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THE VOICE OF SSPC
VOLUME 36, NUMBER 10 OCTOBER 2019

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Printed in the USA / www.paintsquare.com

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Recently Issued or Revised SSPC Consensus Documents Concerning Concrete

A revision to **SSPC-SP 13, NACE No. 6, "Surface Preparation of Concrete,"** was issued in May of 2018. The basic content of the standard, first issued in 2003, is still relevant, but it has been updated with pertinent companion standards and technology from technical papers.

The revised standard also contains mandatory minimum acceptance criteria, which were located in a non-mandatory appendix in the 2003 version. Specific responsibilities for establishing acceptance criteria are still assigned to the specifier (for example, the procurement documents are to include requirements and acceptance criteria for determination of moisture content, if that is a contractual concern).

To use this standard, specifiers and installers determine whether the service environment for the flooring installation is "light" or "severe," and then select an appropriate method for surface preparation of the concrete substrate, considering its condition and the suitability of the profile produced by the selected method for the flooring system to be applied.

The standard provides a sequence of procedures for evaluating a concrete surface to determine its condition prior to surface preparation, for selecting the method of surface preparation to be used, and for inspection of the prepared surface prior to coating application. The reference list and appendices contain supplemental information and commentary about concrete cure, repair of surface defects and imperfections, identification and removal of contaminants, evaluating surface profile and testing for concrete tensile strength and substrate moisture content prior to coating application.

SSPC-CTS 1, "Classification of Concrete Coating Finish Textures," is a new standard first issued in November 2018. When used in conjunction with a set of tactile comparators, the standard establishes a standard terminology that can be used by owners, specifiers and concrete flooring installers to describe various coating surface textures so that the contracting parties can agree on a desired level of coating texture. (See "Focus On: Concrete Coating Finish Texture—SSPC Standard for Texture Categories," p. 11.) This standard contains a classification system for eight textures of finish coats of applied concrete flooring systems, using four coating profile ranges measured via a surface profile probe gauge, and two shapes of broadcast aggregate (rounded and angular).

Courtesy of SSPC.

The tactile texture comparator set includes standardized coupons representing each texture and aggregate level. Concrete floor coatings were applied over smooth panels to ensure that the texture of the coupons was created only by the coatings themselves. The coupons may be used to help determine the degree of coating texture required for a flooring project; determine when an installed flooring system has excess wear and requires a surface texture "refresh"; and provide the installation contractor with a tactile representation of the intended coating texture.

Issued in September 2019, **SSPC Guide 26, "Concrete Floor Coating Selection Guide,"** is a new guide developed to provide specifiers, owners and installers with descriptions of generic floor-coating systems for specific service environments, including the basic benefits and limitations of the most widely used polymer chemistries incorporated into these systems.

Flooring-system selection is dictated by several factors, including existing substrate conditions, performance requirements, installation restrictions and aesthetics. Criteria to assist in evaluating the various systems are included. This guide consolidates selection criteria and information from several existing guides into a single document intended to be a reference for specifiers of concrete flooring systems.

Also issued in September 2019, **SSPC-Guide 27, "Recommended Performance Properties for Liquid-Applied Organic Polymeric Coatings and Linings for Concrete Structures in Municipal Wastewater Facilities,"** is a revision of SSPC-Paint 44 of the same title. This revision converted the former prescriptive standard Paint 44 into a guidance document, changing requirements into recommendations.

Guide 27 provides recommendations for laboratory performance testing and evaluation

criteria for concrete coatings intended for defined service environments within municipal wastewater-treatment facilities. It can be used by coating specifiers evaluating performance properties prior to developing a project specification, as well as by coating manufacturers performing in-house laboratory testing of their products.

A new table including recommendations for field-performance properties, as evaluated by resistance to specific damage mechanisms, has also been added. Benchmarks for evaluation include adhesion per ASTM D7234, film discontinuity testing per ASTM D4787 and solvent rub testing for coating cure per ASTM D5402.

Finally, three new standards for surface cleanliness of concrete prepared by dry abrasive blast-cleaning have been approved for publication in September 2019:

- **SSPC-SP CAB I, "Abrasive Blast-Cleaning of Concrete and Cementitious Materials—Thorough Blast-Cleaning"**;
- **SSPC-SP CAB 2, "Abrasive Blast-Cleaning of Concrete and Cementitious Materials—Intermediate Blast Cleaning"**; and
- **SSPC-SP CAB 3, "Abrasive Blast-Cleaning of Concrete and Cementitious Materials—Brush Blast-Cleaning."**

The new standards were developed to define levels of surface cleanliness for blast-cleaned concrete substrates, parallel to the SSPC/NACE joint blast-cleaning standards for steel substrates. These standards assist owners and specifiers who develop project requirements that involve blast-cleaning of concrete to a standard defined level of cleanliness. They provide contractors and inspectors with benchmarks and acceptance criteria for each of three specified levels of cleanliness.

The standards include requirements for removal of unsound surface deposits, efflorescence, laitance and other visible surface contaminants; the degree to which existing coatings must be removed; and the degree to which surface air voids must be opened. Surface cleanliness is evaluated visually prior to coating application. As with blast-cleaning standards for steel substrates, the standards also contain requirements for materials and methods used in the cleaning process.

SSPC Concrete Coating Courses

To bolster its current lineup of training options for concrete coating applicators, SSPC has added the new **Concrete Coating Application Specialist (CCAS)** program.

CCAS Level I provides a comprehensive overview and practical training for craftworker personnel who wish to be trained and certified in the application of coatings on concrete surfaces. The course will offer hands-on exercises that focus on repair of deteriorated concrete, surface preparation of concrete, and coating application of concrete. After the completion of this training course, craftworker personnel should be able to demonstrate proper preparation and coating application methods on concrete coating projects.

CCAS Level 2 is designed for contractor personnel who wish to obtain certification, or others who wish to learn about surface preparation and coating application on concrete surfaces. It covers principles of structural concrete, wastewater and manhole, and flooring systems.

Other SSPC courses related to concrete include:

- **Floor Coating Basics (C10)**, which outlines concrete components, coating and surface types, and surface preparation and substrate repair techniques;
- **Concrete Coating Basics (CCB)**, a practical and comprehensive overview for those who are new to or have experience in the concrete coating industry;
- **Concrete Coating Inspector (CCI) program**, which thoroughly trains individuals in the proper methods of inspecting surface preparation and coating application on industrial concrete structures and facilities; and
- **Plural-Component Application for Polyureas and High-Solids Coatings (PLURAL)**, which covers protective coatings application by airless spray using plural-component spray equipment.

For more information, visit sspc.org/training-certification-coating-concrete-courses.

CONCRETE COATING PUBLICATIONS

SSPC, the International Concrete Repair Institute, the American Concrete Institute and other industry organizations have published reference materials on concrete coatings, including:

- **SSPC *Concrete Coating Texture Standard and Coupon Set***, which establishes a classification system for textures of floor coating system finish coats and is used in conjunction with a set of tactile comparators that establish a standard terminology that can be used by owners, specifiers and concrete flooring installers;
- **SSPC *Standards and Best Practices for Surface Preparation and Coating Application of Concrete***, a compilation of SSPC standards, presentations and technical articles on the subject;
- **ICRI *Technical Guideline No. 03732***, a document and comparator set that provides both a written and visual guide to selecting concrete surface preparation methods prior to coating and lining application;
- **ACI *Concrete Repair Manual***, a two-volume set that is the industry's most complete collection of concrete repair information, with more than 2,000 pages of standards, guides and other technical documents from the American Concrete Institute, ASTM International, ICRI, SSPC and other associations;
- **SSPC *Concrete Coating Assessment Guide***, a field tool for concrete coating professionals assessing concrete coating system conditions prior to maintenance and repair coating; and
- **SSPC *Fundamentals of Cleaning and Coating Concrete Set***, a thorough examination of concrete's physical and chemical properties, proper procedures and the causes and preventions of concrete deterioration.

These reference materials and others can be accessed online via the SSPC Marketplace at sspc.org/marketplace.

OSHA Announces Beryllium Rule Amendment

The U.S. Department of Labor's Occupational Safety and Health Administration finalized a June 2017 proposal to revise the beryllium standards for construction and shipyards.

OSHA said in the final rule, which was published Sept. 30, that the agency did not roll out the proposal in order to revoke all ancillary provisions, but has extended compliance dates to September 2020 to account for the revising or removal of certain provisions.

According to Reuters, the recently released bulletin indicates that protections for construction and shipyard industries will remain in place, but that the administration will develop a proposal to further adjust the rule requirements for both industries. Protections in question were included in a late Obama-era rule to help limit worker exposure to beryllium.

Every year, roughly 11,500 shipyard and construction workers are exposed to beryllium dust. The new provisions were created in the hope that four lives could be saved every year, though these measures will cost each industry $1,000 a worker for the same time period. Reuters also went on to report that critics have voiced opposition to the measures, noting that workers were already protected and that the additional costs were unfair.

In the June 2017 proposed rule, the measure looked to cut ancillary provisions, including medical surveillance, written exposure control plans and personal protective equipment, among other matters.

"OSHA finds that other OSHA standards do not duplicate the requirements of the ancillary provisions in the beryllium standards for construction and shipyards in their entirety," OSHA wrote. "Thus revoking all of the ancillary provisions and leaving only the PEL and STEL would be inconsistent with OSHA's statutory mandate to protect workers from the demonstrated significant risks of material impairment of health resulting from exposure to beryllium and beryllium compounds."

OSHA is also still enforcing the permissible exposure limit of 0.2 micrograms per cubic meter of air, along with the short-term exposure limit of 2 micrograms per cubic meter of air, reported *Safety+Health* magazine.

"In a forthcoming rulemaking, OSHA will publish a proposal to amend the beryllium standards for construction and shipyards by more appropriately tailoring the requirements of the standards to the exposures in these industries," the agency wrote. "The proposed changes would maintain safety and health protections for workers, facilitate compliance with the standards and increase cost savings."

MartinPrescott / Getty Images

New OSHA Respirator Fit Testing Protocols Approved

OSHA also issued a final rule, which went into effect on Sept. 26, that provides employers with two new fit testing protocols for ensuring that employees' respirators fit properly.

The new protocols are the modified ambient aerosol condensation nuclei counter (CNC) quantitative fit testing protocol for full-facepiece and half-mask elastomeric respirators, and the modified ambient aerosol CNC quantitative fit testing protocol for filtering facepiece respirators.

Both protocols are variations of the original OSHA-approved ambient aerosol CNC protocol, but have fewer test exercises, shorter exercise duration and a more streamlined sampling sequence.

These two quantitative methods add to the four existing in Appendix A of OSHA's Respiratory Protection Standard, which contains mandatory respirator fit-testing protocols that employers must choose from to protect employees from hazardous airborne contaminants. The rule does not require employers in general industries, shipyard employment and construction to update or replace their current fit testing methods, and does not impose additional costs.

For more information, visit osha.gov.

RPM Reports Net Sales, Income Increase

RPM International Inc. (Medina, Ohio), a holding company that focuses on specialty coatings, sealants and building materials, achieved both a net sales increase and increase in net income in the first quarter of its 2020 fiscal year, as revealed in an earnings report issued Oct. 2.

According to RPM, the firm's Q1, which ended Aug. 31, saw a record $1.47 billion in sales, up from $1.46 billion in the same quarter last year. Net income was also up 52.2%, totaling $106.2 million in comparison to the $69.8 million reported a year ago.

"We continued to experience the benefits of the plant rationalization, manufacturing improvements and center-led procurement initiatives of our 2020 MAP to Growth operating improvement plan during the quarter," stated RPM chairman and CEO Frank C. Sullivan.

In June, RPM announced that Michael H. Sullivan had joined the company as Vice President of Operations and Chief Restructuring Officer and would be overseeing the company's 2020 MAP Growth operating improvement initiative.

Since last year's first-quarter reports, RPM has realigned the business into four reportable segments from its previous three segments. The new segments are Construction Products Group, Performance Coatings Group, Consumer Group and Specialty Products Group.

"The objectives of this realignment are to position the business for accelerated growth and to provide our investors with greater visibility into the business and better comparability among our peers," stated Sullivan. "Starting with the current quarter of fiscal 2020, we are reporting our results under this four-segment structure and are providing comparable fiscal 2019 financials that have been recast to reflect the effect of this realignment."

RPM's Construction Products Group saw a 3.6% increase in net sales in Q1 2020 compared to the recast first-quarter from 2019, including 0.7% organic growth and 4.4% growth attributed to acquisitions. Income before taxes for the segment was $82.7 million, up from $65 million the year before.

The Performance Coatings Group saw an increase in net sales to $297.2 million, from $296.4 million in the 2019 Q1 recast. RPM attributes a 0.4% increase in net sales for the group to organic growth, and 1.8% to acquisitions. IBT for the group was also up from the prior year, at $28.1 million in Q1 2020, in comparison with $8.3 million in Q1 2019.

Following suit, the Consumer Group also saw growth in net sales to $479.3 million, from $477.4 million in 2019's first quarter. RPM attributes a 0.1% increase in net sales for the group to organic growth, and 1.3% to acquisitions. IBT for the group was $59.2 million, up from $51 million the prior year.

