rid.com
Booth Number: 940

BORIN[®] DOWIN[®] MANUFACTURING, INC.

Borin Manufacturing, Inc.

Web site: www.borin.com
Booth Number: 1632

● **Brown Corrosion Services, Inc.**
Web site: www.browncorrosion.com
Booth Number: 1533

● **BSS Technologies—
Bin Sari Specialized Technologies**
Web site: www.bsstechnologies.com
Booth Number: 1409

CAPROCO
Web site: www.caproco.com
Booth Number: 1447

● ● **Carboline Co.**
Web site: www.carboline.com
Booth Number: 1609

● **Cathodic Protection Co., Ltd.**
Web site: www.cathodic.co.uk
Booth Number: 1752

Cathodic Technology, Ltd.
Web site: www.cath-tech.com
Booth Number: 1526



**CerAnode Technologies—
Division of APS Materials, Inc.**
Web site: www.ceranode.com
Booth Number: 1439

● **CESCO**
Web site: www.blastandpaint.com
Booth Number: 1853

Champion Corrosion Products, Inc.
Web site: www.championcorrosion.com
Booth Number: 2533

● ● **Chapman Engineering**
Web site: www.chapman.engineering
Booth Number: 2552

● **Chase Corp.-Tapecoat/Royston**
Web site: www.chasecorp.com
Booth Number: 1608

Chemco International
Web site: www.chemcoint.com
Booth Number: 1352

ClampOn, Inc.
Web site: www.clampon.com
Booth Number: 2153

● **Clemco Industries Corp.**
Web site: www.clemcoindustries.com
Booth Number: 1935

CM BEASY, Ltd.
Web site: www.beasy.com
Booth Number: 2335

Coast to Coast Inspection Services
Web site: www.coastnde.com
Booth Number: 1429

Concrete Sealants, Inc.
Web site: www.conseal.com
Booth Number: 1411

Confined Space Robotics
Web site: www.csrobotics.com
Booth Number: 2358

● **Corrosion Materials**
Web site: www.corrosionmaterials.com
Booth Number: 2339

● **Corrosion Service Co., Ltd.**
Web site: www.corrosionservice.com
Booth Number: 2847

Cortec Corp.
Web site: www.cortecvci.com
Booth Number: 1909

Cortest, Inc.
Web site: www.cortest.com
Booth Number: 1854

CSNRI (ClockSpring/NRI)
Web site: www.cs-nri.com
Booth Number: 1333

Curran International, Inc.
Web site: www.curranintl.com
Booth Number: 2235



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● **Dairyland Electrical Industries**
Web site: www.dairyland.com
Booth Number: 2557

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Web site: www.dakotaultrasonics.com
Booth Number: 1509

Dale Fastener Supply
Web site: www.dalecompany.com
Booth Number: 2259

● **Dampney Co., Inc.**
Web site: www.dampney.com
Booth Number: 1653

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● **DeFelsko Corp.**
Web site: www.defelsko.com
Booth Number: 2147

● **Dehumidification Technologies,
L.P.**
Web site: www.rentdh.com
Booth Number: 2252

● **De Nora**
Web site: www.americas.denora.com
Booth Number: 2547



● ● **Denso North America**
Web site: www.densona.com
Booth Number: 1835

DESCO Manufacturing Inc
Web site: www.descomfg.com
Booth Number: 1521



D.E. Stearns Co./The
Web site: www.destearns.com
Booth Number: 1927

Detroit Tarp, Inc.
Web site: www.detroittarp.com
Booth Number: 1426

● **DNV**
Web site: www.dnvgl.com
Booth Number: 2008

Drinkwater Products

Web site: www.drinkwaterproducts.com
Booth Number: 1332

Droycon Bioconcepts, Inc.

Web site: www.dbi.ca
Booth Number: 2551

● Eagle Industries

Web site: www.eagleind.com
Booth Number: 1929

ECKART GmbH

Web site: www.eckart.net
Booth Number: 1754

ECS—The Electrochemical Society

Web site: www.electrochem.org
Booth Number: 1512

Eddyfi Technologies

Web site: www.eddyfi.com
Booth Number: 2054

EIU, Inc.

Web site: www.eiui.com
Booth Number: 2763

● Elcometer

Web site: www.elcometerusa.com
Booth Number: 1815

● Elecsys International

Web site: www.elecsyscorp.com
Booth Number: 2127

Electralloy, a G.O. Carlson, Inc. Co.

Web site: www.electralloy.com
Booth Number: 841

● Element Materials Technology

Web site: www.element.com
Booth Number: 2839

● Elsyca

Web site: www.elsyca.com
Booth Number: 2554

Emerson

Web site: www.emerson.com
Booth Number: 2539

● EN Engineering

Web site: www.enengineering.com
Booth Number: 946

Energy Economics, Inc.

Web site: www.eei.com
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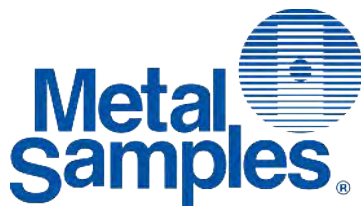
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Downtown Denver Rooftop Receives a Mile-High Makeover

BY JENNIFER FRAKES

PHOTOS COURTESY OF EXECUTIVE COATINGS AND CONTRACTING

When building owners are confronted with an aging, leaking EPDM (ethylene propylene diene monomer) rubber roof, the last thing they want to hear is that a total roof tear-off is needed. Fortunately, in most cases, coatings contractors can come to the rescue with systems that can be applied over properly repaired and prepared roof membrane.

The rooftops of the two Commons Park West apartment buildings located in downtown Denver, Colo., were no exception. “Greystar, the owner of the Commons Park West property, contacted us about water intrusion issues in and around the air conditioning/mechanical pits and low, flat slope areas,” said Ryan Lewakowski, VP of sales at Executive Coatings and Contracting (ECC). “They asked us to put together a bid to either tear off and reroof the areas or come up with another option. After we surveyed the roof areas, we knew that installing a coating system was the right answer.”

According to Lewakowski, it wasn’t difficult to convince Greystar that the application of Uniflex Silicone44 Rubberized Silicone White Roof Coating (provided by Sherwin-Williams) would solve their leaky roof challenges. “We’ve done work with this client previously, and they trusted us to provide the best solution possible. Roof coatings are a much better option for so many reasons, including cost, impact on the environment, and convenience to the residents of the building,” he stated.

Mitigating Disruptions

The Commons Park West apartments are two four-story buildings located in a trendy downtown Denver neighborhood. The buildings have skyline views and are close to many of Denver’s most popular restaurants and attractions. According





Especially for roofs on top of apartment buildings, leaks are disliked. For a client in Colorado, Executive Coatings and Contracting fixed two leaky roofs in two weeks.



For the 4- to 5-person crew, PPE included long pants and sleeves, boots, eye protection, and respirators when spraying. The jobsite did not require fall protection, though, due to the rooftop's design.

Downtown Rooftop



Each rooftop pit had 24 AC units and those had to remain operational throughout the entire summertime job. The crew had to work around the electrical lines and deal with their own heat concerns.

to Lewakowski, it was crucial that the ECC crew create as little disruption to the Commons Park West residents as possible. “The buildings were completely occupied while we were working

on the roof. Although we were going to make as little impact as possible, we still were going to be taking up parking spaces, walking on the roof, and storing materials on the property,” he said.

The crew gave upper floor residents a heads up about workers walking on the roof and any noise that might occur during the job. Most importantly, the crew was extremely careful not to disrupt the air conditioning (AC) service to the residents. “The job took place during the summer months, so keeping the air conditioning units up and running while working on the mechanical pits on the roof was critical to keeping the residents — and the client — happy during the coating application process,” Lewakowski said.

Getting Started

When the crew arrived on the jobsite, the first order of business was to conduct a roof survey and determine the condition of the 16 AC pits and all other flat areas where water might pond. As stated by Lewakowski, the EPDM was showing its age and was in fair to poor condition. “There was separation in the seams and gaps, and many punctures and penetrations had little to no sealant. There were many areas for water to leak,” he explained. Ponding water is especially problematic in a climate like Denver’s, where snow melt leaves a great deal of water on roofs each spring.

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JOB AT A GLANCE

PROJECT:

Apply coating system to AC pits and low areas on two leaky rooftops in two phases

COATINGS CONTRACTOR:

Executive Coatings and Contracting
Centennial, CO
(303) 300-6786
LI: ecc-executive-coatings-and-contracting-
www.executivecoatings.com

SIZE OF CONTRACTOR:

~30 people

SIZE OF CREW:

4–5 crew members

PRIME CLIENT:

Greystar
Greenwood Village, CO
(303) 308-9000
@GreystarApts
www.greystar.com

SUBSTRATE:

EPDM

CONDITION OF SUBSTRATE:

Fair to poor

SIZE OF JOB:

~50,000 sq. ft.

DURATION:

2 weeks

UNUSUAL FACTORS/CHALLENGES:

- » Buildings were completely occupied throughout the entirety of the project, so the crew had to communicate work and navigate around the AC units needed to remain completely operational with no service disruption.
- » Crew had to maneuver around electrical lines in each mechanical pit.
- » Extreme heat and high altitude, made for harsh working conditions for the crew and created potentially drying conditions for the materials.

MATERIALS/PROCESSES:

- » Removed debris and power washed the roof using plain water and a custom-built rig
- » Applied Bond-It Wash Primer to AC pits and low areas for 10–15 minutes, then power washed the area again
- » Applied One Flash sealant to all seams, penetrations, and punctures in the AC pits and flat areas using caulking guns and 4-inch rollers to apply an average of 60 mils WFT
- » Applied Uniflex Silicone44 at an average of 30 mils DFT using a Graco 933ES Hi-Flo sprayer

SAFETY CONSIDERATIONS:

- » Wore boots, eye protection, and 3M half-face respirators to spray
- » Deemed fall protection unnecessary due to the rooftop's design
- » Stayed hydrated and wore long pants and sleeves to protect against the heat and sun

Fortunately, the crew found that extensive repairs to the mechanical pits and low areas were not necessary. To aid in the roof survey, the ECC team used thermal imaging technology that shows where active water is trapped. “The FLIR ONE Pro LT is an infrared survey system that attaches to your cell phone and provides you with thermal imaging information through an app. It gives you a quick snapshot of any temperature differences on the roof. In the morning, any water trapped in the roof system will be cooler than the surrounding areas, and at night, the roof system will cool before any trapped water,” explained Lewakowski.

Thermal imaging technology provides contractors with a non-destructive testing method that can quickly target any problem areas. “The biggest no-no in coating roofs is that you don’t coat over water that is trapped in the existing roof system. Identifying areas where moisture intrusion is a problem is critical to the success of the coating system,” Lewakowski explained.

With the thermal imaging complete, the team was now ready to prepare the black EPDM rooftop for the silicone coating application. No mechanical surface preparation was needed; however, large debris was removed from the roof, and all pine needles were cleared out from the AC pits and low areas. The roof was then power washed with plain water using ECC’s custom-built, pull-behind power washer rig.

After power washing and priming the rooftops, the crew applied One Flash sealant to all seams, penetrations, and punctures. They used caulking guns and 4-inch rollers to apply an average of 60 mils.



Downtown Rooftop



Located in a trendy downtown Denver neighborhood, the four-story buildings were full of residents. That meant that the ECC crew had to be careful of noises and other disruptions and they had to communicate work.

“After the roof was completely cleaned, we applied Bond-It Wash Primer to all the AC pits and low areas. This etching primer gives the existing membrane more ‘bite’ before the coating system is applied. It really helps with adhesion and bonding by breaking the chemical bond of the inorganic surface of the rubber membrane,” said Lewakowski.

The crew applied Bond-It, which is from another business unit of Sherwin-Williams called KST Roofing Solutions, using backpack pump sprayers. Once the team saturated the areas with the clear, low viscosity, water-based wash, they let it sit on the EPDM for approximately 10–15 minutes. “Then, we rinsed off the roof using the power washer and plain water,” said Lewakowski.

At this point, sealing all seams and penetrations became the priority for the team. One Flash, made by Uniflex, is a gray, one-component, flashing-grade roof sealant designed for single-step application. “One Flash is a one-stop shop. You typically have to embed fabric into sealant to achieve the proper result, but not with One Flash. We applied it to all seams, penetrations, and punctures without needing fabric reinforcement. This saved a lot of labor, time, and money,” said Lewakowski.

One Flash comes in 2-gallon (7.6 L) buckets and sausage tubes. The team used a combination of both caulking guns and 4-inch (10.2 cm) rollers to apply an average of 60 mils (1,524.0 microns) wet film thickness (WFT) to the AC pits and flat areas of the roof. Once the One Flash had cured for 24 hours, the roof was ready to receive the installation of the Silicone44 coating system.

Silicone Solution

Uniflex Silicone44 is a white, rubberized premium silicone roof coating that is ideal for ponding water. “We applied the Silicone S44 using a Graco 933ES Hi-Flo sprayer. Spraying silicone requires special, heavy-duty equipment, like the Graco 933ES.

We received training on the sprayer from a Graco rep and received training and support from the coating manufacturer to ensure that we achieved the proper thickness of 30 mils [762.0 microns],” said Lewakowski. Because of the special formulation of the coating, only one pass was needed to achieve that average dry film thickness (DFT).

In addition to protecting the roof from water intrusion, the white color of the Silicone44 offered the mechanical pits and low areas a reflective surface, which was a huge improvement from the black EPDM. “The reflective white roof cuts down on energy consumption, which is a win for the building and its residents, and it’s also great for the environment,” stated Lewakowski.

During the spray-application process, the crew wore long pants, long sleeves, gloves, boots, safety glasses, and 3M half-face respirators. Lewakowski is quick to point out that due to the design of the rooftop, fall protection was not required for any portion of the job.

Special Conditions

With approximately 50,000 square feet (4,645.2 m²) of roof area spanning two buildings, Lewakowski and his crew had their fair share of logistical challenges. “There were 16 mechanical pits and several other low/flat areas between the two buildings. Our crew averaged four to five guys, and we would tackle a couple of pits per day. Once we completely finished those two pits, we’d move on to the next set,” said Lewakowski. The job was further divided into two phases, so all work on the roof of one building was fully finished before they moved on the next.

The crew also had to navigate around all of the mechanical lines within each AC pit. There were 24 air conditioning units in each pit with electrical lines running from each one of them. “We had to be extremely cautious while maneuvering and manipulating the lines so that we didn’t disrupt service to the residents or damage the lines themselves. It was definitely a challenge,” stated Lewakowski.

After two weeks, the crew took all 50,000 square feet and turned it into two leak-free rooftops. As Lewakowski said, “We came in and solved the problem we were hired to fix.”





"I'm happy to say that since the completion of the job, there have been many rainstorms, and there have been no leaks at Commons Park West," said Ryan Lewakowski, VP of sales at ECC.

But it was something else that caused the ECC crew's biggest challenge over the two-week duration of the job: working in the intense summer heat. Some afternoons, the temperature would soar to 98 °F (36.7 °C), and the extreme temperature was exacerbated by working on a four-story building at a high altitude. "We took lots of breaks and made sure all crew members were hydrated. All team members wore long sleeves and long pants to protect themselves from the intense rays of the sun," said Lewakowski.

The crew also shielded the spray hoses so that the silicone coating didn't dry out in the extreme conditions. The coating material itself was stored in a shaded mobile mini-storage container that the ECC team dropped off onsite and was not affected by the heat. And although Mother Nature did heat things up, she did cooperate in another way: The team did not have to contend with any afternoon thunderstorms. According to Lewakowski, this was a big win for the crew because afternoon rain is par for the course during Rocky Mountain summers.

Mile-High Success

Ultimately, the Commons Park West roof recoating job has been a resounding success. The crew set an appropriate timeline with the client, balancing between production and efficiency. "We didn't want to have too many crew members there at once and be too aggressive with the schedule. It was a delicate balance between being unobtrusive and keeping the residents happy, and keeping the client happy by sticking to the schedule," revealed Lewakowski. He also pointed out that it helps that Executive Coatings and Contracting has more than 26 years of

experience and is set up to handle large-scale jobs in occupied residential buildings.

Looking at the job as a whole, it is clear that the ECC team solved the client's water intrusion issues by applying a reflective coating system that should stand the test of time and the elements. "I'm happy to say that since the completion of the job, there have been many rainstorms, and there have been no leaks at Commons Park West. We came in and solved the problem we were hired to fix. It really doesn't get much better than that," Lewakowski said proudly. **CP**

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ROOF

SPF

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COMMERCIAL

Stone-Cold Storage: Coated Insulation for a Major Grocery Store

BY CLAIRE TRAGESER

PHOTOS COURTESY OF NATIONAL COATINGS CORPORATION

For grocery stores everywhere, storing food at cold temperatures is vital to the business. If food gets too hot, it goes bad, and that is money that is just thrown in the garbage.

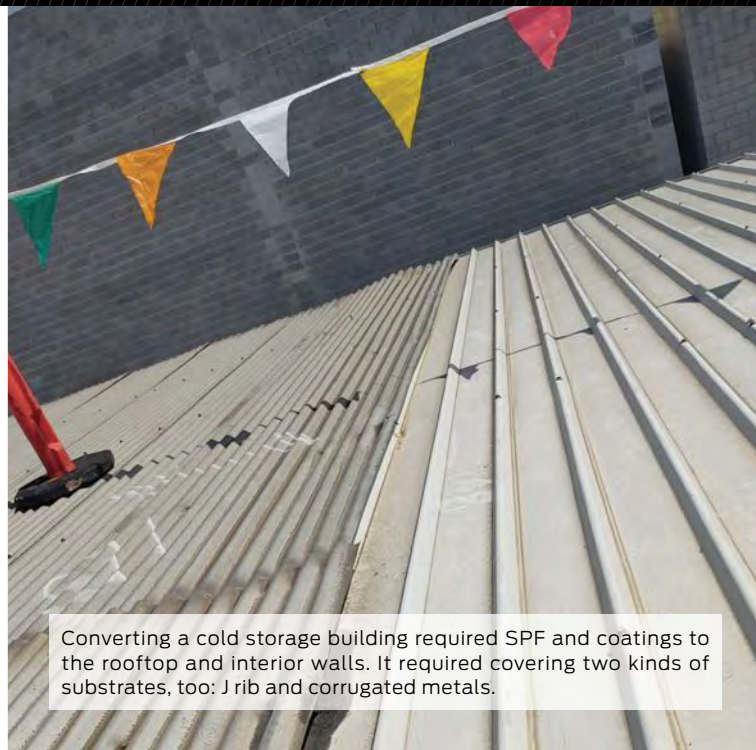
This cold storage concern is especially important on the islands of Hawaii, where almost all grocery items have to be shipped to the islands by boat or plane and then stored safely until they are sold to customers. As anyone who has ever lived on or visited the beautiful islands will tell you, this shipping and storage comes at a cost. (It can cost almost \$7 for a gallon of milk on the big island!)

All of this means that when there was a need for a new roof on a cold storage facility owned by a grocery store in Hawaii that wishes to remain unnamed, the job was very important. "It's an old metal building that they purchased, and they intended for it to be a cold storage building for their products," said Gigi Auditor, an industrial photographer who worked on the job.

"This is a building that's been there in some sort for 30 years," said Michael "Red" Coleman, the project foreman for MRC Roofing, LLC, which was the contractor working on the update. "It's been added onto and changed around, so there's at least three different types of metal roof on this building and several different levels to it over the years." The solution was insulation.

Switching to Spray Foam

Coleman is a responsible management employee at MRC Roofing. The Honolulu, Hawaii-based contracting company provides roofing services and craftsmanship for residential, commercial, and industrial facilities in Honolulu. It also installs spray polyurethane foam (SPF) insulation to both exterior roofing and interior walls and attics for both insulation properties and noise-cancelling qualities. The company has been in business for more than 40 years and has 16 employees in the field and 6 in the office.



Converting a cold storage building required SPF and coatings to the rooftop and interior walls. It required covering two kinds of substrates, too: J rib and corrugated metals.



SPF for Grocery Store

The 41,100-square-foot project was completed by MRC Roofing at a grocery store in Hawaii that wishes to remain unnamed. It took the crew a total of 66 days to complete.



Due to wind concerns on the island, the crew worked to control rooftop overspray. They also used a SprayWorks Spraybot, which came with a spray cage, as well as netting.



SPF for Grocery Store

MRC Roofing landed this particular job through an existing relationship with the general contractor, Coleman said. “We were contacted by Tri State General Contractors. They’re the general contractor, and we had done work with their head guy, Maurice Garcia,” Coleman said. “We’ve done a couple of jobs for them in the past, so they contacted us for the installation portion of it.”

But even before they officially landed the job, there was an interesting conversation to be had with the owners. “They had brought a consultant in from California, and they had specified a single-ply roof plus board stock insulation, which would have been polyisocyanurate board,” Coleman said. “I didn’t feel that would work. And the way they had spec’ed it was, unfortunately, really poor. I had several letters back and forth with the building owner and staff to point that out. But they did have it originally spec’ed with single ply. They did get the bids and they came in way higher than they expected. And that’s pretty true for Hawaii and single ply.”

Coleman was able to convince the owners to look again at SPF, also called spray foam. “Once the bids came in high, we gave them an alternate with the spray foam, which was about 30 percent less,” he said.

It also “helped” that “the building was so cut up,” Coleman said. In fact, the job was a combination of j rib and corrugated metals, with the walls being j rib and the roof having both.

For work on the interior, the crew used a fresh air system and worked from scissor lifts. Spray equipment included a 21st JMT proportioning unit, Graco Probler, and Graco sprayer.



The coating systems varied. For the interior walls it included 5 inches of National Coatings' 2-pound SPF and 20 mils of International Fireproof Technology's DC315 Fireproof Paint.

Convincing the owner to use spray foam as a solution may not have been too difficult. “Actually, they have used foam in the past on several different parts, so it wasn’t new to them,” Coleman explained. “But like I said, the consultants were pretty adamant about putting single ply on it. Once they understood that the single ply might not be as effective as the spray foam, then they decided spray foam was a good way to go.”

“Project requirements and the timeline were not favorable for [the originally spec’d] system,” Coleman continued. “Condensation issues under the board stock insulation was a question that couldn’t be resolved. These factors made it easy to switch to spray foam insulation.”

Smooth Sailing With New Equipment

Once the job was secured, Coleman was ready to get to work. He and a crew of six people tackled the job, which had several parts to it.

First, there was the cold storage roof, which measured out at 22,200 square feet (2,062.4 m²). There, the team first pressure washed and removed ventilators and skylights, and then they put down an average of 5 inches (12.7 cm) of 2.5 pound (1.1 kg) National Coatings Premiseal 60R Foam. They followed that up with an average of 22 mils (558.8 microns) dry film thickness (DFT) of National Coatings Acryshield Vapor Barrier A410, and then installed an average of 20 mils (508.0 microns) of National Coatings SRC 740 Silicone. This vapor barrier was to help avoid moisture getting into the foam above the freezer and cold storage facilities since those areas have a greater vapor drive than a normal building.

The next area to tackle was the office roof, which measured 3,700 square feet (343.7 m²). There, the team also removed ventilators and skylights before installing an average of 3.5 inches (8.9 cm) of the 2.5-pound spray foam. On top, they added an average of 38 mils (965.2 microns) of National Coatings SRC 740 Silicone.

JOB AT A GLANCE

PROJECT:

Install SPF and coatings to the roof and interior walls at a converted building

COATINGS CONTRACTOR:

MRC Roofing, LLC
Honolulu, HI
(808) 842-4464
FB: mrcroofing
www.mrcroofinghawaii.com

SIZE OF CONTRACTOR:

22 people

SIZE OF CREW:

6 crew members

PRIME CLIENT:

Grocery store chain that wishes to remain unnamed

SUBSTRATE:

J rib and corrugated metals

CONDITION OF SUBSTRATE:

Used

SIZE OF JOB:

41,100 sq. ft.

DURATION:

66 days total

UNUSUAL FACTORS/CHALLENGES:

- » Time constraints were due to the cold storage facility being turned on.
- » The crew had to work alongside other trades.
- » Wind concerns required the crew to use netting and a spray cage.
- » They tried new equipment to install the SPF on this job.

MATERIALS/PROCESSES:

- » Used a 21st JMT, Inc. Plural Component Hydraulic Proportioning Unit, a Graco Probler P2 Air Purge Gun, and a Graco Xtreme X70 sprayer
- » Prepped with power washer

For cold storage roof:

- » Removed ventilators and skylights
- » Put down 5 inches of 2.5-pound National Coatings Premiseal 60R Foam
- » Installed 22 mils DFT of National Coatings Acryshield Vapor Barrier A410, and then an average of 20 mils of National Coatings SRC 740 Silicone

For office roof:

- » Removed ventilators and skylights
- » Installed 3.5 inches of 2.5-pound National Coatings Premiseal 60R Foam
- » Added an average of 38 mils of National Coatings SRC 740 Silicone

For overhangs:

- » Installed 1 inch of 2.5-pound National Coatings Premiseal 60R Foam
- » Installed an average of 38 mils of National Coatings SRC 740 Silicone

For interior walls:

- » Installed 5 inches of National Coatings Foamsulate 2-pound spray foam
- » Installed an average of 20 mils of International Fireproof Technology's DC315 Fireproof Paint

SAFETY CONSIDERATIONS:

- » Installed fall protection guardrails and perimeter lines on the roof
- » Used a fresh air system for the interior work
- » Wore PPE, including 3M goggles



The six-person crew from MRC wore proper PPE, including 3M goggles. They also installed fall protection guardrails and perimeter lines on the roof.

The job also included overhangs that measured out at 3,000 square feet (278.7 m²). There, the team put down an average of 1 inch (2.5 cm) of spray foam. Then, they followed that up again with an average of 38 mils of National Coatings SRC 740 Silicone.

Lastly, the MRC crew had to tackle the interior walls of the facility, which combined to a surface of 12,200 square feet (1,133.4 m²). For that part of the job, they put down an average of 5 inches (12.7 cm) of National Coatings Foamsulate 2-pound (1.1 kg) spray foam, and then they installed International Fireproof Technology's DC315 Fireproof Paint to an average of 20 mils DFT.

To do the job, the team used a 21st JMT, Inc. Plural Component Hydraulic Proportioning Unit, a Graco Probler P2 Air Purge Gun, a Graco Xtreme X70 sprayer, and scissor

Up top, there were three different areas to focus on: cold storage roof area, office roof area, and overhangs. Both roof areas needed ventilators and skylights to be removed first.



SPF for Grocery Store



The Spraybot was new to the MRC Roofing crew. They'd never used one before, and they were successful in applying the SPF at 3.5 or 5 inches depending on the area with the automated robot.

lifts when working inside. They also tried something new they had never used before: Coleman got a SprayWorks Spraybot automated spray foam machine, a robot that sprays foam for you.

"It was our first time working with a spray bot, but hand-spraying 5 inches of foam is not as easy, as smooth as we'd like," Coleman said. "We'd researched a spray bot, and I understood if it did it mechanically, if it did what I thought it would do, it would go very smoothly."

And, what were the results, you might ask? Coleman was very pleased. "It did exactly what I thought it would do, which was put down foam in a very nice pattern, very consistent, and it put down exactly what was needed, exactly 5 inches," he said.

There was not much of a learning curve to using the spray bot either, Coleman explained. "It was very easy; we had it dialed in in about one day," he said.

The SprayWorks Spraybot is definitely something the MRC crews will be using again in the future. "We actually bought a second one and started using it for spraying coating also," Coleman said.

Elemental Considerations

Using new equipment wasn't the only thing that went smoothly on the job. According to Coleman, the biggest issue to overcome was the crew's crunch for time.

"By the time we had gotten the contract for the roof, a lot of the stuff inside was done. So we were under pressure to get at least a couple of inches of foam on all of the areas that were going to be cold storage because they were about to start to fire up the compressors and they were going to start to bring the temperature down pretty fast," Coleman explained. "So we were under a time constraint to get it all insulated. Otherwise, we would have had condensation, and we wouldn't have been able to spray it because the deck would have been too cold."

Part of that time crunch also came from the fact that MRC

Roofing operates in Hawaii. "MRC Roofing was given notice to start the project roughly three months before project closing," Coleman said. "Working in Hawaii means that materials take anywhere from two to three weeks to get to the islands. Insulating the interior of the building was the priority because the cooling system was set to be turned on a month before closing. With temperatures in the 37-to-42 degree range [2.8–5.6 °C], installing spray foam after the cooling system was turned on was not an option."

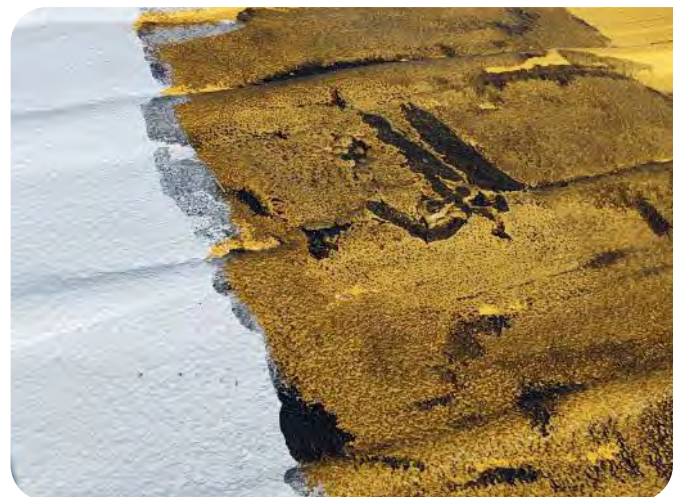
One factor that comes from working in Hawaii that is usually an issue did not turn out to be one this time: the rain. For those who picture nothing but sunny days in Hawaii, that is not actually the case. "Usually, there's a lot of rain in Hawaii, but we were very lucky that we didn't have one rain day," Coleman said. "Weather was not an issue on this project — mostly sunny, blue sky Hawaiian days. The winds, though, are always considered when installing spray foam on a roof, especially in a congested area." MRC used netting when spraying, and the SprayWorks Spraybot included a spray cage. Any overspray issues were mitigated.