However, Specialty Products Group saw a decrease in net sales, reporting $160.1 million in Q1 2020 in comparison to 2019 Q1's report of $168.7 million. RPM attributes a 4.3% decrease in net sales for the group to organic growth, while foreign currency translation also reduced sales by 0.8%. IBT for the group was slightly down from the prior year, at $23.3 million compared to $23.8 million in Q1 2019.

RPM attributed the decline in the group for Q1 2020 to sluggish demands in the OEM, as well as manufacturing and international markets it serves, which ultimately impacted the top line. Although, Sullivan adds that the adjusted consolidated earnings before interest and taxes margins improved by 230 basis points and adjusted EBIT increased by $2.2 million due to good cost discipline, manufacturing yield improvements and restructuring activities from RPM's 2020 MAP to Growth program.

As reported in July, RPM plans to affirm the full-year fiscal 2020 guidance, using the MAP to Growth objective to return $1.5 billion in capital to stockholders by May 31, 2021.

"Despite the tightening of our revenue growth assumption, we expect to leverage the positive momentum of the 2020 MAP to Growth operating improvement plan to our bottom-line results," said Sullivan. "Therefore, we are maintaining our projected adjusted EBIT growth in the 20% to 24% range, as previously reported in July. We expect this to result in adjusted diluted EPS between $3.30 and $3.42 for fiscal 2020."

The company estimates that sales will continue to rise 2% to 3% in the second quarter of 2020.

PAINTSQUARE COMMENTS

designer491 / Getty Images

In Response to, "OSHA Announces Beryllium Rule Amendment" PaintSquare News, Oct. 1

Debate over risks posed by beryllium found in abrasive media was reignited after OSHA recently finalized its June 2017 proposal to revise the beryllium standard for construction and shipyards.

Nathan Bjornson:
"As an alternative to silica sand, some companies use coal slag, which contains beryllium. Make no mistake—no dust is good to breathe. You trade one hazard for another. There are other alternatives and methods of surface preparation that are available."

Dominic DeAngelo:
"All abrasive media contains trace levels of beryllium. This has been documented. Unfortunately, OSHA continues to reference coal slag as an example due to the continuing war on coal. There has not been a single case of Be illness in the over 80-year history of abrasive blasting. We are fighting this attempt at unnecessary overregulation of our industry."

Michael Halliwell:
"I think part of the question being posed for media outside of slag deals with just how much of the Be is becoming airborne/respirable. As a comparable example for what is being asked: soil and natural waters contain asbestos fibers, a known carcinogen. However, the level and method of exposure to these fibers is not generally an issue, especially when compared to airborne occupational exposure (inhalation is the key exposure method and lung cancer the common carcinogenic outcome). If Be is present in all blasting media and represents a risk, then obtaining information on how much Be is released when using the media becomes quite relevant. Just because something is present does not necessarily mean it is an immediate safety concern."

Jeff Bogran:
"I believe any specific 'heavy metal' or other carcinogens and their presence has become moot with the 'fugitive emissions' (dust) rules sweeping corporate America. Our workers are as safe as they have ever been. Beryllium remains one of many health exposure concerns that have been taken care of by corporate risk managers, insurance companies and safety and environmental professionals."

Thomas Enger:
"Abrasive blasting creates inhalation hazards for the blaster as well as anyone within the zone of influence, no matter what kind of media you use. This industry must be keenly aware that a supplied air respirator must be used by the blaster as well as appropriate respiratory protection for employees within the zone of influence. While wet blasting significantly reduces inhalation hazards, it does not reduce dust exposure below the permissible exposure levels. Both dry and wet blasting require a NIOSH-approved supplied air respirator endorsed for abrasive blasting, period!"

Problem Solving Forum

paintsquare.com/psf

As a facility owner, how can I justify the cost of quality-control measures, such as third-party inspection, to upper management in my company?

Ronald Lewis, Corrosion Management Ltd.:
"Because repairing incorrectly used products costs a great deal more than doing the job correctly the first time ... We have experienced several examples that justify this comment, all involving splash-zone corrosion protection. Most repairs cannot be made in the tidal zone using the original coating products. So, this then

involves increased cost and technology using tidal zone and immersion service products and more expensive underwater application procedures."

David Lemke, Team Industries, Inc.:
Look at the "Investigating Failure" article from the December 2018 JPCL by Rob Lanterman, 'The Really Premature Coating Failure.' When your material is already rusting before erection at the site, this is a good example for why some inspection should have taken place before shipment."

What factors would justify coating stainless steel in water or wastewater service? What standards and methods apply?

Jeff Kim,
The Sherwin-Williams Company:
"You should coat SS if it will be exposed to severe immersion service. You should also coat SS to isolate [it] from other types of metals to prevent galvanic corrosion. Other reasons like color-coding may dictate coating as well. Prepare SS for coating per SSPC-SP 16."

Nicole de Varennes, IRISNDT:
"I've been a bit confused about this myself, as typically the process for material selection, in order of mild to aggressive conditions, would be as follows: carbon steel, coated carbon steel, stainless, high alloys (with rubber linings and fiberglass where applicable). If the stainless is not suitable for the service conditions, I don't see why, with the extra cost, it would be the material selected. I do agree that isolating stainless from dissimilar metals is required. But coating stainless for corrosion resistance does not make sense to me."

PAINT POLL

paintqsuare.com/poll

scanrail / Getty Images

Toward the end of July, President Donald J. Trump signed an order that would promote the expanded use of American-made iron and steel in federal projects. The "Buy American" platform is slated to push the domestic content threshold from 50% to 95%. Do you believe this will help to boost the U.S. industrial economy?

Yes. **65%**
No. **33%**
Other. **2%**

Gary Siler:
"Since federal projects are [only] a small fraction of steel usage, it will have little to no effect on the overall economy. However, this would steer U.S. taxpayers' dollars to American producers—a good step.

PAINTSQUARE NEWS TOP 10

paintsquare.com/news, Sept. 2–Oct. 6

1. **PPG Announces Investigation Resolution**
2. **OSHA Announces Beryllium Rule Amendment**
3. **EU Moves Forward with Titanium Dioxide Steps**
4. **Bridge Collapses in Taiwan, Killing 6**
5. **Tesla Faces Solar Panel-Related Lawsuits**
6. **World's First Commercial Nuclear Plant Defueled**
7. **New Sinkhole Found Near PA Pipeline**
8. **Bridge Removal Continues with Guillotine-Like Blades**
9. **Border Wall Construction Progresses**
10. **Panel Approves $100M Millennium Tower Fix**

Concrete Coating Finish Texture: SSPC Standard for Texture Categories

BY TOM MURPHY, VP MARKETING LLC

Although surface texture may be used as an aesthetic treatment, the primary reason for applying texture to a floor coating is to enhance traction and provide a safe working surface to meet the conditions of use. Uncoated concrete not only has a varying degree of texture but is also a slightly porous substrate. When concrete is protected with polymeric coatings or high-build flooring systems, water cannot be absorbed into the concrete—instead, it sits on top, resulting in a slippery surface.

The floor coating industry has always understood the importance of texture. Every floor coating manufacturer has a range of textures. They are frequently described as slip-resistant, antislip, non-slip, light texture, medium texture and aggressive texture, but there is no consistency across the industry. Unless you are holding the specific sample in your hand to see and feel the texture, you cannot be certain exactly how much texture to expect.

Earlier this year, SSPC announced the publication of SSPC-CTS 1, "Concrete Coating Texture Standard," created to define texture categories with a corresponding set of tactile comparator coupons to provide a common base of reference for specifiers, owners, contractors, coating manufacturers and maintenance personnel[1].

FACTORS AFFECTING SLIPPERINESS

Floor coating texture is only one way to control the traction and slipperiness of the floor. The coefficient of friction (COF) of a flooring surface itself will vary by the materials used to create a texture, including size, shape, distribution and hardness[2]. For example, angular aggregate tends to provide a higher COF than rounded aggregate with the same peak-to-trough average texture. The resin used will also impact the stiction of the surface. Rigid epoxies tend to be more slippery than flexible resins such as polyurea or polyurethane. The environmental conditions of a work surface will also significantly affect the traction of the floor. Most slip-and-fall incidents occur on a wet or contaminated surface[3]. Temperature and humidity changes may create a damp surface. Fine particulates can hide a texture and create a slippery surface.

The individual or vehicle using the floor area also plays a role in defining the degree of texture and COF required for safety. Pliable footwear, for example, improves traction on a textured floor by increasing the contact surface area and maximizing the friction between the two interfacing surfaces. The mechanics of the contact plays a significant role in slipperiness[4]. User weight, velocity, directional vector, gait and total contact surface area all play a role.

All of these factors must be considered when defining the flooring system COF required for a specific work area. Maintaining the original safe COF during operating conditions requires a defined maintenance program and user education.

MEASURING SLIP RESISTANCE

The ASTM F13 committee on Pedestrian/Walkway Safety and Footwear oversees the development and approval of the ASTM standards and methods related to slip resistance. Historically, numerous instruments were used to measure slip resistance (tribometry), including the James Machine (ASTM D2047)[5] and the Horizontal Pull Slipmeter (ASTM F609)[6], neither of which is recommended for wet or contaminated surfaces. Other proprietary instruments are recommended for wet conditions, including Brungraber (ASTM F1677)[7] and English XL (ASTM F1679)[8], but these standards have been withdrawn and replaced by ASTM F2508[9], which validates tribometers using reference surfaces[10]. Other organizations and standards exist, including National Floor Safety Institute (NFSI), which created the ANSI B101 series of standards,

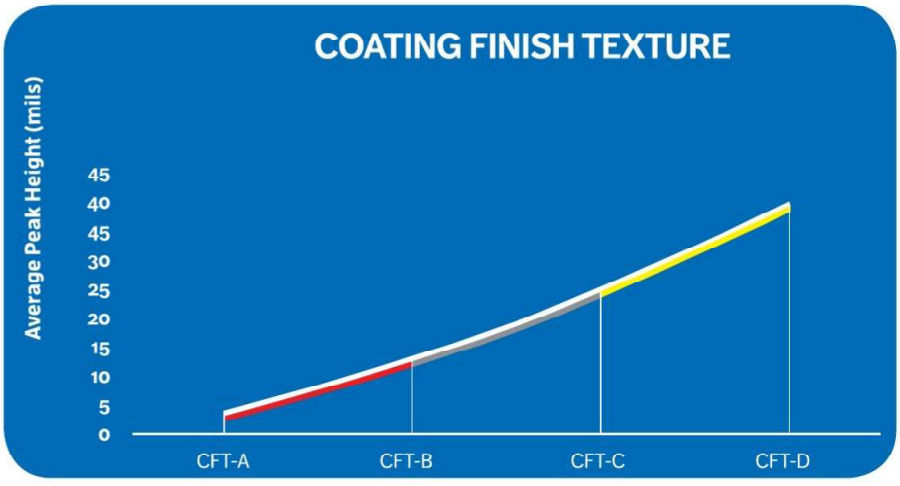

Fig. 1: Concrete coating finish texture designations. Figure courtesy of the author.

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and specifically B101.3[11] based on the proprietary BOT-3000 instrument. In the U.K., the Pendulum Test (BS 7976)[12] is the preferred method of assessing floors and roads for slipperiness, while in Germany and other E.U. countries, the Ramp Test (DIN 51097[13] and DIN 51130[14]) is used to classify products for slipperiness[15]. All of these methods are effective to a degree, but do not provide the same COF values. It is therefore important to identify the instrument of measurement along with the required COF when specifying a slip-resistant surface. Floor coating system manufacturers can incorporate the new SSPC CFT categories in combination with as-new measured COF to ensure that specifiers clearly understand the degree of texture and performance expectations of their coating systems.

DEFINING COATING FINISH TEXTURE

A floor coating system can achieve a textured finished through the system design, the underlying substrate and/or the application technique. Coating system manufacturers engineer their systems and installation procedures to produce a desired degree of texture. The system components that contribute to the coating finish texture include the resin itself, fillers and aggregates. The viscosity, cure rate, the quantity of fillers, and the method of application of both the resin and the aggregates will affect the coating finish texture. The installation conditions also contribute to the coating finish texture.

SMOOTH FINISHES

All floor coating systems have a texture. Smooth coatings have a minimum texture that is generally defined by light reflectance. The gloss level of a coating is influenced by surface roughness. The protrusion of particles through the resin or surface irregularities causes the diffraction of light and a visible dullness. Where the surface is smoother and the angular light is reflected unhindered, a glossy appearance is produced, not unlike a polished glass surface.

TEXTURED FINISHES

Textured coatings can be segmented into uniformly textured and randomly textured. Uniform texture describes an application with peaks and valleys generally consistent throughout the finished coating system. Typically, these systems are applied using trowel or broadcast-to-refusal applications. Stipple finishes are uniformly textured profiles created by the resin itself or the application method of that coating. Stipple finishes are considered to be more rounded and rolling hills rather than the more aggressive peaks created by the addition of aggregate. Random textures are achieved by light (not-to-refusal) aggregate broadcast.

Table 1: Summary of Coating Finish Textures.

Designation	Finish Texture Average Peak Height
CFT-A	2–6 mils
CFT-B	7–18 mils
CFT-C	19–30 mils
CFT-D	31–50 mils

UNIFORM TEXTURE

The primary factor influencing peak density for textured coatings with uniform aggregate distribution is the aggregate size and blend. In general, small aggregates will provide lower texture with more frequent peaks, and larger aggregates will achieve higher texture with fewer peaks per unit area. Manufacturers of coating systems will design these aggregate blends in combination with topcoat application thickness to achieve the desired texture designation as indicated in Table I.

The SSPC Concrete Coating Finish Texture Standard categorizes degrees of textures to improve the communication process for system design, specification, installation and maintenance of textured floor coating systems. The categories define uniformly textured finishes to capture the majority of interior floor coating applications. These categories are based upon the peak-height values as measured by a specialized surface profile gauge. The categories are only concerned with the coating finish texture regardless of the materials used, system thickness or method of installation. Each category is sufficiently broad to capture the natural variability within a field installation.

Coating Finish Texture A (CFT-A): These coating finishes are intentionally designed to provide a slight surface texture. The texture itself is achieved through the physical properties of the resin, an underlying texture of the substrate, a flat (flake) aggregate or a fine aggregate contained within the coating. Measured texture ranges from 2–6 mils.

Coating Finish Texture B (CFT-B): These coating finishes are defined as having a heavier texture with thixotropic resin and/or finer mesh aggregate, either rounded or angular in nature. Measured texture ranges from 7–18 mils.

Coating Finish Texture C (CFT-C): These coating finishes are designed to provide more aggressive texture, especially for wet environments. Most frequently, these systems are designed with sub-rounded or angular aggregate. Measured texture ranges from 19–30 mils.

Coating Finish Texture D (CFT-D): These coating finishes are designed for environments requiring aggressive texture, generally for conditions where deposition of heavy contamination between cleanings is expected. Most frequently, large angular aggregate is used. Measured texture ranges from 31–50 mils.

Coating Finish Texture with Average Peak Heights greater than 50 mils: These are classified as greater than >CFT-D. These textures are considered extreme and are typically used in specialty applications.

Although this standard defines distinct categories of texture, each designation captures a broad range of measured peak heights. Taken together, these ranges represent the entire continuum of texture represented in Figure I (p. 11).

RANDOM TEXTURE

Random texture is a result of arbitrary and/or unsaturated distribution of aggregate in various aesthetic applications of widely dispersed decorative flakes or aggressive aggregate applications for vehicular traffic. Aggregate size, shape and distribution vary significantly and will dictate the final texture achieved. Because of the random nature of this installation, it is difficult to describe and specify. Therefore, detailing this type of texture application must clearly specify the following variables.

1. Aggregate Shape: Flat, angular, semi-angular, rounded.
2. Aggregate size and range.
3. Distribution: Average particles per measurable defined area or aggregate volume/mass per square feet or square meters.
4. Acceptable variability.

5. Maximum contiguous area with no aggregate.
6. Minimum measurable peaks/aggregates within a 6-inch-square sample; average peaks over five to 10 sample areas.

A random textured coating application will be extremely variable. It is therefore important that all specifications for this type of texture be confirmed with samples and/or mock-up applications to confirm desired texture.

INSTALLATION VARIABILITY

Concrete coating products are hand-applied finishes subject to minor variations in surface finish. The degree of acceptable measured surface irregularity is a direct function of the type of texture selected as detailed in this standard:

- Smooth application producing the most consistent surface texture; followed by;
- Uniform texture installed with a full aggregate broadcast or consistent stipple finish; and
- Random distribution texture producing the widest variance, which is a direct result of the installation process.

The environmental conditions during installation and cure significantly affect the surface texture and final appearance. Fluctuation in ambient air and substrate temperature, relative humidity and airflow on a day-to-day basis will alter resin viscosity and cure rate. Cooler temperatures tend to increase viscosity and set times, while warmer temperatures decrease viscosity and speed up set times. Variable conditions during placement mandate changes in application timing, alter the resin's ability to incorporate aggregate and increase or decrease the resin's ability to level and fill voids. Relative uniformity of the completed surface is significantly improved when materials are installed in a controlled environment.

A properly installed concrete coating will have a visually uniform appearance, but sophisticated test instrumentation will reveal a statistical difference from one area to another. The quantitative test results must be interpreted with a measure of common sense that takes into account the circumstances under which the floor was produced.

Adequate provision should be made throughout the selection and installation process to ensure the constructed product can meet or exceed the project requirements. Variations in concrete surface profile may affect the coating finish texture and should be brought to the attention of the customer as part of pre-contract discussions. Ideally, a site mock-up installed under actual site conditions should be constructed and signed off on by all parties prior to the full installation being undertaken.

PRACTICAL APPLICATION

This standard is not intended to be used as an analytical compliance verification tool. Tactile texture comparator sets (Fig. 2, p. 14) have been produced to provide a simple and efficient means of selecting, communicating and comparing the desired texture for an application. Floor coating manufacturers can utilize these comparator coupons to define their individual systems based upon universally accepted quantification categories.

The samples used to produce the production molds for the tactile comparator coupon sets were measured using ASTM D4417, Method B[16] to determine the average height of the peaks. Because of the variable nature of the textured surface, the averages of 10 readings for each measured location were used to determine the average peak height. The textures of the samples were then verified by several laboratories. Molds of the verified sample textures were made for production of comparator coupons, and coupons were produced using hard plastic. Because molds wear out, they will be quality-controlled over time. New molds will be produced when the coupon textures vary from the original retained samples by more than 10%.

Each CFT category is represented with rounded and angular aggregates for visual and tactile comparison. Specifiers and owners can use these tactile texture comparators to identify the degree of texture desired. System manufacturers can correlate the CFT category for their floor coating systems with reported slip-resistant COF values. Floor coating installers can use the comparators to gauge their installation. And finally, facility-maintenance

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Fig. 2: Tactile texture comparator sets have been produced to provide a simple and efficient means of selecting, communicating and comparing the desired texture for an application. Photo courtesy of SSPC.

personnel can use the comparators to ensure proper cleaning procedures and monitor the floor for excess wear.

SUMMARY

The SSPC Concrete Coating Texture Standard improves the communication process of defining texture for all stakeholders of a floor coating system. In combination with a coating system's measured COF, this standard provides a means of effectively selecting, installing and sustaining the appropriate textured finish.

ABOUT THE AUTHOR

Tom Murphy provides consulting and inspection services to the floor coating industry and is an active participant in driving industry standards and training through international associations. He has a master's degree in biochemistry from Creighton University and an MBA from the Keller Graduate School of Business Management. Murphy worked with SSPC to establish the industry's third-party training and certification for installation and inspection of seamless floor coatings (SSPC-C 10/C 11) and also chairs and participates on several committees associated with the building guides and standards for concrete repair, surface preparation and protection. He is a founding member of Resin Flooring International, an international organization whose goal is to raise the quality of seamless flooring through trade training and licensing.

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Fish Eyes:

Lining Failure of Aquarium Tanks

BY JAYSON L. HELSEL, PCS, KTA-TATOR, INC.

An aquarium facility installed three factory-coated aluminum tanks to hold supply water for larger tanks. The welded aluminum tanks were specified to be self-standing construction with tank bottoms and sides structurally reinforced to prevent deflection when full. The tanks and all components were fabricated from all aluminum materials. The approximate size of each tank was 8-feet-by-8-feet-by-5-feet in depth. The typical operating volume was about 2,200 gallons.

The complete tank assemblies, including attachments and appurtenances, were to be coated with an epoxy powder-coat system certified as USDA food-grade suitable for aquatic animals. The coating thickness was not specified. When operating, the water contained in the tanks was specified by the following parameters:

- pH of 7 +/- 0.5;
- Conductivity range of 900 to 1,100; and
- Total hardness of 120 ppm.

Recent test results of other soluble ion contents showed chloride at 117.6 ppm, nitrate at 48.8 ppm and sulfate at 30 ppm.

About a year after the tanks were put into service, the linings began to blister in spot locations, and corrosion of the aluminum substrate was reported. Some failure was observed in each of the tanks, and lining repairs were initially made using a sheet material. When it became obvious that the lining repairs were not performing, a coatings consultant was contacted to investigate the lining and corrosion issues, and recommend options for repair. One of the tanks was drained in preparation for the visit.

The interior of the empty tank was examined to determine the condition of the lining along with obtaining coating-thickness measurements and assessing coating adhesion. Metal thickness measurements of the tank walls were also conducted to evaluate whether or not the observed corrosion was affecting the structural integrity of the tanks.

The tank lining was green/blue in color throughout. There were several areas of the interior where the lining had been repaired using a sheet material that was lighter in color (Fig. 1). The repair areas were typically rectangular in shape and ranged in size from approximately 4 square inches to 18 square inches. The repair patches were all failing to some degree as evidenced by lifting from the original lining along many of the edges and obvious blistering at most repair areas (Fig. 2).

Fig. 1 (left): Areas previously repaired with sheet material. Photos courtesy of KTA-Tator, Inc.

Fig. 2 (above): Coating failure at a previous repair area.

There were numerous areas scattered around the tank where the original lining was blistering. Blisters ranged from small (¼-inch-diameter) to large (1-inch-diameter), including broader areas where numerous blisters were spread across the surface. The coating film was broken, and the aluminum substrate exposed in some locations. White corrosion product, characteristic of aluminum corrosion, was present on the metal surfaces underneath broken blisters (Fig. 3, p. 16). The tank walls at one corner in particular contained numerous blisters and spots of white residue over much of the surface (Fig. 4, p. 16). Overall, the estimated percentage of blistering and corrosion was up to 10% of the interior surface area.

Adhesion testing of the lining was conducted in accordance with ASTM D-3359, "Measuring Adhesion by Tape Test," Method A, which involves making an "X-cut" through the coating to the substrate and applying a pressure-sensitive tape to the cut area and rapidly removing the tape. The adhesion is rated from 0A to 5A, with 0A being worst and 5A best. Tape adhesion tests near blistered locations revealed that the lining could be lifted from the aluminum for a short distance surrounding the area, indicating poor adhesion in the immediate vicinity of failing areas. Adhesion was good with ratings of 5A away from

Fig. 3: White corrosion product underneath blisters in the lining that was removed.

the immediate vicinity of blistered/failing areas where the lining was intact.

Coating thickness measurements of the interior lining were obtained throughout the tank using a nondestructive electronic gauge. The thickness ranged from 4–10 mils, with an average of 7 mils. Overall, there did not appear to be a correlation between the lining thickness and areas of blistering or corrosion, although the lowest thickness measurement of 4 mils was adjacent to a failing area.

When the white corrosion product was removed from the surface at blistered areas or exposed metal, the aluminum tank walls did not appear to be pitted. Metal wall thickness measurements were obtained in areas with and without corrosion using an electronic ultrasonic gauge. The metal thickness was approximately ¼ inch and did not vary significantly between areas with and without corrosion.

Representative samples of the lining were obtained from the tank interior, as well as a water sample from one of the filled tanks. Following the site visit, the consultant reviewed the information and samples collected and determined that the forensic analysis would consist of microscopic examination to determine various coating characteristics and infrared spectroscopy to confirm the generic coating type. The testing of water samples would consist of pH measurement and conductometric analysis.

The microscopic examination of lining samples showed the top surface as green and glossy, and the bottom surface as green with white corrosion products. A significant finding was the presence of pinholes when viewing the top surface at higher magnification, along with black and white spots over the surface. White corrosion products, gray spots and brown spots were visible over the bottom surface. A cross section of the lining revealed a coating layer ranging from 3–10 mils in thickness and a layer of corrosion product up to 4 mils thick. Voids were also visible in the green coating layer. The infrared spectroscopic analysis identified the lining as an epoxy coating, consistent with the specified requirements. The water analysis indicated a pH of 6 and conductivity of 960 µS/cm.

The results of the laboratory analysis indicated that the likely cause of the blistering and subsequent failure of the lining was the presence of pinholes in the coating layer. Although there was not a clear correlation between the lining thickness and observed failures, a thinner lining would obviously be more susceptible to water permeation, particularly if pinholes were present. The additional presence of voids observed by the laboratory in the lining cross section (via microscopy) would only increase the permeability of the lining. The wide range of thickness measurements of the lining indicated that the original powder-coating application process was not consistent.

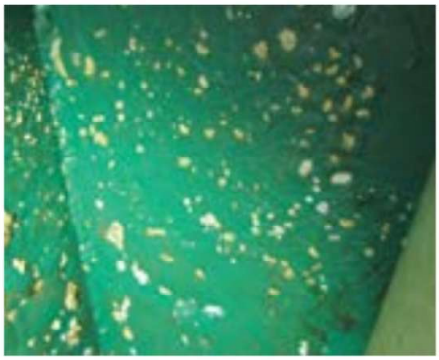


Fig. 4: Numerous blisters in the corner of one particluar tank.

The tanks operated in an aggressive immersion environment with the water containing soluble salts, such as chlorides, that accelerate corrosion. While the corrosion of the aluminum tank walls was not currently significant, chlorides are known to accelerate corrosion of aluminum. Therefore, repairs to the lining were recommended to occur relatively soon before the corrosion could become an issue.

The recommended repair option was removal and replacement of the interior linings based on the present degree of lining failure and corrosion in the tanks. The best method for lining removal would be abrasive blast-cleaning using non-ferrous (mineral) abrasives. Prior to blast-cleaning, it was recommended that the tank surfaces be cleaned initially with pressurized water to remove soluble-salt residues. The appropriate standard for subsequent surface preparation was SSPC-SP 16, "Brush-Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels, and Non-Ferrous Metals." Any additional requirements specified by the coating/lining manufacturer, including surface profile, would also need to be followed.