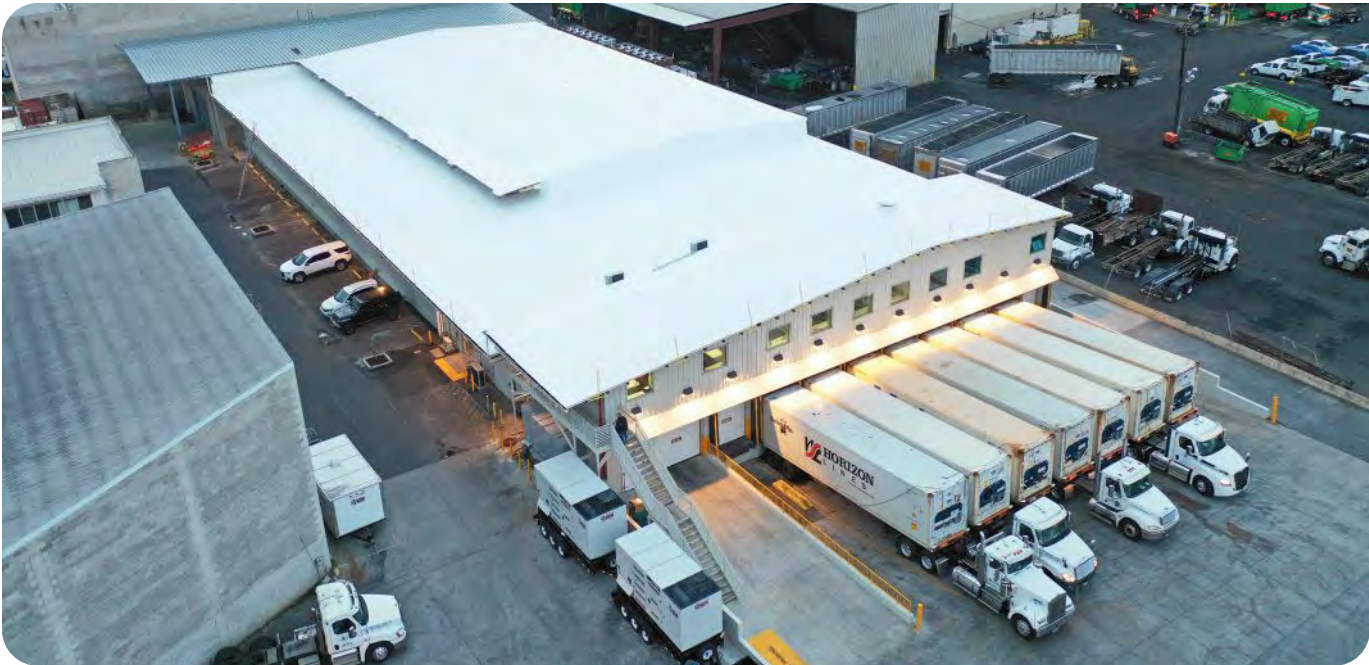
Exceeding Expectations

As for safety, MRC Roofing installed fall protection guardrails and perimeter lines on the roof. When the crew was working on the interior spray foam portion of the job, they had a fresh air system, Coleman said. And in general, the crew wore proper personal protective equipment (PPE), including 3M goggles. The use of the robot allowed the crew to avoid having to use a ton of PPE, but when working without the robot, the spray foam technician did use a supplied air respirator and wore eye protection, gloves, coveralls, and boots.

Thanks to the hard work of his crew, Coleman got the job done on time. Interior insulation was completed in 21 days, and roof insulation and coating were completed in 45 days. In total, they covered 41,100 square feet (3,818.3 m²) of surfaces.

"Insulating the interior of the building was the priority because the cooling system was set to be turned on a month before closing," said Michael "Red" Coleman of MRC Roofing.





MRC Roofing had to work around other trades on the jobsite, but they didn't have to worry about rain, which is unusual. Sunny skies and a well-insulated roof is what this crew left behind them.

The results are so positive that the building owner actually has been using less electricity than expected. "The whole roof is covered with solar panels, and they decided how much electricity they would need to operate the building and put panels on the roof that they thought they'd need," Coleman said. "They just went with generic calculations for what it would take to keep it cold, and SPF far exceeded those calculations." That means that "the solar array they put on was way too big, so they're producing a lot of extra energy than they thought they needed."

There's nothing like exceeding your client's expectations! **CP**

In all rooftop areas, the topcoat was National Coatings SRC 740 Silicone. It was applied at averages of 20 mils over the cold storage roof and 38 mils over the office roof and on overhangs.



VENDOR TEAM

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<p>Graco Inc. <i>Equipment manufacturer</i> Minneapolis, MN (800) 275-5574 @GracoInc www.graco.com</p>	<p>SprayWorks Equipment Group <i>Equipment manufacturer</i> Kent, OH (330) 366-8545 @SprayFoamRigs www.sprayworksequipment.com</p>
<p>International Fireproof Technology, Inc. <i>Coating manufacturer</i> Irvine, CA (949) 975-8588 @IFT1p2p https://painttoprotect.com</p>	<p>Tri-State General Contractors <i>General Contractor</i> Honolulu, HI (855) 874-3477 FB: tristatesanmarcos www.tri-stategc.com</p>
<p>JMT, Inc. <i>Equipment manufacturer</i> Minerva, OH (802) 299-2067 FB: 21stjmt www.21stjmt.com</p>	

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Company ProFILE 2022

Looking for information on coatings services or products? Well, look no further than *CoatingsPro's* annual Company ProFILE section! In this year's Company ProFILE, you can take a closer look at many of the key players throughout the coatings industry. As we kick off the new year, we hope the Company ProFILE section acts as an excellent, comprehensive resource for the coatings industry. And be sure to check back with these companies throughout the year for new and exciting developments in 2022.

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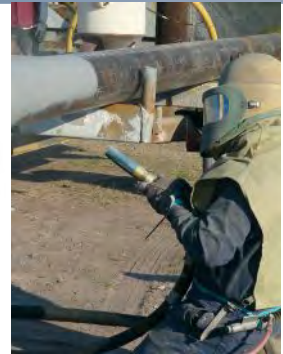
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Classic Blast Machines range in size from in 0.5 to 160 cubic feet, can handle countless applications, and are easy to operate and maintain. They won't spend more time in the shop than in the field. They work as hard as you do.

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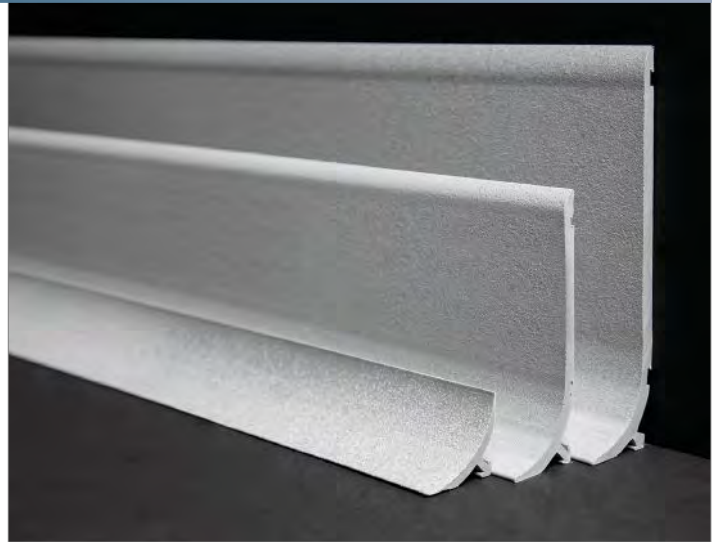
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EDCO Equipment Development Company, Inc.

ProFILE 2022



A trip hazard is when two concrete sidewalk slabs come together and one has risen or lowered creating unevenness someone could trip over. This is a common occurrence caused by different reasons including tree root growth, ground compaction issues, and weather.

There are two ways to fix sidewalk trip hazards:

1. Completely dig out the peaked slabs and add new concrete.

The entire affected area is removed to bare ground, the surface is leveled and new concrete slabs are poured. This removal usually includes the two peaked slabs and the surrounding slabs.

Pros: 1. Eliminates the hazard, 2. Allow workers to fix problems under the concrete, 3. New concrete is poured

Cons: 1. Time Consuming, 2. Pricey, 3. Shuts down sidewalk until concrete cures

2. Use a Scarifier to level the slabs without removal. Just the trip hazard is removed using a Scarifier like the EDCO CPM8. The affected slabs are kept and are left with a textured, non-slip surface. The ground underneath is not serviced, but most times ground service is unnecessary.

Pros: 1. Eliminates hazard, 2. Quick, Long-lasting, 3. Cost-Effective, 4. Easy cleanup. Dust control is an option with Scarifier

Cons: 1. Workers cannot fix problems under the concrete, 2. Leaves a surface someone may find unappealing



EDCO Equipment Development Company, Inc.

100 Thomas Johnson Drive, Frederick, MD 21702

(800) 638-3326

www.edcoed.com; sales@edcoinc.com

HoldTight Solutions, Inc.

ProFILE 2022



HoldTight Solutions Inc. is a manufacturer and distributor of additives for the coatings surface preparation industry to assist with cleaning blasted surfaces of soluble salts and contaminants and to prevent flash rusting prior to coating. The additive, **HoldTight® 102** is used with dry abrasive, wet abrasive, and UHP blasting. Additionally, HoldTight distributes a preservation coating, HT 365, to prevent corrosion and flash rusting of bare steel for up to one year. This is used for storage, shipping, and fabrication of steel products. Finally, HoldTight distributes a suite of testing equipment and test kits for measurement of surface conductivity, chloride ions, and water quality that also benefit the surface preparation market.



HoldTight Solutions, Inc.

(800) 319-8802
<https://holdtight.com>

Huntsman Building Solutions

ProFILE 2022



Huntsman Building Solutions (HBS) manufactures industry-leading spray polyurethane foam (SPF) and coatings for roof, attic, and wall applications. Formed in May 2020 through the combination of the Demilec and Icynene-Lapolla SPF businesses, Huntsman Building Solutions, a business unit of Huntsman Corporation, has a combined heritage of more than 110 years insulating homes and buildings.

Through the ecothermal approach to product design, leveraging sustainable innovative technology, Huntsman Building Solutions focuses on meeting market demands for more energy-efficient building envelopes serving a range of industries, including residential, commercial, industrial, institutional, and agricultural.

At Huntsman Building Solutions our journey towards a greener building envelope begins and ends with our customers. Bringing to life architects' modern designs, providing builders innovative insulation solutions, working with applicators to improve their efficiency, delivering homeowners a comfortable living space.



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Induron Coatings LLC

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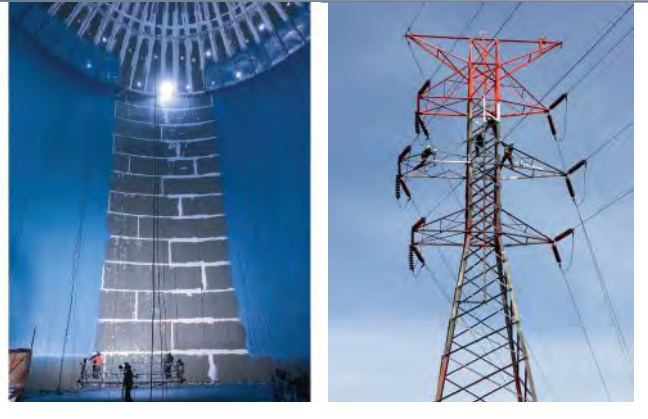
A quality coating job takes more than quality coatings—it takes a quality coating system starting with a commitment to doing what’s right for the job.

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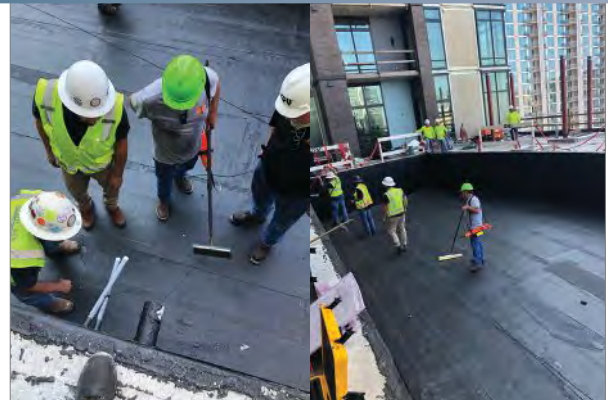
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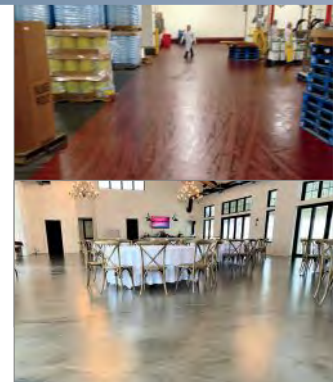
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POLYURETHANE

New LAX Parking Facility Gets Fresh Traffic Coatings

BY ANTHONY PUNT

PHOTOS COURTESY OF POLYCOAT PRODUCTS

Back in the late 1920s, the city of Los Angeles created its first municipal airport that would connect it to the then-fledgling aviation industry. Since those humble origins nearly a century ago, Los Angeles International Airport — or LAX as it's more commonly known — has become among the busiest airports not only in the United States but in the world, with more than 88 million travelers passing through its gates annually. Located 18 miles (29.0 km) southwest of downtown L.A., LAX is considered a major connection point for international visitors. Add those visitors to the nearly four million people who reside in L.A., and you have a recipe for the bumper-to-bumper traffic jams that the City of Angels is notorious for.

To solve this problem, Los Angeles World Airports (LAWA) — a branch of the L.A. city government that owns and operates LAX — launched a multi-billion-dollar plan to renovate its flagship airport. The plan included the construction of LAX Economy Parking, a new parking facility designed to relieve traffic congestion for passengers traveling via the airport, as well as to provide easier access to rental cars and more convenient spots for passenger pick-up and drop-off. This state-of-the-art parking structure stands four stories tall and includes approximately 4,300 new parking stalls spanning over 1.7 million square feet (157,935.2 m²).

LAWA's leaders knew that if they built an advanced economy parking facility, visitors would come. But realizing this vision would take years of hard work and tons of resources to execute.

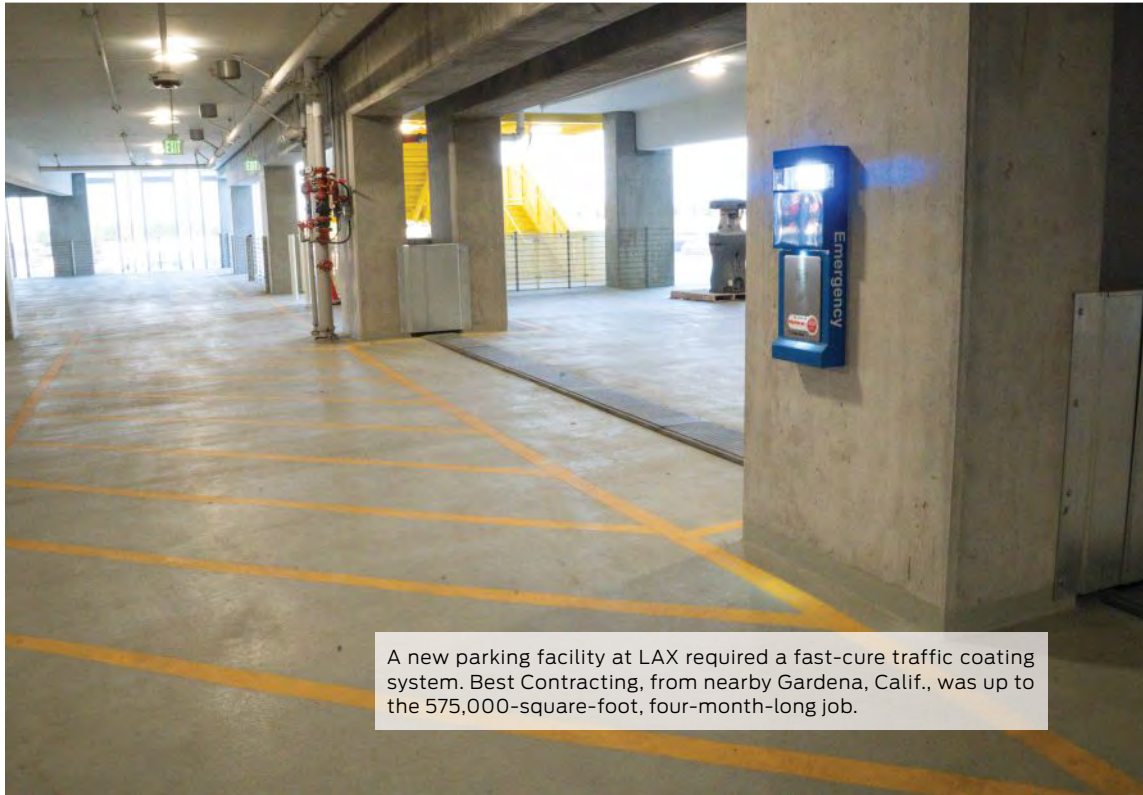
A Go-To Coating System

Construction began on the LAX Economy Parking project in July 2019, which meant that nearly two full years of work had been





“LAX Economy Parking is a historic marker of progress in the midst of a once-in-a-generation transformation at the airport...,” said L.A. Mayor Eric Garcetti in a press conference.



A new parking facility at LAX required a fast-cure traffic coating system. Best Contracting, from nearby Gardena, Calif., was up to the 575,000-square-foot, four-month-long job.

Fresh Concrete Coatings



The concrete of the economy parking facility, which is owned by LAWA, was new, and it was broom finished.

completed by the time Best Contracting Services, Inc. entered the scene in June 2021. A local full building envelope contractor for commercial, industrial, and institutional properties since 1982, Best Contracting was tasked with coating 575,000 square

feet (53,419.2 m²) of the parking structure. More specifically, this included the entirety of the second through fourth floors, including electrical and utility rooms located on the second and third floors and the top lid of the concrete ramp found on the fourth, and final, floor.

According to Mike Calhoun of Best Contracting, who served as the onsite supervisor for the project, his company was brought in as a coatings subcontractor by Swinerton. Along with a competitive bid, the company's size and experience were also decisive factors in securing the contract. "We're one of the bigger outfits in town that is equipped to handle a project of that size," said Calhoun.

Four months prior to the arrival of the Best Contracting crew, Swinerton and some of its subcontracting partners — the project had more than 30 subcontractors in total — installed the facility's new broom finished concrete. For the next four months, between June and September of 2021, the crew applied two different materials. One was a waterproofing, self-adhering membrane that was applied directly to below-grade surfaces, such as basement walls, without any surface prepping required. The other was Poly-I-Gard 575FC (Fast Cure) Vehicular Traffic Deck System, which was used on all three floors since they were sure to receive a high volume of traffic. Made by Polycoat

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JOB AT A GLANCE

PROJECT:

Apply a fast cure traffic coating system to an economy parking facility at LAX

COATINGS CONTRACTOR:

Best Contracting Services Inc.
Gardena, CA
(310) 328-6969
FB: bestcontractingservicesinc
<https://bestcontracting.com>

SIZE OF CONTRACTOR:

Approximately 600 employees

SIZE OF CREW:

8–12 crew members

PRIME CLIENT:

LAWA
Los Angeles, CA
(855) 463-5252
@flyLAXairport
www.lawa.org

SUBSTRATE:

Broom finished concrete

CONDITION OF SUBSTRATE:

New

SIZE OF JOB:

575,000 sq. ft.

DURATION:

4 months

UNUSUAL FACTORS/CHALLENGES:

- » The crew ran night shifts starting at 6:00 p.m. to prevent the coating system from outgassing from the summertime sun and heat.
- » With more than 30 subcontractors on the project, Best Contracting had kept other crews from disturbing freshly coated areas.

MATERIALS/PROCESSES:

- » Applied waterproofing self-adhering membrane to below-grade surfaces
- » Had the concrete shotblasted to achieve an ICRI CSP 4–6 standard
- » Opened up remaining cracks to ¼-inch deep x ¼-inch wide using V-shaped, ¼-inch crack chaser blades
- » Sealed cracks using Sikaflex-2 C NS sealant from Albion caulking guns
- » Notch squeegeed and roll applied Poly-I-Gard 575FC Vehicular Traffic Deck System:
 - Polyprime 2180SC primer at 10–12 mils WFT
 - PC-260 basecoat at 24–26 mils WFT
 - Two coats of Poly-I-Gard 295 at 12–14 mils WFT each, with sand broadcast to refusal in the first layer
- » Used 2- and 4-inch chip brushes to brush around pipe penetrations after each coat was applied

SAFETY CONSIDERATIONS:

- » Received daily temperature checks before entering jobsite, as well as wore face masks and worked at safe distances
- » Wore standard PPE, including Pyramex hard hats and MCR Safety glasses
- » Attended weekly scheduling meetings held by Swinerton
- » Abided by state VOC compliance laws and had work supervised by quality control experts representing LAWA



The crew worked on the second through fourth stories of the four-story structure. And they also applied self-adhering waterproofing membranes to the below-grade surfaces.

Products, this 100 percent solids, polyurethane/polyurea waterproof coating system is low odor and has no volatile organic compounds (VOCs), which enabled Best Contracting to remain compliant with California state laws.

As far as the Poly-I-Gard system is concerned, you can count Calhoun among its biggest fans: “Polycoat is always our go-to traffic coating system. I’ve used Polycoat for 27 years; I’m very familiar with them, love their products. So coming from an estimator standpoint — I was an estimator before, too — it’s very economical in terms of pricing and stuff like that. Anytime a job comes up for us, we always try to bid the job with Polycoat.”

“Poly-I-Gard 575FC is zero VOC, qualifies for a variety of LEED [Leadership in Energy and Environmental Design] credits, and meets Title 24 and SRI [socially responsible investing] standards,” said Anthony Pérez, southwest regional sales manager for Polycoat. “It is a hybrid waterproofing system for

The 8- to 10-person crew wore standard PPE, such as safety glasses and gloves, attended weekly scheduling meetings, adhered to COVID-19 guidelines, and abided by state VOC laws.



Fresh Concrete Coatings



After having the concrete shotblasted to ICRI's CSP 4–6 and handling cracks, the crew started by squeegeeing and rolling Polyprime 2180SC at 10–12 mils.

heavy duty vehicular traffic. Along with being extremely cost effective in both material cost and labor requirements, Poly-I-Gard is manufactured right here in the USA.”

Working Fast and Finding Luck

Prior to the application of the Polycoat traffic coating, EER, Inc., a local flooring subcontractor, shotblasted the concrete floors to open up its pores and better enable the coating to penetrate them. Shotblasting the concrete allowed EER to achieve an International Concrete Repair Institute (ICRI) Concrete Surface Profile (CSP) 4–6 standard.

From there, the Best Contracting crew used V-shaped, ¼-inch (0.6 cm) crack chaser blades to open up the remaining cracks ¼-inch deep by ¼-inch wide (0.6 x 0.6 cm). They then sealed up those cracks using Sikaflex-2 C NS, a polyurethane-based elastomeric sealant with a non-sag consistency, and the crew applied that material using Albion caulking guns.

Now came time for the Poly-I-Gard 575FC system, starting with a coat of Polyprime 2180SC, a two-component epoxy primer that was applied using notched squeegees and followed up with 3/8” (1.0 cm) Purdy roller naps on 18-inch (45.7 cm) Wooster roller frames at 10–12 mils (254.0–304.8 microns) wet film thickness (WFT). The crew then laid down a layer of PC-260, a two-component elastomeric basecoat applied with notched squeegees and followed up with a roller at 24–26 mils (609.6–660.4 microns) WFT.

Finally, two gray-colored coats of Poly-I-Gard 295, a two-component, solvent-free polyurea-polyurethane aliphatic hybrid coating, were squeegeed and roll applied at 12–14 mils (304.8–355.6 microns) WFT. While typical polyurea coatings gel quickly, Poly-I-Gard 295 is a hybrid topcoat that allows applicators a curing window of up to 15 minutes. After the first coat of the 295 was applied, dry, rounded sand was broadcasted to refusal before the second coat was applied for a gray finish. And all the while, the crew used 2- and 4-inch chip (5.1 and 10.2

cm) brushes to brush around plumbing drainpipe penetrations and electrical conduits after each coat was applied.

The 8- to 12-member crew from Best Contracting worked six days a week to coat all 575,000 square feet of concrete. Despite the size and scale of the project, though, the crew remained undaunted. It helped that the facility didn't present any unusual or difficult geometric areas to coat that would've lengthened the project's timeline.

“It was all horizontal decking stuff, nothing vertical, just a standard, square parking structure,” Calhoun said. “It was just a simple in-and-out [project], really quick. We got lucky.”

On the Night Shift

With that said, there were still obstacles that Calhoun and his crew had to overcome. Given the fact that they were working during the summer months in sunny L.A., the crew had to contend with the effects of heat and sunlight on the coatings. In particular, they were concerned that outgassing bubbles would form as a result of the heat pulling solvents from the coating. As temperatures reached highs of 87–88 °F (30.5–31.1 °C) at the start of the project, Calhoun made a permanent switch to a night shift schedule that started at 6:00 p.m. and ran through the night. As he recalled, “It helped the guys who were working and installing the stuff during the middle of the day, and it definitely was better for the coatings to run [the job] at night, too.”

Unfortunately, there were times during the project when the coatings that the crew applied at night were ruined the following day. Said Calhoun, “Ultimately, our main challenge was fighting other contractors who would try to drive forklifts and stuff like that on [our coatings] during the daytime. So there were quite a bit of repairs that we had to do, and my biggest thing was keeping other contractors out of the way.”

When fencing and other protective measures failed to prevent subcontractors from disturbing freshly laid coatings,

The crew ran night shifts starting at 6:00 p.m. to prevent the coating system from outgassing from the L.A. summertime sun and heat.





After the PC-260 basecoat at 24–26 mils, the crew applied two coats of Poly-I-Gard 295 at 12–14 mils each with sand broadcast into the first, keeping the other 30+ subcontractors off the fresh coats!

Swinerton installed onsite cameras to identify the responsible parties and make them accountable for the cost of repairs. “I think a lot of the contractors got the hint when they saw how expensive it was to repair, and that pretty much kept everybody out of our area,” Calhoun said.

According to Calhoun, the project’s general contractor did a great job keeping the 30-plus contractors coordinated. “Swinerton held a weekly scheduling meeting, and we sat in the trailer once a week for about two hours every Monday, from about 11:00 to 1:00, while they set everybody’s schedules.”

In addition, health and safety was a key concern, particularly with regard to COVID-19. Swinerton reps took daily temperature checks and made sure workers were wearing N95 masks and were safely distanced from one another.

In terms of personal protective equipment (PPE) specific to the job, Best Contracting crew members wore Pyramex hardhats, MCR Safety glasses, gloves, long-sleeved T-shirts, and work boots. Swinerton had safety inspectors monitor the crew to make sure they were wearing their PPE and following safety protocols — “They were pretty much the sheriffs in town,” said Calhoun — while LAWA had quality control experts onsite who took photos to make sure the crew was applying the VOC-compliant system properly.

A Noteworthy Success Story

After they finished coating the facility in September, Calhoun’s crew went back in October to install an additional 5,000 square feet (464.5 m²) of traffic coating. Both the company and the Poly-I-Gard 575FC system were singled out for praise by LAWA officials.

“It was all positive feedback,” Calhoun said. “Everyone loved the product. We had a lot of people saying, ‘Can I use it at home or in my garage?’ and that type of thing. And my guys got a lot of good feedback as well. They did a very, very good job.”

At long last, the LAX Economy Parking project was

completed by October 2021, just in time for its triumphant unveiling. While news of an airport parking lot might not typically be a big deal in most cities, the scale of the LAX Economy Parking project was such that its opening drew many of the city’s key dignitaries, including L.A. Mayor Eric Garcetti.

“As the third largest airport in the world, LAX is our gateway to the world — where dreams take flight — and we welcome the future of our city with open arms,” said Garcetti in a press conference when the facility opened. “LAX Economy Parking is a historic marker of progress in the midst of a once-in-a-generation transformation at the airport — bringing travelers a state-of-art facility that will help reduce congestion, enable our airport to realize its full potential, and continue to create a more seamless travel experience for millions of Angelenos and visitors.”

Calhoun admitted that it was one of the biggest traffic coating projects Best Contracting has ever done in its nearly four decades of existence. And in terms of local media coverage alone, it may be its most high-profile job as well. But even after the reporters are done covering this story, the Best Contracting crew will have the pleasure of knowing that their work will be seen and appreciated by visitors from across the world for years to come! **CP**

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Artistic Tools Help Preserve Dallas Water Tank

BY **BEN DUBOSE**

PHOTOS COURTESY OF **GOLDMAN GLOBAL ARTS AND TANKSPEK**

Built in 1914 in the Deep Ellum neighborhood of Dallas, Texas, the Continental Gin Building includes a cone-top water tower that has since become a community landmark. After more than 100 years of existence, the 140-foot-tall (42.7 m) tower — which holds up to 100,000 gallons (378,541 L) of water while in service — understandably needed some restoration, and property owner Westdale Real Estate Investment and Management was ready to greenlight the job.