In addition, due to the known presence of soluble salts in the operating water, the cleaned surfaces would need to be tested for contamination using ion-specific tests to determine surface concentration (for example, chloride and sulfate) or by conductivity to determine total soluble-salt content. A typical conductivity limit for surfaces in immersion service is 30 µS/cm. SSPC Technology Guide 15 was referenced for methods for retrieval and analysis of soluble salts

The recommended replacement lining system consisted of a two-coat epoxy phenolic or epoxy novolac system with a total thickness ranging from 10–20 mils. Replacement lining systems would also need to be USDA food-grade approved based on the originally specified requirements. It was pointed out that some manufacturers of the recommended types of systems require heat curing of the lining after application is completed.

Following application and adequate curing, holiday testing to detect pinholes in the installed lining was recommended.

ABOUT THE AUTHOR

Jay Helsel is a Senior Consultant with KTA-Tator, Inc. He holds a Master of Science degree in chemical engineering from the University of Michigan, is a licensed Professional Engineer in multiple states, a NACE-certified Coating Inspector, and an SSPC-certified Protective Coatings Specialist (PCS) and Concrete Coatings Inspector (CCI). At KTA, Helsel manages coating projects, performs failure investigations and coating surveys, writes coating specifications and is a regular instructor for KTA coating inspection courses. Helsel previously served as a Lieutenant Commander in the U.S. Coast Guard with experience in marine vessel inspection.

THIS MONTH IN ...

1990

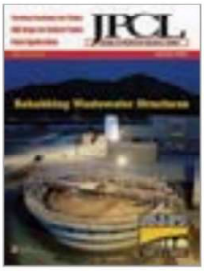
After recent environmental contamination incidents from hazardous chemicals, Patrick Nau and Benjamin Fultz of Bechtel Corporation authored, "Coatings and Linings for Secondary Chemical Containment in Power Plants," which discussed how protective coatings could be incorporated into containment design to ensure chemical resistance and impermeability.

1997

In the Applicator Training Bulletin article, "Introduction to Surface Preparation of Concrete," William Ashmore of ICI Dulux Paints/ICI Devoe Coatings provided basic instructions for understanding the condition of concrete and how to prepare it before applying coatings.

2007

Michael Oriol of V&A Consulting Engineers teamed up with Kirk Howard of the Fairfield-Suisun Sewer District on, "Rehabilitating



Primary Waste Treatment Structures: From Assessment to Warranty," which recapped a complex concrete sewer rehab project from the condition assessment to the specification stage to final coating inspection.

2015

Dwight G. Weldon of Weldon Laboratories, Inc., presented the Investigating Failure case, "The Saddest Words: A Resilient Floor That Lost Its Shine," which looked into the causes of a fading glossy polyurethane topcoat on a concrete automotive showroom floor.

2018

"Adaptive Reuse: Repurposing the Factory Floor," by Tom Murphy of VPM LLC, guides preparation and application of new coatings on previously used industrial concrete floors to meet the performance requirements of new operations.

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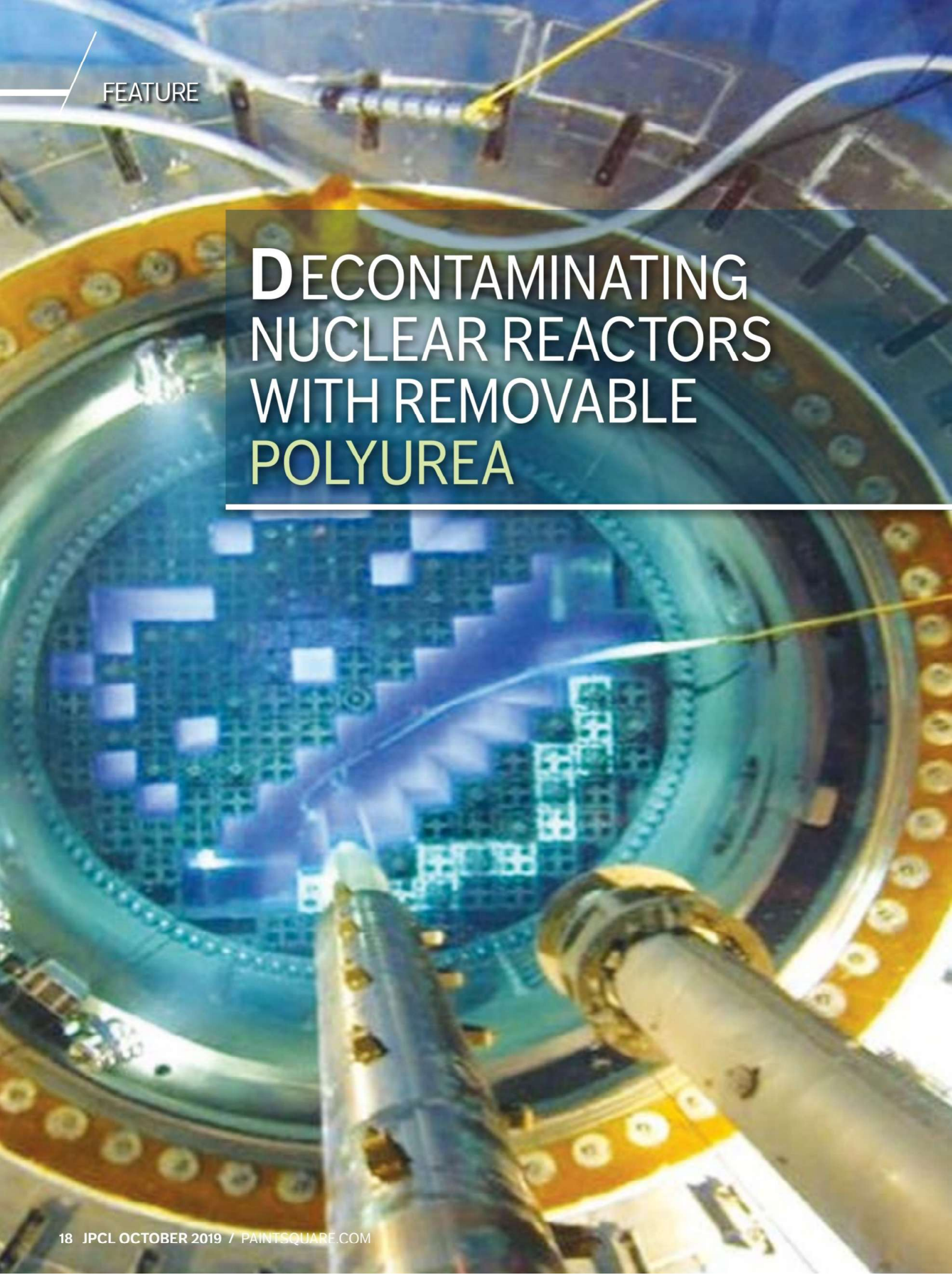
DECONTAMINATING NUCLEAR REACTORS WITH REMOVABLE POLYUREA



BY TIMOTHY WEDOW, MASTER-LEE ENERGY SERVICES CORP.

Coatings are typically designed for the purpose of protecting a structure from corrosion or protecting the environment in the event of a chemical spill. In most cases, they are created to last as long as possible. As a manufacturer of protective coatings, let's say you were asked to design a coating that could be completely removed within days of application. Your first thought might be, "Why on Earth would anyone want a coating system to do that?" A few reasons might be to protect personnel from exposure to contaminants and to capture the contaminants before they can damage the environment. Given that, your next question might be, "What are the contaminants?" Radioactive contamination, for example, requires very different considerations than does chemical contamination.

In the United States, there are currently two main reactor designs used in commercial operation for the generation of electricity: pressurized water reactors (PWRs) and boiling water reactors (BWRs). Commercial nuclear power plants are operating 24 hours a day, seven days a week, 365 days a year. The operating term of a plant is called a cycle, which is a period of 18–24 months depending on the design of the reactor. When a plant enters a scheduled shutdown condition, it's referred to as an outage. Outages provide an opportunity to perform maintenance and inspection of equipment and to replace the fuel in the nuclear reactor.

REACTOR DISASSEMBLY

A nuclear reactor contains numerous critical components. The reactor head sits in a large pit called the reactor cavity that's approximately 20 feet wide by 50 feet long and roughly 30 feet deep. It's lined with stainless steel (Fig. 1). The reactor head is bolted to the reactor vessel by many large studs and contains control rod drives, instrumentation cabling, ventilation systems and other components. In order to obtain access to the nuclear fuel assemblies so that the fuel can be replaced, the reactor head must be disassembled and removed. To facilitate removal, the reactor studs must be hydraulically stretched to loosen them.

Reactor head removal is a complex task due to its weight (approximately 150 tons) and configuration. As the reactor head is being removed from the reactor cavity, the cavity is filled with water that is used to shield radiation and control radioactive contamination and reactivity. The removal of the reactor head exposes the reactor upper internals, which contain control rod drive shafts used to control the reactor's power levels (Fig. 2). The control rod drive shafts are held in position by the upper internal structure and must be unlatched from the designated fuel assemblies. The upper internals are then removed to reveal the nuclear fuel assemblies. The fuel is under approximately 40–50 feet of water (depending on the design of the reactor) and once exposed, the off-loading of the fuel can be executed.

Fig. 1: A reactor head in the reactor cavity.
Photos courtesy of Master-Lee Energy Services Corp.

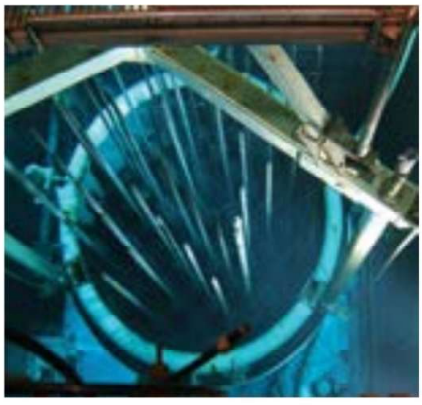


Fig. 2: Exposed upper internals.

NUCLEAR FUEL MOVEMENT

During an outage, fuel assemblies are removed from the reactor vessel and replaced with both new and reused fuel assemblies. A typical fuel assembly can be used for three operating cycles; therefore, approximately one-third of the reloaded fuel per outage will be new fuel assemblies. Fuel assemblies are removed one at a time by a specially

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designed crane and transferred underwater across the reactor cavity by the fuel transfer system. The fuel-transfer system transfers the removed fuel assemblies to an isolated storage pool known as a spent-fuel pool. The fuel-transfer process is repeated until all fuel assemblies are removed and transferred to the spent-fuel pool, where work such as changing control-rod clusters, moderators and sources is performed. After all spent-fuel work is completed, the fuel assemblies are ready to be reloaded into the reactor core. Before core reload commences, all equipment and plant-safety systems must be verified as operable. The fuel is then reloaded using the same process that was used to off-load the core, but in reverse. After all the fuel has been reloaded into the core, cameras are used to verify that the fuel assemblies are in the proper locations.

REACTOR REASSEMBLY

After the fuel has been reloaded into the reactor vessel, the upper internals are installed, and the control rods are latched and verified to ensure that control of the reactor is able to be maintained. The reactor cavity will then be drained of water and the reactor head reinstalled. During this refueling process, small amounts of radioactive material are left behind, which results in contamination of the stainless-steel liner surface. After the water is drained and the reactor head is placed on the reactor vessel flange, there is a large amount of work that must be performed to reassemble the reactor head.

In order to reassemble the reactor, technicians using specialized equipment must physically enter the reactor cavity to reassemble the reactor head. Due to the contamination levels created during the fuel-moving process, the cavity must be decontaminated ahead of time.

RADIOLOGICAL CONTAMINATION WORKER SAFETY

As opposed to corrosion protection, worker safety from radioactive contamination is the main goal of this coating application. Radioactive contamination is simply radioactive material that is not where it is supposed to be. As many are aware in this day and age, this has become a major industry concern. In some fairly recent circumstances, the spread of radioactive contamination has become a global issue.

From a worker standpoint, the spread of radioactive contamination is controlled by the site providing protective clothing to the worker. A standard set of protective clothing consists of a cloth hood, one-piece cloth coveralls, cloth booties, a pair of rubber gloves and a pair of rubber shoe covers. Once the worker has left the contaminated area, the outer layer of protective clothing is removed, and the clothing is either discarded or properly laundered for reuse. The worker is then monitored to ensure that he or she does not have any radioactive contamination on inner clothing or skin prior to leaving the building.

The worksite focused on in this article is typically highly contaminated. This area is very warm (temperature-wise), which will obviously result in worker discomfort. Because the protective clothing is a fabric, it may become saturated from a worker's sweat and therefore the contamination could leach into the worker's inner clothing or skin. In most cases, a worker may be required to wear two complete sets of protective clothing and, in some circumstances, respiratory protection. The respiratory protection eliminates the possibility of a worker becoming contaminated internally through ingestion or inhalation, or externally through his or her face. As one could imagine, working in this environment with multiple layers of clothing would slow a worker's progress and capabilities. So, how do we make the environment safer for the worker? We must remove or encapsulate the radioactive contamination in place.