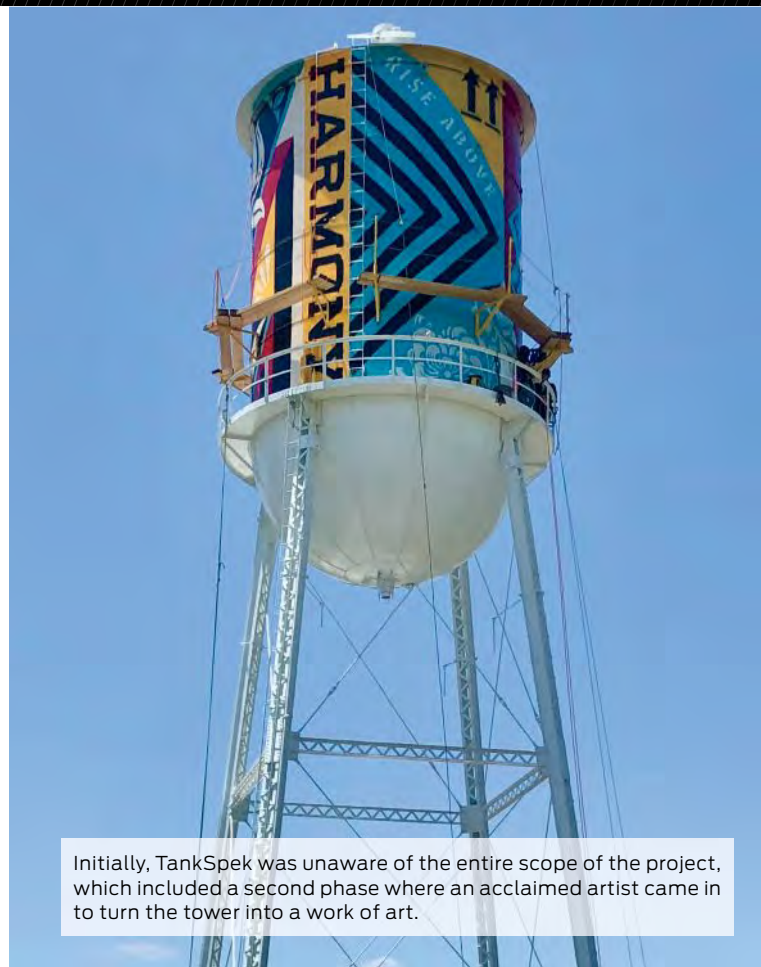
Based in the neighboring state of Arkansas, TankSpek, Corp. was formed in 2016 and began talking with Westdale in late 2017 about the Deep Ellum tank, which had a job up for bid. TankSpek's founders and presidents are Nathan Gray and James Brookshire, who have more than 50 years of combined experience in tank evaluation, inspection, repair, and refurbishment. Thus, even if the company name isn't familiar, they clearly bring a significant pedigree.

Initially, TankSpek wasn't selected as this job's coatings contractor. But cost concerns related to the first proposal and the unique challenges of working in a sensitive urban area led to Westdale calling an audible in 2019, and TankSpek seized the opportunity.

"Right away, we were interested in the restoration portion of this project because it was an outlier," Gray said. "It was apparent almost immediately that due to complications, such as project location, access limitations, and traffic circumstances, that the project would bring challenges beyond what we might typically experience. Because TankSpek is a young company and parameters have not been decidedly set for our wheelhouse, certain logistical challenges have a unique appeal in helping us establish where TankSpek is headed as a company."

Texas Two-Step

Beyond costs, another key reason for the client choosing to



Initially, TankSpek was unaware of the entire scope of the project, which included a second phase where an acclaimed artist came in to turn the tower into a work of art.



The project took place during 2021, which meant that this crew had to deal with a historic winter storm. The crew members had to demobilize and leave the jobsite for weeks in February.



Restoring a historic water tower in Dallas, Texas, was a team effort. Lead by TankSpek, a 2–5 person crew worked on prepping and coating, while an artist gave it a decorative touch to finish.



Trendy Texas Tank

switch contractors involved application strategy. The initial contractor wanted a spray application for the restoration phase, which concerned Westdale given Deep Ellum's close proximity to downtown Dallas.

"In Deep Ellum, which is basically downtown Dallas, I told them I wouldn't even consider spraying anything," Gray said. "There's no footprint around the tower to put up a curtain. They loved that we were willing to brush and roll, and that these [coating] materials could be brushed and rolled. The guys at Westdale want to be good neighbors. He told us, 'We can't have that liability of putting overspray all over our neighbors' buildings and cars. We really want to take care of the people that we're working with here in our community, and it sounds like you guys are the guys to do that.'"

As part of that pitch, Gray reached out to Paul Powers, a sales and service representative at Induron Protective Coatings. Powers recommended a multi-layer epoxy-acrylic coating system with a polysiloxane topcoat since it could overcome some of the traditional challenges of brush-and-roll applications.

"With [coating] products that have lesser solids, they have to be sprayed in order to build up enough mils to provide protection and coverage," Gray explained. "Polysiloxane has such a high solids content that when you roll it on, you can roll it on surprisingly thin, and the high solids in that material will cover."

TankSpek and Induron had worked together on previous projects, and that trust proved to be critical on relatively short notice. "The folks at Induron tend to demonstrate product knowledge that is at the level of actual hands-on application," Gray said. On this project, Induron recommended Indurlux 7600 as the finish coat because of its virtually unlimited color range and ultraviolet (UV) protection.

What neither TankSpek nor Induron knew originally was

The 9,000-square-foot tank was aged, and when the crew came on site there was rust and loose coatings to deal with. Prep included power washing to achieve NACE WJ-4/SSPC-SP WJ-4.



Working near the city helped TankSpek decide to use brushes and rollers to mitigate overspray concerns. They also couldn't use cranes or boom lifts due to a lack of ground space.

that Westdale was also planning a second decorative phase of the project. After the initial restoration round, the client's plan was to work with Goldman Global Arts to incorporate street art onto the tower's top, specifically, a mural titled "Cultivate Harmony" from well-known artist Shepard Fairey.

To do this, Fairey's team requested 8 to 10 colors in aerosol form. "A member of the artists' team notified us that they typically apply their work with rattle cans," Gray said. At that point, Gray again consulted with Powers, who identified New Jersey-based MyPerfectColor as a vendor who could package Induron's paints into aerosol form.

"When we discovered that Induron could use series 7600 to match the artist's color palette, this became another key that allowed the project to move fluidly," Gray said. "Using another product would have likely created a timing dilemma due to recoat windows when applying another material over a polysiloxane. Plus, the polysiloxane looks great! With the way the colors are laid down, you can just about see this water tower from the moon!"

Access and Safety

Naturally, working at heights brought unique challenges for accessing the Deep Ellum water tank, which Gray estimates at approximately 9,000 sq. ft. (836.1 m²) of steel surface area. Those challenges became even more pronounced for the artist's portion of the job, since artists are less familiar than coatings crews when it comes to certain safety protocols.

"The news that Shepard Fairey was being brought on site was where, logistically, our planning became almost surgical in our approach both to safety and general process," said Gray, whose plan involved daily jobsite safety briefings. "They had done some water tower projects, but not water tower projects that were 140 feet up in the air. They hadn't worked off of this type of scaffolding that was attached directly to the tank. I

JOB AT A GLANCE

could write chapters on how far safety was taken on this project, and this was noted by almost every individual who participated. Seriously, even Goldman Global Arts' owners felt comfortable enough with our safety protocol to ride our equipment to the top of the tower!"

Members of the coatings crew, which typically had two to five workers each day depending on the task, utilized standard personal protective equipment (PPE) including steel-toed boots, hard hats, and harnesses with double-lanyard systems. A suspended scaffolding system consisting of a Sky Climber basket was attached via cable to the tower's top, with a zip-line pulley attached to an adjacent cable. To access the system, crew members used 12-mm (0.5 inch) safety ropes supplied by Petzl and attached those to the bracketry, with rope grabs purchased from GME Supply.

"Throughout most of this project, we had a crew of people positioned over 100 feet [30.5 m] in the air, painting upside down and sideways, and without any means to fully protect paint from going wherever the wind took it," Gray said.

Meanwhile, the artist's team took extra steps such as using an AZTEK pulley system from Rock Exotica. Priority One Safe-T, LLC was contracted to provide a safety rescue team, which connected the 5:1 rescue pulley system to the artists' harnesses.

"That [AZTEK] system was connected from a bracket welded onto the tower's sidewall to the harnesses of the artists to assist in their climbing out of the Sky Climber basket, over the upper balcony handrail, and onto the balcony floor," Gray explained. "This allowed them the added safety of a secure tie-off point in the event that they lost footing while climbing over the handrail, and it also reduced their individual body weight during the brief climbing process. Once the team members were positioned onto the balcony floor, they would connect to safety lines before being disconnected from the Rock Exotica system."

The crew used a suspended scaffolding attached to the tower's top via a cable. They used a zip-line pulley system and Sky Climber basket, too. The artists were supplied with AZTEK pulley system.



PROJECT:

Restore a historic water tower with an artist's decorative top layer

COATINGS CONTRACTOR:

TankSpek, Corp.
Berryville, AR
(800) 624-1023
FB: TankSpekCorp-1467041196653235
www.tankspek.com

SIZE OF CONTRACTOR:

4 full-time employees

SIZE OF CREW:

2-5 crew members

PRIME CLIENT:

Westdale Real Estate Investment and Management
Dallas, TX
(214) 515-7000
@WestdaleTweets
www.westdale.com

SUBSTRATE:

Steel

CONDITION OF SUBSTRATE:

Aged with rust and loose coatings

SIZE OF JOB:

9,000 sq. ft.

DURATION:

4 months, off and on

UNUSUAL FACTORS/CHALLENGES:

- » TankSpek was not initially made aware of the project's full scope.
- » Traditional equipment, such as cranes or boom lifts, was not feasible at this jobsite due to a lack of ground space.
- » TankSpek brought in a third-party safety rescue team (Priority One Safe-T) to review all installations and connect the rescue pulley system to artists' harnesses.
- » Due to overspray concerns, TankSpek used brushes and rollers.
- » Induron worked with MyPerfectColor to aerosolize the topcoat for the artist.
- » Due to a historic winter storm in Texas in February 2021, crews had to demobilize and leave the jobsite for weeks.

MATERIALS/PROCESSES:

- » Power washed steel surface areas at 4,200 psi to achieve the NACE WJ-4/SSPC-SP WJ-4 standard for light cleaning
- » Applied Induron's E-Bond 100 epoxy penetrating sealer at 1-2 mils DFT to tower's lattice legs and to any bare metal areas of the bowl, side wall, and roof
- » Applied Induron's Induramastic 85 epoxy coating at an average of 6 mils DFT
- » Applied two layers of Induron's Indurlux 7600 acrylic polysiloxane finish coat at combined 3-5 mils DFT
- » Supported the use of aerosol paint cans of Indurlux 7600 in 8-10 colors to draw artist's rendering on top structure

SAFETY CONSIDERATIONS:

- » Utilized standard PPE, including steel-toed boots, hard hats, and harnesses
- » Had a Sky Climber basket attached for suspended scaffolding via cable to the tower's top, with zip-line pulley attached to adjacent cable
- » Used 12-mm safety ropes supplied by Petzl and attached those to bracketry with rope grabs for access
- » Supplied artists with AZTEK pulley system from Rock Exotica

Trendy Texas Tank



"That [AZTEK] system was connected from a bracket welded onto the tower's sidewall to the harnesses of the artists to assist in their climbing...." TankSpek's Nathan Gray explained.

TankSpek involved its safety team in every aspect of rigging, including the specific gapping measurements of plank boards used as scaffolding. "Rigging on an older tower is very tricky," Gray said. "Because of where the tower sat, you couldn't get a crane in. You couldn't get a boom in. A lot of conventional

equipment that would have normally been considered to provide access just wasn't a possibility because you couldn't get that equipment into this parking space."

"We enjoyed studying the archives of old-school access methods, brainstorming a new access method, and reinventing the wheel," Gray concluded. "When that level of management goes into a project and hundreds of ideas are vetted for feasibility, you find yourself sleeping very little because you're checking every detail. When the folks involved say that your team made it look easy, well, that should tell you that you have a good team in place. I like to think that's absolutely true!"

Prep and Paint

With access, safety, and material plans in place, the first step of executing the application phase involved power washing and hand tooling the entire steel surface area to get rid of any old paint that was poorly adhered. Using TankSpek equipment, all areas were power washed at 4,200 psi (289.6 bar) to achieve the NACE WJ-4/SSPC-SP WJ-4 (Society for Protective Coatings Surface Preparation) standard for a light cleaning of metals.

"Without any available space for a curtain footprint, there was no way to contain the tank, which left us having to deal with remaining rust," said Gray, who noted that a subcontractor



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The Induron system started with E-Bond 100 at 1–2 mils DFT to tower's lattice legs and to any bare metal areas of the bowl, side wall, and roof. Then, it was Induramastic 85 at ~6 mils DFT.

was used for some of the prep and painting work. When a subcontractor is at the site, TankSpek's employees take on roles as project managers and facilitators.

"Without sandblasting, we weren't exactly turning up white metal," Gray said. "We had to remove any oxidation or loose coatings because there were still some pre-existing coatings, primarily on the shell of the tank. There was almost no coatings left on the legs, but even on those, there was surface rust."

With the surface prepared, the next step was applying Induron's E-Bond 100 epoxy penetrating sealer at 1–2 mils (25.4–50.8 microns) dry film thickness (DFT) to the tower's lattice legs and to any bare metal areas of the bowl, side wall, and roof. "We used the epoxy sealer to do its magic and penetrate, neutralize, seal, and whatever other voodoo that material does to handle residual rust on a marginally prepared surface," Gray said.

For an intermediate layer, they brushed and rolled Induron's Induramastic 85 epoxy coating at an average of 6 mils (152.4 microns) DFT. Each coating layer was allowed to cure overnight. "I really believe that these two coats were the backbone that essentially created a durable barricade against corrosion and the elements," Gray said.

Finally, crew members applied two layers of the Indurlux 7600 acrylic polysiloxane at a combined 3–5 mils (76.2–127.0 microns) DFT in a white top layer for the tower's legs and in blue and yellow for the side walls of the top structure. The high-gloss topcoat created an even sheen that Gray believes will hold up "for years."

Ultimately, the relationship between contractor and manufacturer made for a smooth application. "TankSpek's field teams can reach out to Induron's coating reps with real-world questions, like which roller nap works best for specific

circumstances, and get answers that make their day move more quickly," Gray said. "There are times when CIP [Coating Inspector Program] level knowledge is paramount, but providing CIP reps that can talk paint like they've actually applied it is something that elevates Induron as a very useful resource."

Up top, the two-tone backdrop of blue and yellow was applied immediately prior to the arrival of the artist team, and the properties of the polysiloxane proved critical. "If Indurlux 7600 could not have been tinted to an infinite color range, the artist would have had to apply a different product over the white backdrop," Gray explained. "The color matching was everything!" According to Gray, the artist said having that blue-and-yellow backdrop saved a lot of aerosol spray cans and time, as opposed to having that put on by his crew.

As planned, MyPerfectColor did its part in delivering hundreds of Indurlux 7600 "rattle cans" to the jobsite, and the artist's team used those over a four-day period to install Fairey's artwork. The mural features a large eye circled with the words "EYES OPEN, MINDS OPEN," along with other text reading "cultivate harmony" and a design featuring a peace sign.

"I actually have one of those used cans on display in my office," Gray said.

Project on Ice

Though the Deep Ellum tank project was years in the making, all work was completed over a staggered period of approximately four months from January 2021 through May 2021. It could have been much shorter than that, but February's historic winter storm that caused widespread power outages across

Indurlux 7600 acrylic polysiloxane finish coat was applied in two layers to a combined 3–5 mils DFT, in a white top layer for the tower's legs and in blue and yellow for side walls.



Trendy Texas Tank

Texas disrupted operations for several weeks.

“That was the first time that I’ve had to move a crew in the middle of the winter from Texas to Nebraska, looking for better weather,” Gray recalled. “Typically, in the winter, you want to move your crew from Nebraska down to Texas, but that was a one-off.”

For the artist’s portion, there was one sequence where the Sky Climber motor sensed some limited cable areas where individual wires had frayed, and a replacement cable wasn’t available until the next day. In such a situation, the Sky Climber will “lock up” as a built-in safety protocol, Gray said. As such, this required Fairey’s team to come down from the scaffolding, and since they weren’t familiar with using the tank’s attached ladder, they utilized Petzl equipment and ropes to descend in a somewhat similar manner to a “rescue” operation.

“When the team got down, I had my concerns about what they might say, and [asking] why they had to do this,” Gray said. “But they loved it. They said it just added experience, and it was a great time. They said they felt safe, and that they were in good hands. They work fast, they work diligently, and they seemed fearless.”

Within weeks, Gray received a phone call from the son of Westdale’s owner, who praised TankSpek’s work and passed along a message that a Goldman Global Arts representative had remembered Gray by name while crediting him for all the work and behind-the-scenes planning.

“He said, ‘This was something that seemed impossible to us, and you made it happen.’ He said, ‘I couldn’t appreciate you more.’ That was huge. For a little company like us, that was a big phone call,” Gray explained.

Ultimately, it was a collaborative approach and diligent communication between the contractor, coating manufacturer, client, artist, and beyond that sparked success in North Texas.

To complete the job safely, in addition to the access considerations, the crew wore proper PPE, including steel-toed boots, hard hats, and harnesses with double-lanyard systems.



One key part of the project was the ability to put Inderlux 7600 in aerosol paint cans so that the artist’s rendering could be completed using 8–10 colors on to the top structure.

“The whole project was full of creative people bringing ideas to the table to make something happen that would’ve been largely written off as impossible,” Gray concluded. **CP**

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Acrylic Polysiloxanes: Art on a Water Tank

By **William Seawell**, Technical Service Manager for Induron Protective Coatings

Acrylic polyurethanes, fluoro urethanes, and perhaps even cross-linked epoxy siloxanes are among the most common chemistries we encounter in the realm of industrial finishes. What do all these technologies have in common? They are all multi-component products that require some degree of expertise to apply them, and they typically carry with them a very large VOC (volatile organic compound) and HAPS (hazardous air pollutant) burden.

However, there are alternatives: water-borne urethanes and water-borne acrylics. These may be considered the “darlings” of the commercial and residential industries because they have significantly reduced VOCs, generally lower HAPS, and are single-component products. They are known for being easy to apply — but at the expense of dry film performance.

Lesser-known acrylic polysiloxanes offer a single-component finish, which splits the difference between the constructability enjoyed by water-borne acrylics and the performance many have come to rely on from the cross-linked members of the performance finish family.

How Does It Work?

One can think of single-component acrylic polysiloxanes as curing in a manner similar to that of “normal” acrylic emulsions. The curing mechanism involves little-to-no formation of covalent bonds, but it relies on the evaporation of water and solvents so that the resin particles suspended in liquid emulsion (in this case, acrylic functionalized siloxane globules) can physically knit together and form a continuous polymer membrane.

The key difference here is in the dry film properties of the siloxanes. Siloxanes are defined by the chemistry of the silicon-oxygen covalent bond. This bond is known by chemists for being particularly robust (aka having a very negative binding energy), and, incidentally, it is also the reason for the extreme chemical stability of many of the fillers used in many polymer and coating products (think silica and sand).

Organic coatings weather due to degradation of the carbon-carbon, carbon-hydrogen, carbon-oxygen, and carbon-nitrogen bonds contained within their cured films, but the siloxane bond is not subject to these same degradation mechanisms since they're not organic, resulting in a robust weathering finish. The resultant films can achieve extremely high gloss levels with great color and gloss



retention due to their highly ordered and silicone resin-rich surfaces. This same property lends itself to a soiling-resistant low surface tension film as well.

Acrylic polysiloxanes can accomplish this with low VOCs and HAPS footprints while also being completely isocyanate-free and having relatively quick drying times for single-component finishes.

Acrylic Siloxane Artwork

In this project, the single component nature of acrylic siloxanes enabled the top coating to be able to be placed into an aerosol can in several colors for the artwork. This level of graphic complexity would not have been achievable with a two-component finish, and nothing in the way of weatherability or performance was sacrificed to achieve that using an acrylic siloxane.

Conclusion

Water tanks can be painted with almost any resin type, but for specific scenarios, it pays to stop and consider which coatings would be ideal for the situation. Top coats are often treated as interchangeable in our industry, but the choice of top coat, in this case an acrylic siloxane, allowed the artist to do his best work. The Continental Gin Company water tank in Deep Ellum became more than a rehabilitated water tank; it is now a work of art that will stand out for decades to come. **CP**

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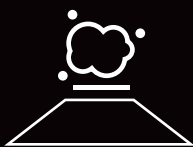
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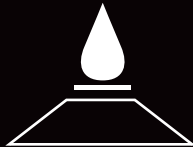
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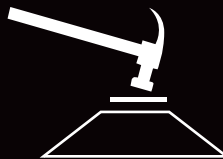
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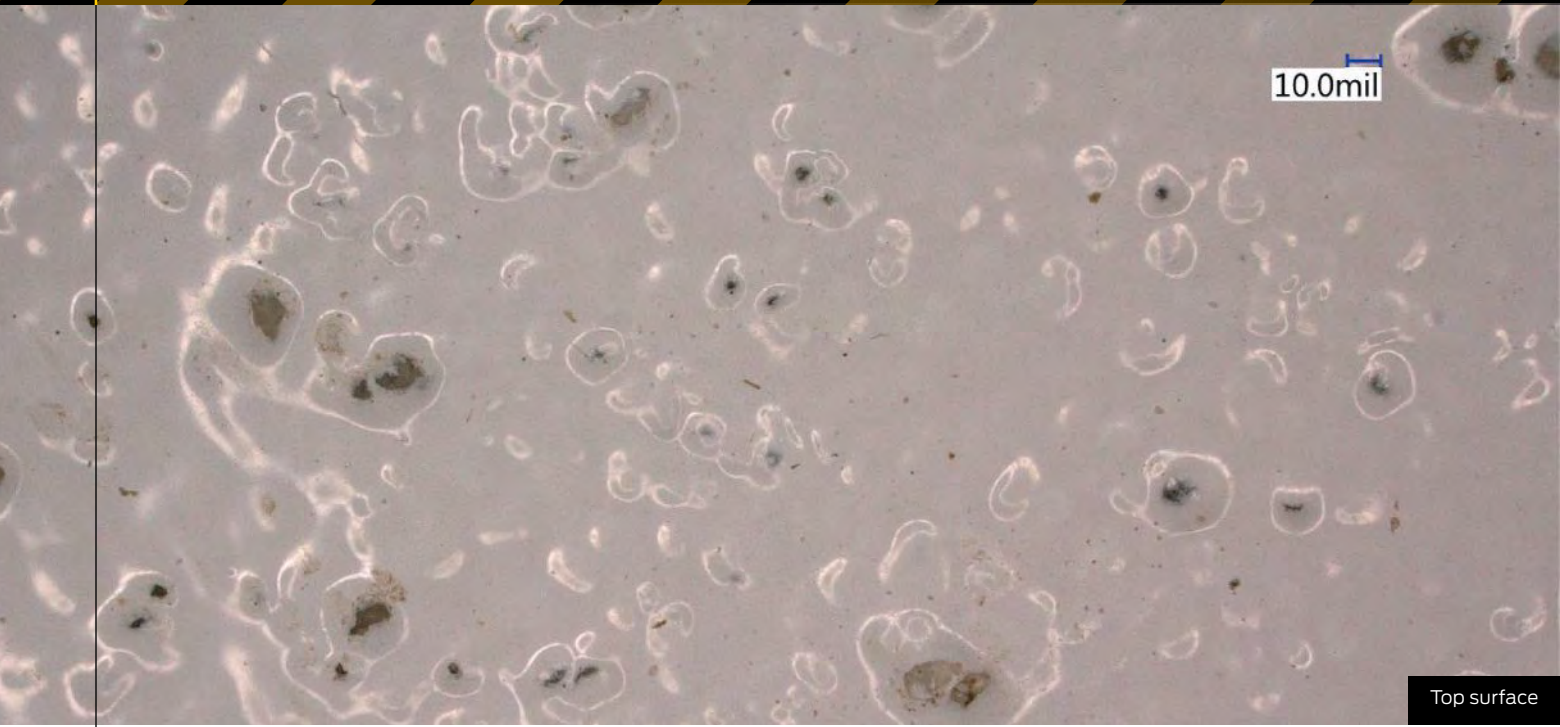
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Top surface

The Case of the Bubbling Marijuana Facility Floor

By *Valerie Sherbondy, Technical Manager of the Analytical Laboratory at KTA-Tator, Inc., and Lou Frank, Business Development Director at Coatings for Industry*

Photos courtesy of Coatings for Industry and KTA-Tator, Inc.

When any facility is being converted for a new use, problems with renovating or upgrading the concrete floor can deliver a surprise if the building's previous history isn't fully known. The resulting failure in the floor coating system is infuriating for both the applicator and the owner, and — as in this case — they might not have a clue as to why it happened in the first place.

The lesson: It's critical to learn as much as you can about the floor and its former uses before you begin applying coatings. This was a floor coating lesson learned the hard way. Fortunately, it has a good ending.

This lesson was learned by a major national contractor and the coatings

subcontractor tasked with converting a former industrial building into a marijuana-growing facility. When bubbles appeared in the newly coated floor, the coating manufacturer was called onto the project. Through some proactive investigation and old-fashioned customer service, the problem was identified and the issue resolved.

The Job

The facility in question was a 50,000-square-foot (4,645.2 m²) building that stands on a hillside in an industrial park in the Mid-Atlantic region of the United States. Beyond knowing that the floor had a former life, which was described by the commercial real estate broker as "light manufacturing," the stakeholders

It was later determined that the building was used as a machine shop, which likely resulted in oil spills and contamination in the concrete.

of this project knew little about the building's previous uses.

It was later determined that the building was used as a machine shop, which likely resulted in oil spills and contamination in the concrete. That information would prove critical in determining the cause of, and solution to, the bubbles in the concrete floor coating.

The owner hired a major national general contractor (GC) to lead the renovation and build-out of the facility, converting it to serve the growing demand for CBD (cannabidiol) products, which have recently been legalized in many states. The contractor retained a highly experienced coatings subcontractor to provide a resinous coating system to the concrete floor. The system chosen was confirmed with the coating manufacturer with the purpose that it would deliver years of service in the renovated facility.

Uncharacteristically, the surface preparation had been completed by the general contractor before the coating application crew arrived on site. This coatings subcontractor typically does his own surface prep work, as it allows the subcontractor to be sure it was done correctly as well as learning as much as possible about the condition of the floor prior to coating application.

For this subcontractor, not completing his own surface prep work was a concern, but he weighed his options of arguing with his client and determined that the size of the job outweighed the potential risks.

The general contractor informed the coatings professionals that the floor had been tested for moisture and the moisture vapor emission rate (MVER) was 10 pounds (4.5 kg) per 1,000 square feet (93.0 m²) per 24 hours. That's well above the 3-pound (1.4 kg) limit for typical coatings as suggested in ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring."



After about four weeks after the job was completed, the bubbles began to appear

Based on that information, the subcontractor used a moisture mitigating primer followed by an epoxy mid-coat. This system was designed to handle the light-to-moderate foot and wheeled traffic that was expected on this industrial facility floor. Both the primer and

issue, the flooring subcontractor found that some of the bubbles were leaking brown liquid that appeared to be pushing up through the coating. The liquid that oozed from beneath through the bubbles of the resinous floor coating was brown with telltale rainbow colors of oil on top of water.

The liquid that oozed from beneath through the bubbles of the resinous floor coating was brown with telltale rainbow colors of oil on top of water.

epoxy coating were applied with no issues, but that didn't stop the trouble.

The Problem

Lurking beneath the coating was an unforeseen problem for everyone.

About four weeks after the job was completed, bubbles began to appear in the floor. They showed up in isolated areas and not across the entire floor. Called in to inspect the

The owner and general contractor assumed that the messy liquid was somehow caused by the coatings. The blame was placed on the subcontractor for selecting an incorrect coating or not applying it properly. Needing to avoid a very expensive re-grind and re-coat, the subcontractor teamed up with the coating manufacturer to prove this was not the case.

Clearly, the floor had more problems than just increased MVER,

Never Again

and the combination of the moisture and likely contaminants meant this job was going to be difficult — and expensive — to deal with.

The discovery of the floor's problems sent tensions high. The building owner had the GC under a tight completion deadline to get the building operational, and they placed blame on the coatings subcontractor, even implicating that the coating might also be at fault.

In addition to the visual observations made by the subcontractor, the coatings manufacturer sent a representative to the job to take photos and samples of both the applied and cured coatings and the brown ooze. The samples were sent to



The facility was converted from a machine shop

an independent forensic coatings lab where they were analyzed.

The laboratory investigation consisted of a visual and detailed

microscopic examination and infrared spectroscopic analysis. First, chips of the coating were examined under a microscope. The topcoat was white

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and glossy with a textured finish. The bottom surface was gray and uneven with areas of adherent cement residue. Some chips had a deposit of yellow discoloration on top of the surface. When viewed under magnification, the residue did not have a crystalline appearance. A sample of the residue collected from the floor was examined separately and found to have a yellow/orange color, and it did not have crystalline characteristics.

An infrared spectroscopy analysis was then conducted on the discolored region of the coating chips, on the residue collected from the floor, as well as on the amine hardener components of both the primer and epoxy because they had an amber color similar to the discoloration and floor residue. The spectroscopic analysis of the discolored areas indicated carbon-hydrogen materials similar to a wax or oil-based material, calcium carbonate, silicates, possibly phosphate drying agents, and bound water.

The analysis determined that



Residue from floor.



Lurking beneath the surface was an unforeseen problem.

the bound water, calcium carbonate, and silicate materials were most likely the result of contact with an older concrete floor. The wax or oil and possible drying material were likely contaminants from when the building was used as a machine shop. This analysis also ruled out that the contaminants were caused by a component of the coating materials. No amine from either coating was identified as part of the residue by this analysis.