DECONTAMINATION EFFORTS

Traditionally, reactor cavity decontamination efforts have included hand scrubbing and/or pressure washing the cavity floors and walls, which could take up to 24 hours to complete. Then, if the decontamination efforts fail to reduce radiation levels sufficiently, the reassembly technicians are required to wear additional layers of protective clothing that could include plastic coveralls and respirators. While the use of respiratory protection

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devices and multiple layers of clothing protects workers, it can also reduce their productivity and increase the amount of time it takes to complete the task. Any increase in the time required to complete an outage reduces the amount of time the plant is generating electricity, and in this case, losses can exceed $100,000 per hour.

EARLY STRIPPABLE COATINGS

To address the problems previously discussed, strippable coatings were introduced in reactor cavities to reduce decontamination, radiation exposure and outage costs. One issue with these coatings, however, was that they were not capable of being submerged in water. For that reason, the strippable coating process could only happen after the nuclear fuel was reinserted into the reactor core and the water was drained from the reactor cavity. Another issue with past coatings was that the strippable application was either too thin or too heavy and could not be removed efficiently and/or entirely from the cavity floors and/or cavity walls. Additionally, a strong odor of ammonia was a by-product of the coating process. Because the ammonia vapors were prone to remain in the reactor cavity when combined with the high relative humidity of the reactor building, the reassembly technicians were often required to wear respiratory protection. As a result, the slow curing process of the early strippable coatings did not prove to be efficient for technicians waiting to gain access into the reactor cavity to start reassembly. A plastic grating was placed on the uncured floor coating for technicians to work from, but it was not an optimal surface on which to reassemble a nuclear reactor because there was no way to secure it. Because the grating could slide on the uncured coated surface, it could cause a potential injury to the worker and the coating process was thus deemed a failure. The strippable coatings industry in nuclear power was in demise as word spread of its shortcomings.

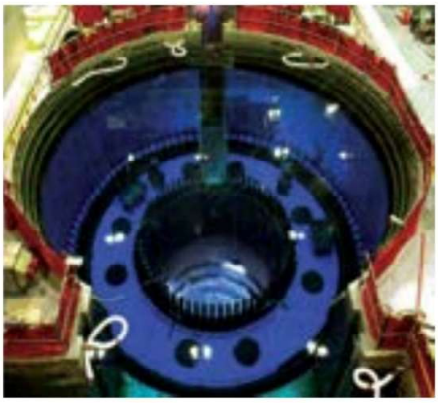

Fig. 3: Refueling the reactor cavity, Option One. The polyurea is blue for easy visual identification.

ENTER POLYUREA COATINGS

In contrast to the early coatings, polyurea coatings can capture contaminants, bear weight and allow for speedier access to the work area. A polyurea coating can be walked on within seconds of application and can be submersed in water within hours after the application. A special polyurea blend was developed to withstand the effects of radiation exposure and

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cure in 24 hours after the application process. At this point, the polyurea blend has achieved the necessary physical properties, making it capable of being removed from the reactor cavity walls and/or floors manually, without the use of abrasives and/or power tools.

A typical nuclear power outage lasts approximately three to four weeks, but some outages may run longer than others for specialized equipment inspections and maintenance of larger components. The polyurea coating system has given a nuclear facility two separate coating options to potentially reduce outage time and provide a cleaner work environment with less radiation exposure to the technicians.

Option One

A coating is sprayed six to seven feet high on the stainless-steel walls (similar to the height of workers) and on the floor prior to the reactor disassembly while the cavity is still dry. For a BWR plant, the entire cavity is typically sprayed as shown in Figure 3 (p. 21). The polyurea is immersed in water for five to 30 days prior to defueling and refueling the reactor. The application time, which includes the masking and removal of the masking, is approximately two to four hours. Once the reactor is refueled, the cavity is drained, a quick rinse of the coating is performed and the removal process commences. The removal process takes a handful of technicians approximately two to three hours, depending on the reactor cavity size. Once the polyurea coating is removed, the general work area is cleaner for the workers, thereby reducing their exposure to radioactive contaminants.

Option Two

After reloading the fuel assemblies and draining the water from the cavity, the polyurea coating is applied about six to seven feet high on the walls and on the floor, making the work area contaminant-free for the workers (Fig. 4). The coating may again be removed at any time after the minimum required time of 24 hours.

With either option, the original 12–24 hours of reactor-cavity-decontamination time is reduced drastically to approximately four to seven hours.

Fig. 4: Reactor cavity post draining, Option Two.

RAPID CURING OF MATERIAL

The rapid dry time of the polyurea (approximately 30 seconds) allows technicians to access the cavity as soon as the coating system is installed. The tensile strength of polyurea allows the crew to stage the substantial equipment needed to reassemble the reactor on the coated cavity floor. For example, the reactor head studs, which are delivered in storage racks of approximately six to eight studs and

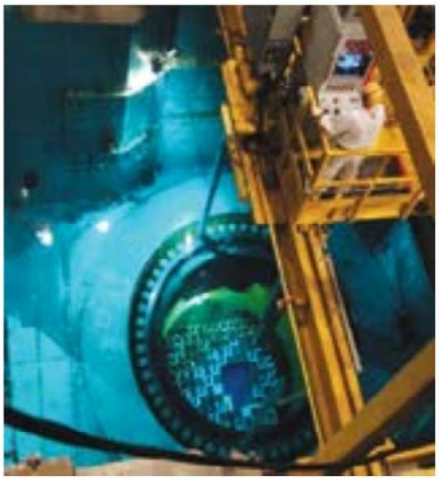

Fig. 5: The fuel-handling equipment.

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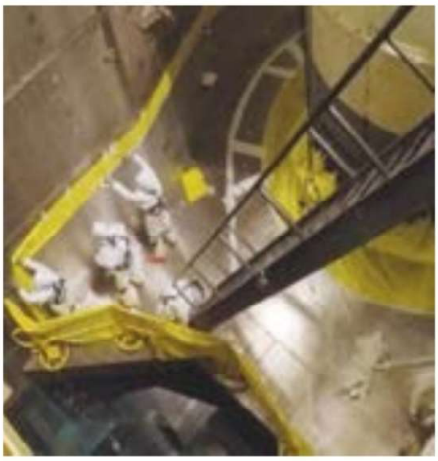

Fig. 6: Workers mask the reactor cavity.

weigh approximately 4,000–5,600 pounds, are placed directly on top of the polyurea coating within a few hours of the coating application. A specially formulated polyurea that can be used with either option previously mentioned, has been tested to handle the high levels of radiation that it is exposed to during the fuel-handling process (Fig. 5). There are also nuclear steam supply system (NSSS) specifications that the coating formulation must meet. These specifications have set very specific limits of leachable by-products of the formula that may come into contact with primary system cooling water, which comes in direct contact with the fuel assemblies.

POLYUREA COATING CREW

As with any coating application, a polyurea coating requires a highly trained crew, knowledgeable about all the significant components that go into an effective coating application. The crew must be extensively trained in plural-component application equipment and the safety aspects of applying an isocyanate-based coating. The experienced crew must understand the importance of detail regarding masking required on irregular surfaces as well as the removal of the masking to ensure that the integrity of the coating's adhesion is not jeopardized while it is submersed (Fig. 6). As with many other coating specialists, they must be knowledgeable about the environment they are working in or around. More specific to this industry, they must be highly trained in dealing with radioactive contamination. The coating application being performed is in a highly radioactively contaminated area and the crew

Fig. 7: Workers apply polyurea in the reactor cavity.

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must maintain respect for the contaminants they are dealing with, strict controls of the coating process and nuclear safety integrity (Fig. 7, p. 23).

REMOVAL OF THE COATING

To determine the effectiveness of a decontamination process, the radiation-protection department will calculate a decontamination factor (DF). Because the polyurea coating can only be removed by hand, a high DF is required to ascertain a successful decontamination process. As shown in Figure 8, the polyurea coating is cut into two-to-three-feet-wide strips. If the coating was immersed in water as explained in Option One, then the surface of the coating would be highly contaminated, and the coating would be rolled into itself in order to control the contamination. If applied using Option Two, the coating would be folded to control the contamination on the back side of the coating. It is important to remove the coating from the walls first and then remove the coating from the farthest point on the floor away from the exit point. As the workers proceed with removal back to the exit point, contamination on the bottom of the workers' shoe covers will be minimized by removing the shoe covers prior to walking on the newly exposed stainless-steel liner so that it does not cross-contaminate the clean surface.

Fig. 8: Workers remove contaminated polyurea in sheets from the reactor cavity walls and floor.

Each stainless-steel liner is unique because many different techniques have been used to decontaminate the reactor cavity over the course of the life of the plant. Some plants have used mechanical scrubbers that created a surface profile. As we all know in the coating industry, surface profile is paramount to a long-lasting successful coating application, but in this case surface profile creates a tougher surface from which to hand-strip the polyurea coating. In the early years of the polyurea formulation for nuclear power plant applications, there had been decontamination factors of 95% or greater, but it was very difficult to remove the coating in many of the reactor cavities. In some cases, it would take the workers two to three times longer than expected. It has taken many years of trial and error to perfect the polyurea blend capable of withstanding the effects of radiation, allowing manual removal in the least amount of time and maintaining a decontamination factor in excess of 80%.

CONCLUSION

Returning to the question posed at the beginning: "Why on Earth would you want a coating system designed to be removed?" Using the proper easily removable coating captures contaminants to protect workers, increases their productivity time and reduces outage time, all of which reduces the overall cost associated with an outage.

ABOUT THE AUTHOR

Timothy Wedow is the Special Projects Coordinator for Master-Lee Decon Services Corp. in Latrobe, PA. He has over 23 years of experience in the nuclear power industry applying protective coatings, specializing in polyurea coatings. Along with protective coatings, Wedow works as a reactor maintenance technician and refueling technician, as well as in specialty decon processes utilizing ultra-high-pressure water blasting, CO_2 blasting, grit/sponge-blasting and concrete scarification. He is a member of SSPC and is PCI Level 1, C7 and C12 certified. ***JPCL***

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TO RECOAT OR NOT TO RECOAT:

A SECONDARY CONTAINMENT CASE STUDY

BY WARREN BRAND,
CHICAGO CORROSION GROUP, LLC

Secondary containment areas (SCAs) are typically concrete or earthen berm structures in which aboveground storage tanks (ASTs) live. Both concrete and earthen SCAs are lined more often than not, but not always. It depends on the local regulations as well as the contents of the ASTs. As the name implies, they are designed to provide secondary containment should primary containment (the storage tank itself) somehow lose its integrity or leak. SCAs can house one tank or many.

SCAs, while ubiquitous and a mainstay in the petrochem industry, are often poorly understood and poorly designed. The industry standard for the design of SCAs is typically to accommodate 110% of the storage capacity of a tank. In situations where multiple tanks are housed in one SCA, the secondary containment must be able to hold 10% of the capacity of all the tanks combined or 110% capacity of the largest tank, whichever is greater. The specific design of any secondary containment system is much more complex—this explanation is to serve only as a guide.

The concept seems straightforward, but circumstances can get tricky very quickly. Regulations require that the SCA be able to hold the liquid from the AST and prevent a release of that liquid into the environment for a period of at least 72 hours. Why 72 hours? The rationale is that the liquid from the AST can be removed within that time frame.

In reality, a catastrophic event leading to an entire tank rupturing and dumping all of its contents is exceedingly rare. That said, the author's motto when working on secondary containment is that an SCA is primary containment waiting to happen, and the coating system on the SCA must be robust enough to act as primary containment—not because of a potential catastrophic event, but to maintain the integrity of the SCA by rendering it impervious to whatever is being held in the AST. What is far more typical are a series of small events such as a leaking valve or fitting, an overfill incident or a spill during maintenance.

THE CASE IN QUESTION

It was the spring of 2018. The author's company was called upon to look at a concrete basin that measured roughly 120 feet long by 40 feet wide by 3 feet deep and was divided into three sections. It had been coated about seven years prior with what was purported to be some type of elastomer.

The chief engineer mentioned that a number of paint companies and contractors had been on-site and had given him and his team pretty much the same advice—that the existing coating should be removed and replaced—but he chose to arrange a meeting with the author's company before purchase orders were cut for removal and replacement of the existing coating.

The author's visual inspection, punctuated with prodding and poking, revealed the following observations.

1. Visually, the coating looked good. It had a uniform tan color with small areas that had been repaired over time (as was conveyed) due to blisters and other imperfections. This is not uncommon with polyurethanes and these areas were few and far between.

2. The coating was thick. With the engineer's permission, the coating was cut into at roughly a 45-degree angle. It was hard and approximatel
3. Adhesion, at least in the few areas checked, was excellent. The tip of the knife could not be inserted under any of the coating.
4. The coating exhibited some oxidation, as the original color was blue and it was now tan, but the oxidation layer scraped right off with the tip of the knife. The oxidation layer was estimated to be less than 2 mils thick.
5. The coating system exhibited substantial and uniform crazing that destructive testing initially indicated was just that—crazing and not cracking. Crazing is cracking that lacks motivation and is too lazy to move all the way down to the concrete substrate.
6. The coating exhibited areas where cracks in the concrete were mirroring through the coating system, but the coating system only showed the impression of the crack. The crack had not penetrated through the coating (Fig. 1).