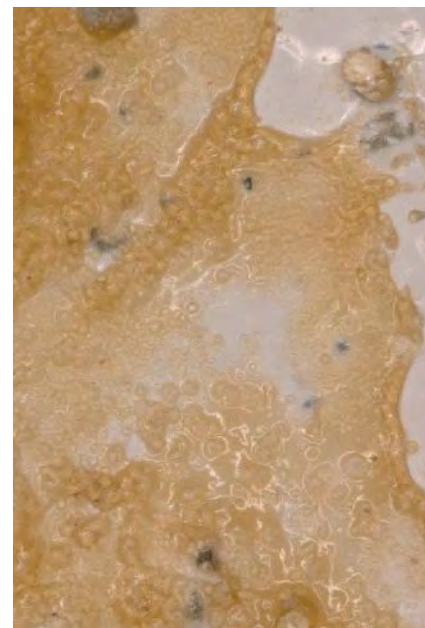
Separately, the company that the facility owner contracted for testing also yielded findings concurrent with those of the independent lab.

The Results

Based on the agreeing results of the tests, the building owner, eager to get the marijuana-growing facility up and running, realized he could not blame the contractor or the coating for the problems with the floor. Further, the owner saw that the contractor was serious about fixing the actual problem rather than assigning blame. The owner asked the coatings subcontractor to fix the bubbling floor — redoing the entire floor and not just

the bubbling sections — and paid him for the additional work.

The coatings manufacturer's tech team worked closely with the general contractor and coatings subcontractor, specifying a completely different coating system designed for such challenged floors: a surface-tolerant polyamide epoxy primer



Yellow Discoloration

Never Again

with a polyamide-cured novolac epoxy topcoat. The products in the second system are designed to work with moisture-laden and moderately contaminated substrates. It's now been several years since the repairs were completed, and there have been no further problems with the floor coating. The facility owners are happy, and their customers are likely happy, too.

The Lessons Learned

The main lesson that both the building owner and contractors learned together — and that every stakeholder should consider — is that it is important to know what you are over-coating. You can learn what the condition of the substrate is, so, whenever possible, do your own surface preparation.

The subcontractor on this project is a veteran of the concrete floor coating industry, and he normally follows that best practice. This time, though, he didn't. That prevented him from inspecting the slab prior to preparation, which may have shown visible oil stains or wax discolorations from decades of machine shop use.

Even if you're unable to do your own prep, you can do a quick test to verify that surface contaminants have been removed: Put a drop of acid on the concrete. The acid should quickly react with the alkaline concrete and bubble. If you don't see any bubbling, something may be blocking the acid from reacting with the concrete.

Another factor in this premature coating failure was that the building is located on a hillside. That probably meant that rainwater had run along and underneath the building for decades prior to the latest coating installation, which is likely the source for the increased MVER.

Much was learned by all involved with this flooring project, and hopefully, now that the stakeholders are all aware of why and how this



premature coating failure occurred, they can ensure that this type of problem will occur for them never again. **CP**

VALERIE SHERBONDY is the technical manager of the Analytical Laboratory for KTA-Tator, Inc., an independent consulting and engineering firm specializing in inspection, consulting, and



laboratory services for the protective coatings industry. Sherbondy has worked for more than 25 years in the paint industry. She has been involved with hundreds of paint and coating failure investigations and has analyzed or tested hundreds of different coating materials, from architectural to industrial coatings. For more information, contact: Valerie.Sherbondy, vsherbondy@kta.com.

LOU FRANK is the business development director at Coatings for Industry, a 50-year-old formulator of performance coatings. He is most widely known as the founder of *CoatingsPro Magazine*, now owned by AMPP. He



has a business degree from the University of Maryland. He has served as the publisher of online platforms and as a board member for several industry organizations. For more information, contact: lou.frank@cficoatings.com.

The main lesson that both the building owner and contractors learned together — and that every stakeholder should consider — is that it is important to know what you are over-coating.



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Upskill, Slowdowns, and Paying It Forward

ProFile: Sid Arthur

By Jim Cook

Sid Arthur started what is now a multi-million-dollar business just a day after being laid off by his previous employer. “It was almost a joke,” he said. “I walked into my former employer’s biggest account’s office and told them I was starting a business.”

Arthur’s force of character was no joke to the contractor-turned-client, who began sending work his way. Over time, Arthur built Sid’s Sealants LLC into a business that employs 60 people and earns about \$9 million in revenue per year.

Located in Port Washington, Wis., Sid’s Sealants primarily focuses on building weatherization. Arthur’s business began more heavily using coatings in its work about a decade ago, and it further embraced coatings with the purchase of a business specializing in polyurea spray coatings in 2018. His company’s recent work to install a variety of materials, including a fluid-applied air vapor barrier, was featured in the article titled, “New Hospital’s Building Envelope Signed, Sealed, and Delivered!” (*CoatingsPro*, November 2021).

Arthur credits the strong relationships he’s built with customers and fellow contractors and a growing professional reputation in high-rise work in the Milwaukee area with a decade of strong success for his business.

“2010 was a turning point for us,” Arthur said. “We started building a better name for ourselves in high rises, and since then, our business has really expanded.”

Getting By With a Little Help From Friends

Arthur is a native of Iron Ridge, Wis., and grew up on a farm. He credits his work ethic to his father, who was employed as a chemist and also ran the family farm.



“He’d work for 10 hours a day and then come home to work the fields or in the barn,” Arthur said.

As a young adult, Arthur worked as a general laborer in the construction industry before taking up an opportunity to upskill as a PCC (Pointer/Cleaner/Caulker). Arthur enjoyed how this work required a practical mindset and an artistic sensibility; this combination of skill sets has kept him interested and engaged in the industry over the years. Before starting his own company, Arthur worked for several employers, and he has tried to incorporate what he learned from each into how he runs his business now.

“I wanted to take what was best from each of them and practice it in my own business — if they did good work, if they were reliable, if they had a reputation for honesty, if they had a good sense of humor — I incorporated all these things into my company,” Arthur said.

Arthur said he was lucky in that several contractors immediately took him under their wings after he started his business, sending work along to him. And he said the relationships he built in the industry likely saved his business in the early 2010s when a major customer was unable to pay for the work that Sid’s Sealants provided.

Arthur’s good relationships with other contractors in the construction industry ensured that his company stayed afloat. “Luckily, we had some great customers looking out for us who gave us projects, which allowed us to maintain the business,” he said.

Looking Back and Ahead

With regard to coatings, Arthur said he’s been impressed by how much more precise the industry has become over the years. He said the body of knowledge surrounding not only the manufacture of quality coating products but also their application has vastly increased in the 25 years he’s been in business.

Arthur has made his own contributions to the coatings industry. Several manufacturers in the coatings industry have worked with Sid’s Sealants to test new coatings and equipment, evaluating how they work in the context of his company’s specialty: weatherization.

Looking forward, Arthur said he sees challenges on the horizon for the construction industry as labor and supply shortages caused by the pandemic and macroeconomic conditions have made building more expensive and may result in a slowdown. Should that occur, Arthur feels confident that the strong relationships he’s built over his career and the good reputation of his company will allow Sid’s Sealants to weather any economic downturn.

Arthur also hopes to pay some of the good fortune he’s had forward. In recent years, much like that first customer did for him, Arthur has taken a beginner under his wing and sent business his way.

“He’s become a dear friend, and he let me know that if I hadn’t sent business his way in those first years, he likely would have folded,” Arthur said. **CP**



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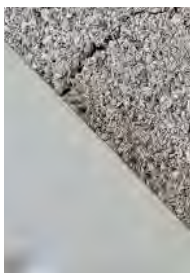
New Fiber-Reinforced Repair Mortar for Concrete



Industrial coatings manufacturer Carboline introduced Carbocrete 4010, a fiber-reinforced repair mortar with strong application properties for vertical and overhead concrete substrates. The new product can build up to 4 inches (10.2 cm) thick on vertical surfaces to repair and resurface deteriorated concrete surfaces. It offers a quick-setting ability that allows it to be topcoated with various high-performance linings in as little as 6 hours, making it ideal for jobsite production.

Carbocrete 4010 exhibits low shrinkage, high bond strength, and low permeability, which are all critical features in high moisture and underground environments, according to the company. It is also NSF 61 approved for applications involving potable water. The potential applications are extensive, but the product is specifically effective for water and wastewater structures such as manholes, wet wells, and pipelines. For more information, contact: Carboline, (800) 848-4645, www.carboline.com.

CFI's Flexible Coating Bridges Cracks in Concrete



small cracks in concrete slabs. In

Coatings for Industry, Inc. (CFI) introduced its new WearCOAT 474 flexible epoxy coating, which represents a two-part system designed to bridge

addition, it functions as a waterproofing membrane to seal floors and help prevent leaks below the substrate. Combining flexibility and durability, WearCOAT 474 is capable of 85 percent elongation, or about 30 times greater than typical epoxy coatings, according to the company. The dent in the test panel demonstrates the coating's flexibility without cracking. The product creates a membrane that can span small cracks and imperfections in the concrete slab while also working as a sealer. The coating's protective qualities are enhanced by adding fiberglass reinforcement. For more information, contact: CFI, (215) 723-0919, www.cfi-coatings.com.

Werner Announces Multi-Max Pro Ladder



Climbing products and fall protection equipment manufacturer Werner is introducing the new Multi-Max Pro, an ultra-flexible, multi-position ladder that sets a new standard in worksite versatility. According to the company, Werner has combined many of its most innovative features into the Multi-Max Pro to create a replacement for five common ladder types on the jobsite. While the ladder is fully loaded with pro-focused design elements, it makes no compromises when it comes to build quality. With a load capacity of 375 pounds (170.1 kg), the Multi-Max Pro provides maximum versatility made easy. By combining the functions of five ladders into one, it can be used as a twin-step ladder, stairway-step ladder,

wall ladder, extension ladder, and leaning ladder. Users can adjust the hinge at the Multi-Max Pro's central pivot point, making it easy to change positions. For more information, contact: Werner, (888) 523-3371, www.wernerladder.com.

JTS 1 Joint, Termination Sealant Now Available in Clear



Mule-Hide Products Co. has added Clear to the color palette for JTS 1 joint and termination sealant, allowing contractors to quickly and easily complete projects that would otherwise require color matching. JTS 1 is described as a 100 percent solids, moisture-cure urethane joint and termination sealant that is used in applications where significant movement or vibration is expected. It adheres to dry and wet surfaces with no sagging or shrinking and has minimal odor.

The sealant delivers strong adhesion to concrete, masonry, EPDM (ethylene propylene diene terpolymer), PVC (polyvinyl chloride), wood, vinyl, and most other common building materials. TPO (thermoplastic polyolefin) membranes must be primed before the application of JTS 1. The sealant's high-solids content allows it to seal larger joints of up to 2 inches (5.1 cm) wide and 1 inch (2.5 cm) deep without the use of a backer rod. When JTS 1 is applied to vertical surfaces, the



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bead stays in place, rather than oozing down the joint. For more information, contact: Mule-Hide, (800) 786-1492, www.mulehide.com.

New Women's Work Boot From KEEN Utility



KEEN Utility has released the Dover work boot in a women's fit, which the company describes as being built for the unique fit needs of today's tradeswoman and skilled worker. The women's Dover is an outdoor-inspired hiker and represents the first women's fit safety style from the company-owned factory. This boot offers a variety of performance and safety features, including the new KEEN KonnectFit heel-locking system, along with KEEN's Luftcell midsole that offers nearly 100,000 air bubbles per cubic cm, providing lightweight comfort for all-day wear. This medium-duty boot also offers a KEEN.Dry breathable waterproof membrane; an electrical hazard (EH)-rated abrasion-, oil-, and slip-resistant non-marking rubber outsole; and non-metallic carbon-fiber toes that are 15 percent lighter than steel. Other highlights include an ergonomically designed removable PU (polyurethane) footbed to provide underfoot support. For more information, contact: KEEN, (866) 676-5336, www.keenfootwear.com.

DAP Expands Legacy ALEX Brand With ALEX Ultra Sealant



Construction products provider DAP has expanded its legacy and flagship ALEX line with the introduction of ALEX Ultra Advanced Anti-Shrink Sealant. Formulated with breakthrough anti-shrink technology, the ALEX Ultra

is specifically designed to meet the demanding needs of professional paint jobs by solving for traditional latex sealant pain points while still providing ease of use. The product outperforms the competition as the lowest shrink latex sealant on the market, according to the company, and it features silicone additives for greater flexibility and excellent adhesion to a wide variety of substrates. These two features combined provide a long-lasting bead and excellent finish that will not crack or lose adhesion over time. ALEX Ultra can be found at Home Depot. For more information, contact: DAP, (888) 327-8477, www.dap.com.

WEATHER GUARD Introduces Saddle and Lo-Side Boxes



Work truck equipment provider WEATHER GUARD has introduced 38 new Saddle and Lo-Side Boxes with an updated, modern appearance and advanced technology to enhance the user experience. These new truck toolboxes build upon the protection WEATHER GUARD is known for by offering benefits including one-key simplicity, a high-security locking system, a modernized sloped lid, and PowerSync Technology compatibility. To further educate audiences on how to utilize and install the new features, WEATHER GUARD has added how-to videos to its YouTube channel, including "How to Code the Lock" and updated installation videos for mounting and PowerSync installation. For more information, contact: WEATHER GUARD, (800) 456-7865, www.weatherguard.com.

Mag7 Technologies Introduces Graphene Enhanced Anticorrosion Coating

Mag7 Technologies LLC recently announced the launch of CeraGraphe AC, an innovative, graphene-enhanced anticorrosion coating for metal surfaces. The product is for metal infrastructure upgrades to bridges, rail cars, and metal buildings, and for marine applications where saltwater, extreme temperature variation, and intense weather are persistent problems.

Unlike many anticorrosion coatings, CeraGraphe AC works best without a primer undercoat so that it can chemically bond to the covered metal surfaces. The product is applied once in two passes, manually by roller or robotically by high volume, low pressure (HVLP) spray. It cures at ambient temperatures to roughly 3 mils (76.2 microns) of smooth thickness, which is adequate for most flat surfaces — though the thickness can be increased on rough metal edges. The single one-and-done application benefit dramatically cuts the lifetime cost of protecting metal surfaces. It is ultraviolet (UV) stable and contains chromium or zinc. For more information, contact: Mag7 Technologies, (541) 292-5656, <http://mag7tech.com>.