Fig. 1: The back side of the coating exhibited surface crazing. The surface crack did not penetrate the coating film, thus confirming that the distress is crazing. Photos courtesy of the author.

The author advised that there was nothing substantially wrong with the coating—that the chief engineer should leave it alone and have it reassessed in a few years.

"Why is everyone else telling us we need to remove it and replace it?" he responded.

The author then explained his observations from a purely technical perspective.

The chief engineer responded: "We want to coat it anyway, or at least evaluate it for overcoating or recoating. This is a critical component of our system, and we believe in a belt-and suspenders approach."

Recoating against the author's recommendation did have its merits. This basin is used all year long and this examination occurred at a scheduled shutdown point. The cost of ensuring the durability of the coating was small in comparison to costs associated with an unplanned shutdown.

Fig. 2: Scraping away the top oxidized layer, exposing the pristine coating underneath.

The engineering team also thought that the coating system looked pretty good and was wondering why no one had recommended or even considered overcoating it. All of the vendors consulted indicated that overcoating was not an option. Why? Legitimately, there is some liability in overcoating someone else's work and material.

TECHNICAL EVALUATION AND OPTIMAL COATING SELECTION

In order to overcoat any existing coating system on an SCA, you must go through a highly detailed checklist. For this project, it looked something like the following.

1. Determine exactly what material was initially applied to ensure that it is compatible with the contents of the AST. Don't assume that it's compatible simply because it's there.
2. Find any application notes or other documentation from the original installation. Make sure, to the best of your ability, that the material was installed properly, including the following considerations.
   a. Was it raining during application?
   b. Was the coating mixed properly and applied at the proper thickness? Issues had revealed themselves, evidenced by about a dozen repaired areas where blisters had formed.
3. Test the adhesion of the material to the substrate by conducting pull-off tests (ASTM D4541). Pull-off tests provide two critical pieces of information.
   a. The strength of adhesion of the coating system to the concrete.
   b. The internal (cohesive) strength of the coating itself.
4. When overcoating is the chosen solution, it is necessary to spot apply and test, using ASTM D4541, to ensure robust adhesion of the new coating to the existing coating.

There were other technical considerations specific to this case, including the following.

1. Because the existing coating was an elastomer, it was necessary to consider only other elastomers with equal or greater elongation characteristics. The existing coating had roughly 45% elongation, so the field was wide open for other, more flexible options.
2. The new material had to be resistant to the contents of the AST. This was not difficult as the liquid was primarily water, so chemical compatibility in this case would not be an issue.
3. For economic reasons, it was necessary to identify the least costly method of effective surface preparation. As cited

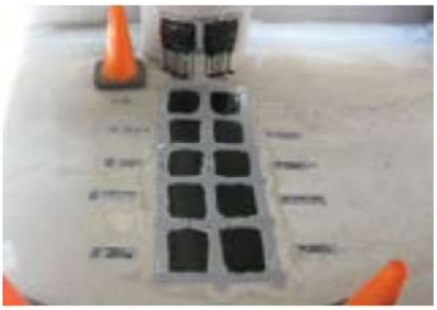

Fig. 3: Mock-up of test materials applied to vertical and horizontal surfaces. The grid represents different levels of surface preparation and in this case, the use of a primer (left) and without primer (right).

earlier, the existing material exhibited a uniform crazing pattern that presented a unique opportunity to use the crazing as a mechanical adhesion profile, much like a blast profile on steel. The crazing was deep—between 2–6 mils—and uniform.

4. The coating had an oxidation layer on all of its surfaces. The layer was easily removed with a knife (Fig. 2, p. 27). A determination had to be made as to whether or not the oxidation layer was sufficiently adhered to the coating to be overcoated, or warranted removal.

DESIGNING AND TESTING THE MOCK-UP

The coating company that had supplied the existing material was contacted and confirmed that it was a polyurethane. For liability reasons, however, the coating supplier would not allow their material to be used for overcoating.

As an alternative plan, four different elastomers were identified, all of which had excellent chemical resistance and an equally good track record of durability. Testing had to confirm that the coating selected would adhere to the existing coating and be compatible with the liquid contained within the tank.

Fig. 4: Dollies adhered to various materials in anticipation of pull-off tests. Duct tape was used to secure dollies in place on vertical surfaces until the adhesive cured.

Fig. 5: One of dozens of pull-off tests indicating a "good pull." This dolly shows cohesive failure of the coating system—ironically a good result indicating that the failure occurred within the coating film, as well as adhesive failure—also a good result indicating that the coating was so strongly adhered to the substrate that the glue holding the dolly failed before the coating pulled away from the substrate.

For surface preparation, four zones were created, each representing varying degrees of preparation and each representing differing costs.

SURFACE PREPARATION TESTING

Zone 1: Brush off with cloth. This was the least costly means of surface preparation,

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although it was suspected that it would likely not be sufficient.

Zone 2: Powerwashing. Using soap and powerwashing, the goal was to remove all dirt, debris and loose oxidation.

Zone 3: Solvent wiping. The concept here was the same as in Zone 2, but also to soften the existing elastomer slightly so that a chemical bond might be obtained as well as mechanical bond.

Zone 4: Light sanding of the surface. To clean the coating as well as mechanically removing some of the oxidation layer.

Zone 5: Using hand-held grinders and sanders, the oxidation layer and crazing were completely removed, exposing the original coating system as well as providing an anchor pattern.

Zone 1 surface preparation was obviously the least costly, with Zone 5 being the highest.

APPLICATION AND DESTRUCTIVE TESTING

After surface preparation was complete, four different coating systems were applied, making certain to also apply them to vertical surfaces as well, where gravity can work against adhesion (Fig. 3, p. 27).

Destructive testing was performed, including adhesion testing as per ASTM D4541 (Fig. 4, p. 28).

RESULTS

Zone 2 provided sufficient adhesion—verification of two assumptions made early on. First, the oxidation layer was sufficiently well-adhered and the crazing acted in the same manner as would an abrasive blast on carbon steel—promoting adhesion (Fig. 5, p. 28).

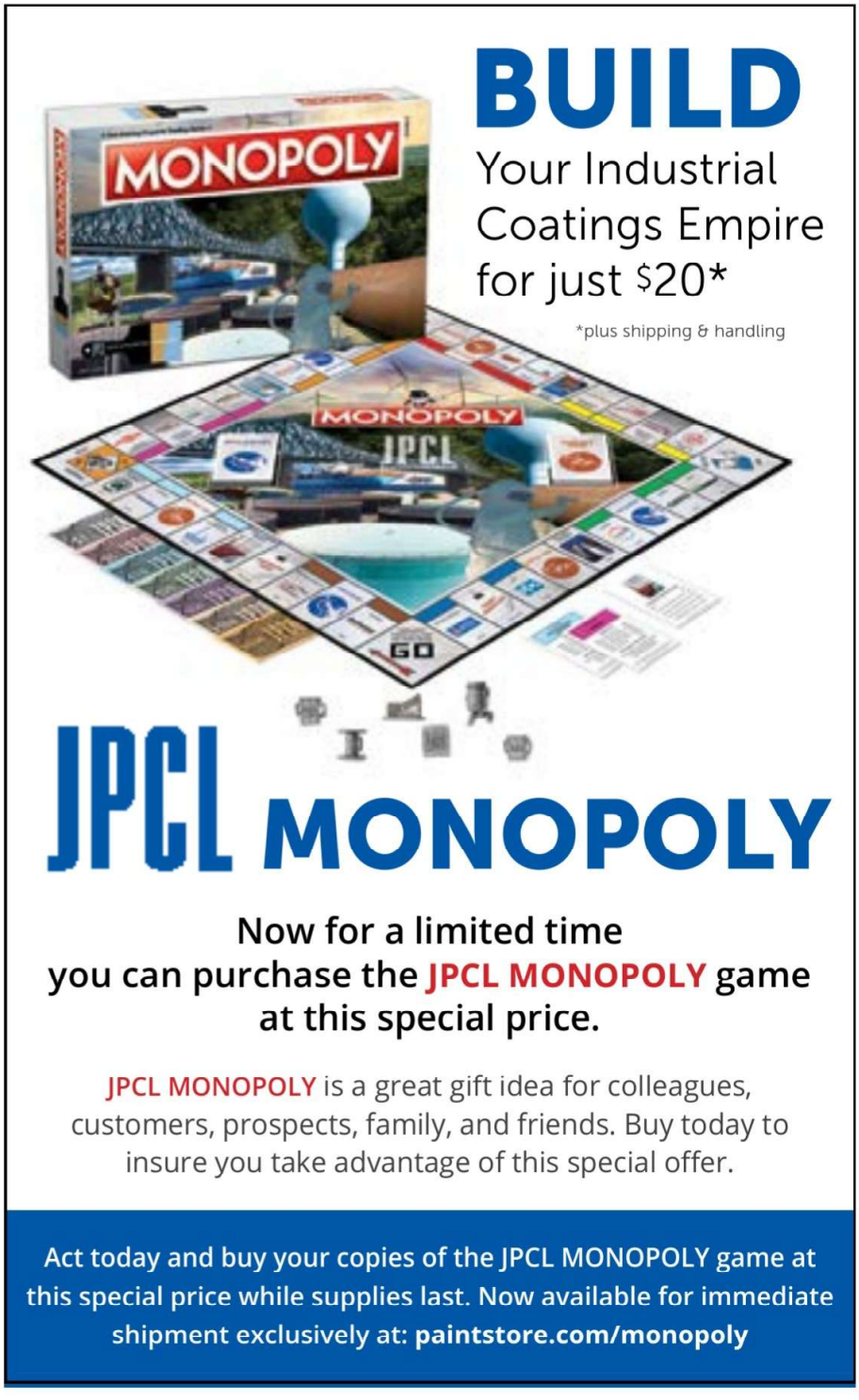
Technical-support engineers from each mock-up coating supplier were consulted extensively. The chosen material supplier was so impressed with the test results, that the company provided a very rare, unconditional five-year warranty to the client.

It is imperative that owners not rely solely on vendors who are justifiably incentivized by the sale of their goods or services. If an owner does not have the resources to do so in-house, then they should be sought elsewhere.

On this project, the chief engineer was convinced through third-party involvement to forego his initial decision to completely remove and recoat, and instead opt for a savings of over $600,000 and a better, more durable overall system with a longer warranty.

ABOUT THE AUTHOR

Warren Brand, who began in entry-level field painting, has managed and developed specs for thousands of coating installations over nearly 30 years. NACE Level-III and SSPC PCS 2 certified, Brand, an MBA, now heads Chicago Corrosion Group, a coatings consultancy. He is a JPCL contributing editor and blogger on paintsquare.com. ***JPCL***



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Smiling Over Spilled Milk:

FLOOR COATING AT A DAIRY-PROCESSING FACILITY

BY STEVEN REINSTADTLER, COVESTRO

The small town of Littlefield, Texas, suffered economically when its denim mill closed in 2015. With 340 residents suddenly out of work, Lamb County's unemployment rate doubled from 4.5 to 9.1% in one month. After the facility laid empty and unused for 10 months, the community bounced back when Continental Dairy Facilities Southwest LLC invested $250 million and converted the mill into a state-of-the-art milk-processing facility. The investment entailed repurposing of the existing building, as well as the installation of a 100,000-square-foot addition. The scope of work included milk-tank storage areas, interior tank truck-offloading docks, QC lab areas, warehousing and various connecting hallways. It also included multiple drain details and termination points where the new floor connected with adjacent areas. A major part of the construction centered on ensuring that the facility could operate in compliance with strict U.S. Food and Drug Administration and Food Safety Modernization Act (FSMA) safety and hygiene requirements for risk-based preventive controls. Additionally, because the facility processes four million pounds of raw milk into cream, butter and dry milk yearly and exports to 14 countries around the world, the owners were keen on making sure that their facility was protected from the rigors of the production process that might disrupt daily operations. This included protecting a major facility component that was at risk: the concrete production floor space.

THE PLAYERS

Continental Dairy Facilities Southwest LLC, in partnership with Select Milk Producers, Inc., is a food-ingredient production company operating several state-of-the-art milk-processing plants. Select Milk Producers is a group of 99 dairy-farm members and processes more than seven billion pounds of milk each year using innovative sustainable farming, and animal care and comfort techniques.

Select Services provides turnkey project and construction-management services for all of Select Milk Producers' capital projects nationwide.

Dahlgren Industrial performs full-service, industrial construction solutions that focus on process-based projects for industrial clients from straightforward projects to full plant construction and/or modification.

T.W. Hicks specializes in the detailed installation of industrial flooring solutions such as chemical-resistant floors, seamless bacteria-resistant floors, and floor resurfacing or repair using well-trained estimators and applicators.

CONDITIONS AND CHALLENGES

The production floor conditions required a high-performance, multi-layer solution that could withstand several serious challenges. First, the 141,000 square feet of floor area and 14,500 linear feet of integral cove base

consisted of both old and new concrete. The old concrete had some wear from over the years and there were areas that were stained and contaminated with dyes and bleach used in the former denim mill production process. The new concrete floor of the addition had a hard-troweled finish that required profiling.

Secondly, the production floor area would need to withstand thermal shock from frequent cleaning, as well as routine high-temperature exposure from the nearby milk evaporators. Third, the floor surface needed to resist cracking from impact as well as the vibration from fluid milk dryers.

Finally, the floor's topcoat would be intermittently exposed to water and liquid milk, which is slightly acidic. In addition, the topcoat would also be exposed to a low-pH caustic solution that is used in the clean-in-place (CIP) sterilization process. CIP refers to a mix of chemicals, heat and water used to clean machinery, vessels or pipework without dismantling the plant. CIP has been in use for over 50 years in hygiene-critical industries such as food, beverage, biotechnology and pharmaceutical, to clean primary (and some ancillary) plant lines. Sodium hydroxide is frequently used as the alkali industrial-cleaning agent where it is often referred to as caustic or caustic soda. It is added to water typically at 0.5–2% volume, heated and then used to clean process equipment and storage tanks. It can dissolve grease, oils, fats and protein-based deposits. The benefit of the CIP process is that the cleaning is faster, less labor-intensive and more repeatable. It also poses less of a chemical exposure risk to the employees working in the facility. However, this caustic alkali solution can present challenges to coatings exposed to it without adequate chemical resistance.

SELECTION, SURFACE PREP & INSTALLATION

Once the team reviewed these critical challenges, several coating system options were considered. Based on the criteria, the team chose the following polyurethane mortar system:

- A 3/16-inch base of a self-leveling, heavy-duty, beige, three-component, cementitious urethane slurry with a full quartz broadcast, bringing it to ¼-inch overall; and
- A 12–14 mil topcoat of a gray-beige, two-component, high-solids, fast-cure, UV-resistant, polyaspartic urethane coating system.

Fig. 1: The area around the large storage tanks required a protective coating on the floor as well as on the cove base areas and curbs. Photos courtesy of T.W. Hicks Inc.

Because color and texture were critical for worker safety, ergonomics and light reflectivity, several mock-ups were created for pre-approval. The flooring contractor coated various textured samples with a pigmented beige topcoat that the owner chose for cleanability and to hide possible staining.

Once a final finish was selected, the flooring contractor was able to begin the floor-coating process. The first step was to perform appropriate surface preparation on concrete floor areas. The surfaces were cleaned and then profiled using grinding around the perimeter and shotblasting on the other 95% of the existing concrete floor surface. The shotblasting was performed using an electric shotblast machine charged with steel shot to achieve an ICRI surface profile of CSP 3–4. The entire area was then cleaned and prepared to accept the multi-step system.

With surface preparation completed, the polyurethane mortar system was applied, consisting of a 3/16-inch lift of the cementitious polyurethane slurry designed to provide excellent resistance to abrasion, impact and chemical attack. The slurry was applied using gauge rakes and was then broadcast to rejection with dried quartz sand to build the lift to a total of ¼-inch. After the cementitious polyurethane basecoat was cured, the polyaspartic urethane coating was applied using a flat rubber squeegee and then backrolled to a thickness of 12–14 mils.

Fig. 2: Water from the sterilization process flows over the flooring system and is collected for treatment and agricultural reuse.

The cove base was installed using a vertical-grade, three-component, cementitious polyurethane coving and detailing mortar, at a thickness of ⅛–¼ inch.

Fig. 3: The industrial floor coating system had to be resistant to cleaning agents as well as intermittent contact with milk products.

COMPLICATIONS

When the slurry application began on the new concrete areas, a prickly problem popped up. The contractor had applied about 2,000 square feet before noticing many raised surface defects. After investigation, it was determined that the new floor area was composed of fiber-reinforced concrete and during the shotblasting process, some of these fibers were exposed. Due to the static surface treatment meant to aid in the incorporation of the fibers into the concrete mix, the exposed ends of the fibers were sticking up and causing raised defects when covered with the slurry.

To resolve the issue, the new concrete area with the exposed fibers received two skim coats of a three-component, solvent-free, high-build, water-dispersed polyurethane/cement coating applied with a tight steel squeegee to a thickness of 7–8 mils per lift, that encapsulated and laid down the fiber ends. Once these two coats were cured, the new floor area received a treatment similar to the existing floor:

- The cementitious polyurethane slurry was applied to a 3/16-inch lift using gauge rakes and broadcast to failure with dried quartz sand to build the lift to a total of ¼-inch.
- The pigmented polyaspartic coating was applied to 12-14 mils using a flat rubber squeegee and then backrolled.

Several additional challenges were addressed. First, the site was fairly remote and required multiple large-scale crew and material mobilizations over the construction period.

During the several months of coating and cove base application, the seasons changed and temperature fluctuations were common. Normally, this would impact the cure and the final properties of cement or coating materials; however, this wasn't an issue, as the cementitious polyurethane slurry cure was aided by the internal reaction process of the polyurethane modification. In addition to increasing the compressive strength and impact resistance of the concrete, the polyurethane components help the cement to cure similarly even in varying temperatures. Although the cementitious polyurethane slurries and coving materials were installed in the winter and spring, they cured at roughly the same speed with little change in the colder winter months.

The polyaspartic topcoat technology was forgiving of air-temperature fluctuations and the cold slab effect. The two-component polyaspartic's reactive chemistry allows these floor coatings to be applied at temperatures below 50 F with minimal cure-speed differences, which extends the application season for commercial industrial projects and leads to increased productivity, as well as reduced labor cost for contractors. Additionally, polyaspartic floor coatings aren't subject to amine blush in cold weather as are many epoxy floor coatings. Amine blush occurs when the epoxy coating cures while the temperature is dropping or is lower than the minimum application temperature specified by the manufacturer. Therefore, the use of a polyaspartic flooring topcoat addressed the challenges of both curing consistency as well as avoiding surface issues that other coating technologies may experience in colder weather.

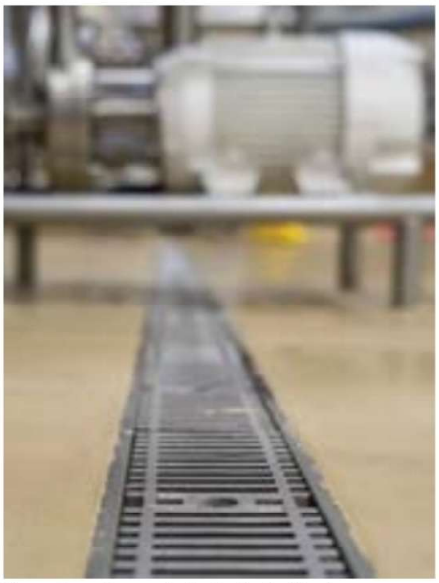

Fig. 4: One of many drains in the facility that were effectively addressed using the floor coating system.

SUSTAINABILITY BENEFITS

Although Continental Dairy had conducted a similar construction operation in Coopersville, Michigan, where an old GM facility was converted into a dairy plant, there are always a host of unknowns when taking an existing building from an unrelated industry with the intent of adaptation for a new use. However, the repurposing of an old building supports sustainable practices by reusing existing, expended resources, allowing for the upgrade

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Fig. 5: Over 14,000 linear feet of cove base was created using a polyurethane mortar and a polyaspartic-based topcoat.

of less efficient building components such as lighting and insulation, diverting a significant waste stream from a landfill. In addition to the adaptive reuse of an existing building, the Continental Dairy facility also contributed to the ongoing local sustainability by allocating an additional $28 million to construct a wastewater treatment plant to convert wastewater from the dairy plant into irrigation-quality water for regional farmers.

When sourcing the cove-base material for the facility, ease of use, durability and cure speed were considered. In this case, the cementitious polyurethane mortar system selected was available in totes made of a reusable outer tubular metal frame with a recyclable HDPE liner—another sustainability advantage.

The floor coating portion of the Continental Dairy facility was completed in the first quarter of 2019 and the facility was opened and fully operational in late March. The renovations have allowed this modern facility to begin safely and efficiently processing millions of pounds of liquid assets into non-fat dry milk, butter and more.

ABOUT THE AUTHOR

Steven Reinstadtler is the Infrastructure Market Manager for coatings, adhesives and sealants - CAS Business Unit of Covestro LLC in Pittsburgh. He works closely with contractors, companies and organizations that build infrastructure with durability and sustainability in mind by educating the market on high-performance coating and sealant options. Reinstadtler has been with Covestro for more than 30 years in technical and marketing management positions. He holds a degree in chemistry with a polymer science option from the University of Pittsburgh and is an active member of professional societies such as AIA, CSI, ACS, SSPC, CPI, ACA, ESWP and PDA. ***JPCL***

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SSPC COATINGS+ 2020

Long Beach, CA | Feb. 3–6, 2020

TRAINING & CERTIFICATION

dszc / Getty Images

As it does each year, SSPC will offer a wide range of on-site training and certification courses for attendees of its annual conference and exhibition, Coatings+ 2020, in Long Beach, California, Feb. 3–6, 2020.

Registration for all SSPC training courses must be done separately from the Coatings+ conference registration. Individuals who register for a training course will receive a $100 discount on full conference registration. Download the Coatings+ 2020 training registration form at sspc.org/event/coatings or visit sspc.org/training to register by January 8, 2020. Please contact Joe Corll (corll@sspc.org; 412-281-2331, ext. 2241) with questions about training course registration.

The following is a list of the training and certification courses that will be offered at Coatings+ 2020. Please note that some course dates extend before and after the official conference dates. This list is preliminary; courses will not be confirmed until January 8, 2020.

For complete, up-to-date information on the SSPC Coatings+ 2020 conference and exhibition, visit sspc.org/event/coatings.

ABRASIVE BLASTING PROGRAM (C7)

Feb. 1–2

The C7 course is designed for contractor personnel and others who wish to learn about dry abrasive blast-cleaning of steel. It covers principles of surface preparation, surface cleanliness, surface profile, dust and debris control and abrasives. A certificate of attendance will be given to those attending the lecture portion and observing the blaster demonstration.

AEROSPACE ENGINEER COATING APPLICATION TRAINING

Feb. 4–7

The objective of this course is to support corrosion prevention and control during the life cycle of Department of Defense aircraft. The course includes multiple workshops and problem-solving exercises so that participants may immediately apply the learning in a classroom setting, without the pressures of production and project schedules. Instructors will explain how proper design is required to prevent corrosion; define the performance properties needed to qualify, validate and verify a coating for aircraft; and define military documents, specifications and requirements for corrosion control of aircraft.

BRIDGE COATINGS INSPECTOR PROGRAM (BCI)

Level 1: Jan. 30–Feb. 3

Level 2: Jan. 30–Feb. 4

The BCI course covers the fundamentals of how to inspect surface preparation and application of protective coatings on bridge steel. The course covers unique situations that will affect inspection in the field (such as containment, field safety hazards and changing weather conditions), as well as the fundamental inspection skills required to inspect new bridge steel painted in the shop, in the field or maintenance systems applied in the field.

COAST GUARD BASIC PAINT INSPECTOR COURSE (COAST GUARD)

Jan. 30–Feb. 3

This five-day inspection course was developed to train coatings inspectors in the duties and responsibilities involved in inspecting surface preparation and protective coatings application for the U.S. Coast Guard.

COATINGS+

COATING APPLICATION SPECIALIST REFRESHER (CAS REF)

Jan. 30

The CAS Refresher is an overview of surface preparation and application covered in the Body of Knowledge of SSPC-ACS I/NACE No. 13, "Applicator Certification Standard No I Industrial Coating and Lining Application Specialist Qualification and Certification." This training program covers those topics for Level I in the areas of surface preparation and coating application. Level I training is especially designed for entry-level employees new to the coatings Industry.

COATING APPLICATION SPECIALIST (CAS)

Level 1: Jan. 31

Level 2: Jan. 31–Feb. 1

Level I of the CAS program consists of a one-hour written exam and is intended for entry-level/trainee Application Specialists, who customarily work with and under the supervision of Level 2 and Level 3 Application Specialists. CAS Level 2 requires passing a closed-book written exam drawn from the core areas of the SSPC Transition Plan Body of Knowledge, as well as a hands-on portion certifying proficiency in abrasive blasting and coating application using conventional or airless spray.

FUNDAMENTALS OF PROTECTIVE COATINGS (C1)

Jan. 30–Feb. 3

This course provides a practical and comprehensive overview for those who are new to the protective coatings industry. It is also an ideal refresher for reviewing the fundamentals of corrosion and the use of coatings as a protective mechanism against corrosion and deterioration of industrial structures.

LEAD/HAZARDOUS COATINGS REMOVAL (C3)

Jan. 30–Feb. 2

The C3 course includes information on the hazards of lead and other toxic metals, and the current legal and regulatory environment. Topics include protecting workers, compliance with environmental regulations and specifications, waste stream management, associated control technology, insurance and bonding issues and other safety and health issues.

COATINGS+ *Exhibitors*

The following is a list of companies planning to showcase their products and services in the Coatings+ 2020 exhibit hall. For questions about exhibiting, please contact Nicole Lourette (lourette@sspc.org).