Jotun Introduces Jotacote Universal S120 Epoxy

Jotun recently introduced its Jotacote Universal S120 with groundbreaking Covallox technology. The solvent-free epoxy can protect structural steel and equipment in refineries, power plants, and other industries from corrosion for 20–30 years. The technology utilizes Covalent chemical bonding between the paint and the substrate, which the company says is 10 times stronger than the typical hydrogen bond used in previous epoxy chemistries. This formulation uses bonds that chemically anchor the epoxy to the steel while

preventing water from replacing the Covalent anchors. By contrast, the original hydrogen bonds that have long been used in epoxies are quickly breached and replaced by water and other contaminants. In the field, Jotun has found no rust creepage or delamination after the coating is damaged. The low-odor product, which can be applied by air, roller, or brush methods, has almost no volatile organic compound (VOC) emissions, and it also does not have hazardous air pollutants (HAPs) or crystalline silica. For more information, contact: Jotun, (713) 860-8241, www.jotun.com.

Sapphire Lenses, Windows, and Domes Protect Drone Optics



Meller Optics, Inc. has introduced custom-fabricated sapphire lenses, windows, and domes for protecting all types of vision systems and sensors on drones that are exposed to harsh environments. The line features Mohs 9 hardness, which is second only to diamond and is impervious to fast-moving dirt, sand, most chemicals, and high temperatures. Ideally suited for protecting different vision systems and sensors on drones used in harsh environments, these sapphire optics can be custom fabricated as lenses with focal lengths from 0.75 inches (1.9 cm) to 1,000 mm (39.4 inch) or greater, and as windows and domes in a variety of sizes.

Available in sizes from 0.25 inches (0.6 cm) to 10 inches (25.4 cm) in diameter and ½ mm to 1-inch (0.05 cm–2.5 cm) thick, Meller Sapphire Optics can include antireflective (A/R) coatings. Sapphire can withstand heat of up to 1,000 °C (1,832 °F) and

pressures to 10,000 psi (689.5 bar), depending upon configuration. For more information, contact: Meller Optics, (800) 821-0180, www.melloptics.com. **CP**

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Concrete Conference and Roofing Expo

World of Concrete



Informa is a leading international intelligence, events, and scholarly research group. Its mission is to champion the specialist, connecting people with knowledge to help them learn more, know more, and do more. The company is listed on the Financial Time Stock Exchange (FTSE) 100 Index with 10,000 colleagues working in more than 30 countries as well as a presence in all major regions, including North America, South America, Asia, Europe, the Middle East, and Africa.

One of Informa's largest events, World of Concrete (WOC) 2022, will occur from Monday, January 17 to Thursday, January 20, 2022, and it will be hosted at the Las Vegas Convention Center in Las Vegas, Nev. Education sessions will be offered January 17-20, allowing attendees to get their hands on advanced technology and machinery as well as access the newest training and techniques in concrete and masonry. Education program hours for all four days and related seminar prices are as follows:

- WOC 90-Minute Seminars: 8:30 a.m.-10:00 a.m. and 1:30 p.m.-3:00 p.m. (\$145)
- WOC 3-Hour Seminars: 8:00 a.m.-11:00 a.m. (\$190)
- WOC 4-Hour Certification Seminars: 8:00 a.m.-12:00 p.m. and 1:00 p.m.-5:00 p.m. (\$245)

From January 18 to 20, exhibits will be offered from original equipment manufacturers (OEMs) from around the world and exclusive U.S. distributors of equipment, tools, products, and services

for the commercial construction, concrete, and masonry industries. WOC attracts approximately 1,500 exhibiting companies, including many coating and equipment manufacturers, and it occupies more than 700,000 square feet (~65,000 m²) of indoor and outdoor exhibit space. Exhibit hall hours for these three days are 9:30 a.m.-5:00 p.m.

To ensure the health and safety of everyone involved in WOC 2022, the event will follow all state and local regulations and guidance as well as the guidance from Informa AllSecure. Nevada currently has a mandate in place that masks must be worn in all public places, regardless of vaccination status.

For more information, contact: www.worldofconcrete.com.

International Roofing Expo



Established in 1886, the National Roofing Contractors Association (NRCA) is one of the construction industry's oldest trade associations and is the voice of professional roofing contractors worldwide. It is an association of roofing, roof deck, and waterproofing contractors, along with industry-related associate members and international members. NRCA has more than 3,500 members from all 50 states and 42 countries, and it is affiliated with 86 local, state, regional, and international roofing contractor associations.

NRCA has announced that the International Roofing Expo (IRE) is returning to New Orleans, La. in 2022. This edition of the IRE will be held at the Ernest N. Morial Convention Center from Tuesday, February 1 through Thursday, February 3, 2022. IRE brings the roofing and exteriors community

together to help them stay current on trends, see the largest selection of products and services, and connect with their peers. The goal of IRE is to help industry professionals grow their careers and find new ways to improve the way they do business.

During the three-day event, attendees will connect with their peers while experiencing a full range of educational sessions and activities. The 2022 International Roofing Expo will feature:

- IRE conference program with 45 sessions
- Keynote session featuring Reid Ribble, NRCA CEO
- Hundreds of the top suppliers and manufacturers
- Exhibitor-presented seminars taught on the show floor
- Dedicated windows and siding pavilion and education theater
- Exhibitor product clinics featuring live demonstrations
- Exhibit hall product showcase
- Outdoor exhibits and special events
- NRCA training classes

Attendees who purchase a Conference Super Pass will have access to 45 conference sessions, more than 20 show floor educational sessions, the exhibit hall, the keynote session, and the welcome party. The Expo Hall Pass includes access to the exhibit hall, more than 20 show floor educational sessions, and the keynote session. In addition, attendees can participate in NRCA special events and training classes for an additional fee.

For more information, contact: www.theroofingexpo.com. **CP**



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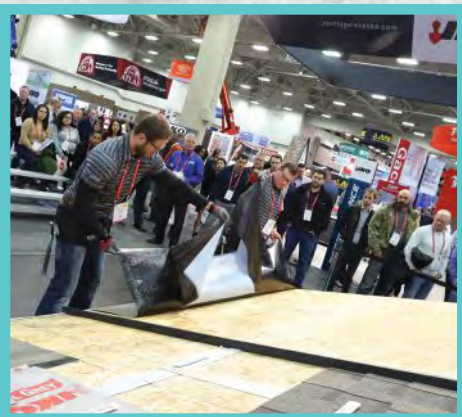


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Upcoming Events

JANUARY 17–20 WORLD OF CONCRETE

Las Vegas Convention Center — Las Vegas, NV

Sponsored By: Informa

Features: World of Concrete (WOC) has been serving the global concrete and masonry construction industries for 46 years. The event connects and educates buyers and sellers through live and digital events throughout the year. The goal of WOC is to provide this important community with the connections, intelligence, and opportunities that help customers grow, do business, and make informed business decisions.

More Info: www.worldofconcrete.com

FEBRUARY 1–3 INTERNATIONAL ROOFING EXPO

Ernest N. Morial Convention Center — New Orleans, LA

Sponsored By: National Roofing Contractors Association (NRCA)

Features: The International Roofing Expo (IRE) is the premier event for both the commercial and residential roofing and exterior construction industries. The IRE brings the professional community together to help them stay current on trending knowledge and to see the largest selection of products and services. The event helps professionals improve their business through education, exhibitions, and networking.

More Info: www.theroofingexpo.com

FEBRUARY 28–MARCH 3 SPRAYFOAM 2022 CONVENTION & EXPO

Henry B. Gonzalez Convention Center — San Antonio, TX

Sponsored By: Spray Polyurethane Foam Alliance (SPFA)

Features: The largest annual convention and trade show in the United States dedicated to spray polyurethane foam (SPF), the Sprayfoam Show, brings together industry participants in insulation, roofing, specialty applications, and related equipment. The Sprayfoam Show offers educational sessions, exhibits hall, the SPFA professional certification program, the annual golf tournament, VIP events, and an entertainment-filled close-out event party. Attendees can also explore the latest developments in SPF, including solutions for maximizing energy efficiency and achieving zero net energy in residential and commercial building projects.

More Info: www.sprayfoam.org/sprayfoam2022

MARCH 6–10 AMPP ANNUAL CONFERENCE + EXPO 2022

Henry B. Gonzalez Convention Center — San Antonio, TX

Sponsored By: AMPP

Features: AMPP Annual Conference + Expo is the leading global source of knowledge, innovation, networking, and collaboration for those in the coatings and corrosion industry. This event combines the best of CORROSION and Coatings+, bringing together corrosion and coatings professionals at the leading industry event — a brand new event unrivaled in the industries. Expect a robust program featuring new technical sessions, standards and administrative meetings, networking events, and a full exposition with select content available on demand following the event.

More Info: <https://ace.ampp.org>

APRIL 22 COATING SOCIETY OF THE HOUSTON AREA TRADE SHOW 2022

Pasadena Convention Center — Pasadena, TX

Sponsored By: Coating Society of the Houston Area

Features: The Coating Society of the Houston Area Trade Show 2022 grants admission to access the more than 70 exhibits, a technical program, and a free live band. Adjacent to the Trade Show is a Demo Fair where visitors can discover the latest coating industry technologies and see products, services, and equipment in action. Door prizes such as yeti coolers, fishing poles, and more will be given out throughout the event. Door prize tickets will be available for \$30 and include lunch provided to exhibitors and early arrivals.

More Info: www.coatingsocietyofhouston.org/tradeshow

JUNE 12–15 ACE22

Henry B. Gonzalez Convention Center — San Antonio, TX

Sponsored By: American Water Works Association (AWWA)

Features: After two years, AWWA is thrilled to be returning to an in-person format where water sector professionals can come together and learn, connect, and be inspired to solve today's global water challenges. And for those who are not able to be physically present, the event will include a hybrid feature where content from the most essential tracks is streamed. Annual Conference and Expo (ACE) 22 provides opportunities to connect with global water experts in every segment of the water sector with events such as the Water Industry Luncheon or pre-conference workshops that provide hands-on learning experiences.

More Info: www.awwa.org/ace

The information for these events was accurate at the time of publication.



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Project: 3 MG Water Storage Tank Coating, Cleaning, Coating, Repairs and Structural Alterations

Sample Project

BidID: 6550766
 Project Number: 19-229-B5
 Owner: Ambridge Water Authority
 Date Posted: 11/18/2021
 Cost Estimate: \$1,100,000
 Stage: Bid
 Type of Contract: Painting
 Location: Ambridge, PA 15003
 Submittal Date: 12/17/2021
 Project Size: (1) 3MG water tank

EDITOR NOTES

This project involves interior and exterior surface preparation of a 3MG potable water storage tank.

The project includes a lump sum item for abrasive blast-cleaning interior surfaces to Near White (SSPC-SP 10/NACE NO. 2) and coating application.

The project also includes a lump sum item for abrasive blast-cleaning exterior surfaces to Near White (SSPC-SP 10/NACE NO. 2) and coating application.

The project also includes a lump sum item for concrete ring wall cleaning and coating.

Work includes a one year anniversary inspection and touch-up.

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- » Awarded a \$673,714 project in May 2020
- » Awarded a \$677,554 project in May 2020
- » Awarded an \$89,750 project in April 2020
- » Awarded a \$328,000 in February 2020

TOTAL WON: \$2,290,518



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Drain Cover Art

By Ryan Tilly, Digital Brand Manager for Michigan Specialty Coatings

Much like a bridge during the wintertime, air circulating around an object rather than just on top will change the speed with which things occur (the “thing” in this case is drying time). Try using a bucket to help speed up the drying time of the coating on your floor drain cover. Place the cover on top of an upside down bucket, coat the drain, and let it cure. This helps not only to get the drain out of the way of the rest of the work going on, but it also helps keep the drain away from any lower level dirt or dust that might contaminate the curing coating. Make that cover art!

From the archives: This trick was originally published in the November 2016 issue of CoatingsPro. Does it still hold up? **CP**



Photo courtesy of Michigan Specialty Coatings

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On Attracting Talent, Focusing, and Being Successful

20 YEARS
2 DECADES OF COVERAGE

By Ron Puszynski, President and Co-Founder of Concare Inc.

Our industry is a craft. Unlike an assembly line, which is very rote and repetitive, there's a lot of craft to what we do. When you get into a project and there's some wrinkle there that you didn't expect, how you handle it, deal with it, and overcome it, is really, really important. You need some creativity when you're doing that.

But, at the end of the day, we have to be able to attract people to that part of the business. The job isn't just labor — lifting, moving, and things like that. You're really creating something that is special.

I get no greater pride than looking at a [transformed] facility. It's amazing. If you can't get a sense of pride out of that, then you might be in the wrong business. And that's really the way to capture the imagination of people who may not be for college but may have an interest in having a craft that they can count on for their future.

Labor- and Time-Saving Methods

For the next 20 years, we're going to have to be aware and cognizant of adding labor-saving methods, equipment, materials, etc., to our repertoire. The way that the labor market is today, it's going to be a challenge to find the talent that's needed, to train them and get them up to speed, and then to get them to be productive.

Many of our installers have 15-plus years of experience. Well, you can't buy that off the street. You can't just hire someone and he/she has that, so to develop those things is really important. Being able not only to save labor and make it more efficient to do jobs but also to preserve the labor force that you have right now is going to be a huge trend over the next 20 years.

In terms of materials, we have seen some things that have been developed to



Photo courtesy of the author.

where the application can be a one-step process. Thereby, you save not only the direct labor of application, but you also save the associated costs of that labor, such as expediting material and equipment to the job, travel costs, etc. The fewer days you can spend on a site, the sooner you can complete the turnaround for the customer and the quicker you can make your schedule available to do the next project for your internal customer base as well.

How to Stand Out

I see a lot of people who are new in the industry who start out doing their buddy's garage floor, somebody's basement, or a small commercial space. They're doing a coating over here, they're doing staining over there, they're doing something else over there. They're not really focused on anything that could make them successful. I know this because when a project comes up, they're not the first person that somebody thinks of; instead, they're offering a mishmash of services.

Once you decide what you want to be, don't waver from it. Because there are all kinds of ways to do one application, system, and type of product, and you need to dive in 100 percent. And you can't get distracted when somebody says, "Hey, do you mind

coming over here and doing Y for me?" Or, "Can you do this for me?" The answer should be no if it doesn't align with what you do.

Learn that one thing as well as you can, continue learning it every single day, and get so good at it that whenever someone asks, "Do you know anybody that does X?," your name always comes up first.

Additionally, if you're getting into especially demanding applications, such as industrial plants, production plants, and food and beverage plants, then you definitely want to make sure that you focus on the end result or the end expectation. And I don't mean the result on the day you finish that project.

That means, don't start by asking a potential client, "What color do you want it?" Start asking them, "Alright, in two years, what are you going to be doing here? Are you going to run forklifts on it? Foot traffic? Pallet jacks? Are you going to drop chemicals on it? Are you going to have hot-water steam cleaning in here? What are you going to do, and what do you expect it to hold up to?" Because if you start there, you can back down the line into what you would recommend for them at the very beginning.

I've seen newcomers, including specifiers, find out that a brand name product isn't suitable for what the customer wants to do in that space. A lot of times, newcomers make that mistake. They recommend, suggest, or quote something without knowing enough to dig into the final use of their application. When they do that, they become unsuccessful because now they've got failure. And you don't want to be known for that, for sure. **CP**

This article comes from an anniversary-related podcast interview. The full interview is available online at www.coatingspromag.com/podcasts.

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