Abrasives Inc.
Air Systems International
Arid-Dry
ARMEX
ARS Recycling Systems, LLC
Atlantic Design Inc.
Axxiom Mfg./Schmidt Engineered Abrasive Systems
Barton International
Bellemare Abrasives & Minerals
Blast One
Borchers/Chlor Rid
BrandSafway
Bullard
Burleigh Industries
BYK-Gardner USA
CanAm Minerals, Inc.
Carboline
CESCO
Clemco Industries Corp.
Cortec Corporation
Chemours
CoatingsPro Magazine
Cor-Ray Painting Co.
Corrodere Academy
CSI Services
D.H. Charles Engineering, Inc.
Dampney
Daubner Advanced Coating Solutions
DeFelsko Corporation
Dehumidification Technologies, LP
DESCO Manufacturing Inc.
Detroit Tarpaulin, Inc.
Doosan Portable Power
Dupont Protection Solutions
Dustnet by EMI
Eagle Industries
EcoFinish LLC
Ecomaterials, Inc.
Elcometer
Element Materials Technology
EnTech Industries
ErgonArmor
Ervin Industries
Federal Signal Environmental Solutions Group
Fischer Technology, Inc.
Forensic Analytical Consulting Services (FACS)
Gannett Fleming
GMA Garnet USA
GNP Ceramics, LLC
Graco Inc.
Greener Blast
Greenman-Pedersen, Inc.
Harsco Minerals
Herc Rentals
Hippwrap Containment
HoldTight Solutions, Inc.
HRV Conformance Verification Associates Inc.
Induron Protective Coatings
Industrial Vaccuum Equipment Corp.
International Paint/AkzoNobel
ITW Polymers Sealants North America
IUPAT/ Finishing Trades Institute
J.H. Fletcher & Co.
Jollyflex USA
JPCL
Kennametal
KTA-Tator, Inc.
Langtry Blast Technologies
MES – Rentals & Supplies
Minerals Research, Inc.
Monarflex by Siplast
Montipower
NACE International/NACE Institute
National Equipment Corp. (NECO)
NCERCAMP @ The University of Akron
Nextec, Inc./PreTox
Novatek Corporation
Nu Way Industrial Waste Management, LLC
Olimag Sand
Opti-Blast, Inc.
P & L Metalcrafts
Pacific Dust Collectors & Equipment
PaintSquare
Polygon
PPG Protective & Marine
Pro-Tect Plastic & Supply
Rapid Prep
RD Coatings–Dothée S.A.
Rizhao Garnet Ltd.
Rust-Oleum
Saint-Gobain
SAFE Systems, Inc.
The Sherwin-Williams Company
Somay Q
Sponge-Jet
Spray Foam Systems
Sprayroq, Inc.
Sulzer Mixpac USA
Tarps Manufacturing
TDJ Group
Technofink, LLC
Technology Publishing Co.
Texan Stone LLC
Thermion Inc.
Tinker & Rasor
Titan Tool
Tnemec Company, Inc.
Trelawny SPT Ltd.
TruQC
U.S. Minerals
Van Air Systems
Vector Technologies Ltd.
VersaFlex
W Abrasives
The Warehouse Rental & Supply
Wasser Coatings
Western Technology
WIWA
ZIBO TAA Metal Technology Co., Ltd.

LEAD/HAZARDOUS COATINGS REMOVAL REFRESHER (C5)

Feb. 5

This one-day course provides a review of Competent Person duties and responsibilities in working with lead and other hazardous materials encountered in industrial coatings work. It also reviews relevant OSHA and EPA regulations.

NAVSEA BASIC PAINT INSPECTOR (NBPI)

Jan. 30–Feb. 3

Developed by Naval Sea Systems Command (NAVSEA), this course covers inspection of critical coated areas defined by U.S. Navy policy documents such as cofferdams, decks for aviation and UNREP, chain lockers, underwater hull, bilges, tanks, voids, well deck overheads and others. It provides both the technical and practical fundamentals for coating inspection work for many steel structure projects other than ships.

PLANNING AND SPECIFYING INDUSTRIAL COATINGS PROJECTS (C2)

Feb. 3–7

The C2 course provides those who understand coating fundamentals with an overview of the principles of planning, awarding and quality monitoring of new construction or maintenance painting projects. Participants will become familiar with tools to develop effective coating projects and play a more active role in managing painting projects to successful completion.

PROTECTIVE COATINGS SPECIALIST (PCS) PROGRAM

Feb. 5

SSPC's highest level of certification, the PCS program awards recognition to individuals who have in-depth knowledge in the principles and practices of industrial coatings technology. It attests to the professional credibility of the coatings practitioner and raises the standards of the profession.

PROTECTIVE COATINGS INSPECTOR (PCI) PROGRAM

Level 1: Jan. 30-Feb. 3

Level 2: Jan. 30-Feb. 4

Level 3 Exam: Feb. 5

The PCI program thoroughly trains individuals in the proper methods of inspecting surface preparation and coatings installation on an array of industrial structures and facilities. Candidates should be prepared for an intense and fast-paced week of training with evening homework and study. PCI meets the requirements of ASTM D3276; the IMO Performance Standard for Protective Coatings; and IACS CSR.

SPRAY APPLICATION CERTIFICATION (C12)

Feb. 2–3

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. Candidates are certified through a brief written exam and a practical hands-on skill assessment.

THERMAL SPRAY INSPECTOR TRAINING (THERMAL INSP)

Feb. 2

This program covers the inspection of thermal spray from pre-surface preparation through coating application.

THERMAL SPRAY APPLICATOR TRAINING (THERMAL APP)

Feb. 1

This course is designed to train and certify applicators of thermal spray coatings to industrial substrates. Students who do not want to receive the certification can attend the one-day lecture and classroom workshops to receive a certificate of training.

TRAIN THE TRAINER (TTT) TRAINTHEPAINTER (TTP)

Feb. 1–2

This two-day class prepares a company's internal trainer(s) to deliver the SSPC Trainthepainter (TTP) Program to their internal craft workers.

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2019 ANNUAL COATING SYSTEMS

BUYING GUIDE FOR CONCRETE

The 2019 *JPCL* Annual Coating Systems Buying Guide for Concrete features more than 135 coating manufacturers and provides details about high-performance coating systems suitable for concrete substrates for bridges and highways, in chemical and petrochemical plants, food and pharmaceutical plants, power plants, pipelines, wastewater facilities, water works, and waterfront, locks and dams, as well as specialty-function applications. The Guide is published as a resource for facility owners, third-party specifiers, contractors and anyone engaged in a coatings project. It allows the user to identify systems that companies recommend for specific applications, exposures and specialty functions.

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EXTERIOR WEATHERING - MILD/ MODERATE

3M Corrosion Protection Products
Scotchkote
Epoxy/Epoxy 100% Solids

AcryliCon Flooring Solutions
AcryliCon Decor
Other

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane

Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane

AP/M Permaform
Cor+Gard and Cor+Gard EPM
Epoxy/Epoxy 100% Solids

APV Engineered Coatings
NeverFade
Epoxy (1-2 Coats)/Fluoropolymer

ARCOR - Novolac Epoxy Technologies Inc
ARCOR EE-71
Epoxy/Epoxy 100% Solids

Arma Coatings
Arma 901 Polyurea 90AS
Polyurea Pure (1, 2, or 3 Coats)

ArmorThane USA Inc.
EnviroThane
Polyurea Hybrid (1, 2, or 3 Coats)

BASF Corporation–Construction Systems
MasterProtect H 400
Siloxane/Siloxane

Bowers Industrial
Duromar
Epoxy/Epoxy 100% Solids

Carboline Company
Carboguard/Carbothane
Epoxy (1-2 Coats)/Urethane

ChemCo Systems
CCS General Purpose
Epoxy/Epoxy 100% Solids

Chemline Inc
Bridge-Tech
Polyurea Pure (1, 2, or 3 Coats)

ChemMasters, Inc.
Texture DOT, Colorcoat & Colorcoat XL
Alkyd/Acrylic/Acrylic

CIM Industries
CIM 1000
Epoxy (1-2 Coats)/Urethane

Cloverdale Paint Inc.
Clovamastic/Armourshield
Epoxy (1-2 Coats)/Urethane

Coatings For Industry, Inc.
U-Series
Urethane/Urethane

Concrete Solutions by Rhino Linings
Concrete Solutions HP Urethane
Urethane/Urethane

Copps Industries, Inc.
Armorgard 202
Epoxy/Epoxy 100% Solids

Cortec Corporation
VpCI-386
Alkyd/Acrylic/Acrylic

Cote-L Industries Inc.
Durabak 18
Urethane/Urethane

Creative Material Technologies, Ltd.
Dyna-Pur
Polyurea Pure (1, 2, or 3 Coats)

CSL Silicones Inc.
SiCoat 401
Siloxane/Siloxane

Dampney Co., Inc.
Thurmalox High Temperature
Other

Diamond Vogel Inc.
Vers-Acryl 300/Vers-Acryl 222/Vers-Acryl 222
Other

Duromar, Inc.
DF-1310, DF-5610, HydroFlor
Epoxy/Epoxy 100% Solids

ENECON Corporation
Eneseal
Other

ErgonArmor
Ertech
Coal Tar/Asphalt

Euronavy Engineering, S.A.
Euronavy Engineering EE01
Epoxy Coal Tar High Build (1 or 2 Coats)

Fire Free Coatings Inc.
FFE
Other

Flexcrete Technologies Ltd
Cemprotec
Other

FSC Coatings Inc.
Bio-SAFE MaxLife
Alkyd/Acrylic/Acrylic

GCP Applied Technologies
Eliminator Bridge Deck Waterproofing Membrane
Other

GE Silicones
SilShield
Other

Gemite Products Inc.
Gem-Gard SX WB
Siloxane/Siloxane

Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)

Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic / CT-370 Acrylic Aliphatic Poly.
Epoxy (1-2 Coats)/Urethane

H-I-S Coatings
Life-Kote
Epoxy/Epoxy

Induron Coatings, LLC
Indurethane 6600 Plus
Epoxy (1-2 Coats)/Urethane

Industrial Solutions USA, LLC.
Nano-Clear Industrial coating
Polyurea Hybrid (1, 2, or 3 Coats)

Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic

International Cellulose Corporation
K-13
Other

International Metalizing Corporation
Reddevil 888
Thermal Spray

Jessup Manufacturing Company
Jessup Safety Track
Tape Wraps

Jotun Paints Inc.
Pen-O-Prep / Penguard Express / Hardtop AX
Epoxy (1-2 Coats)/Urethane

Kaufman Products, Inc.
SurePoxy HiBild
Epoxy 100% Solids (1 or 2 Coats)

KCC Corrosion Control Co.
KCC Techni-Plus UR 5
Urethane/Urethane

Key Resin Company/Flowcrete
Key MMA/Flowfast MMA
Methyl Methacrylate/Methyl Methacrylate
Klaas Coatings (Norh America) LLC
Si-Rex03
Other
Lalita Infraprojects Pvt Ltd
Duaripoxy 10
Organic Zinc/Epoxy 100% Solids
Maxon Technologies
C2M
Other
Monopole, Inc.
Dex-Coat
Alkyd/Acrylic/Acrylic
NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)
New Guard Coatings Inc.
Jotamastic/Amerlock
Epoxy/Epoxy
Nukote Coating Systems International
Nukote ST
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy/Epoxy 100% Solids
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard AS Polyaspartic
Polyurea Hybrid (1, 2, or 3 Coats)
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Pitt Tech
Other
Premier Coating Systems Inc
PCS-#1111 / PCS-#4300
Epoxy (1-2 Coats)/Fluorourethane
Professional Products of Kansas, Inc
Professional Water Sealant / & Anti-Graffitiant
Siloxane/Siloxane
Protek Paint Ltd.
masonry sealer
Siloxane/Siloxane
Randolph Products
Randolph Products RP 250
Epoxy/Epoxy
REMA Corrosion Control, Inc.
Corogard
Epoxy 100% Solids (1 or 2 Coats)
Rhino Linings
Rhino Extreme
Polyurea Pure (1, 2, or 3 Coats)
Riley Paint Company
Riley Paint
Epoxy (1-2 Coats)/Urethane
Roadware
Concrete Mender
Polyurea Hybrid (1, 2, or 3 Coats)
Sherwin-Williams
Acrylic Texture Coatings,Stains, or Solvent Stains
Other
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, HT-100F UB, HT-SL UB, ElastaFLE
Polyurea Pure (1, 2, or 3 Coats)
Synavax, Inc.
Energy Protect
Thermal Spray
Termarust Technologies Inc.
Termarust TR2000 HRCSA Series
Calcium Sulphonate
Textured Coatings of America
Bridge Cote
Alkyd/Acrylic/Acrylic
Thermion
Thermion
Thermal Spray
Thin Film Technology, Inc.
Bio-Gard 258
Epoxy/Epoxy 100% Solids
TMS Metalizing Systems, Ltd.
TMS Metalizing Systems
Thermal Spray
Tnemec Company, Inc.
Epoxoline/Enviro-Crete
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)
Transpo Industries Inc.
Transpo Ebond 526, Transpo T-48
Epoxy 100% Solids (1 or 2 Coats)
Vertic Zinc Wire OY
VerZn
Thermal Spray
Watson Coatings, Inc.
Armor-Shield
Calcium Sulphonate

EXTERIOR WEATHERING - SEVERE

3M Corrosion Protection Products
Scotchkote
Epoxy/Epoxy 100% Solids
AcryliCon Flooring Solutions
AcryliCon Decor
Other
Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
AP/M Permaform
Cor+Roc
Epoxy/Epoxy 100% Solids
APV Engineered Coatings
NeverFade
Epoxy (1-2 Coats)/Fluoropolymer
ARCOR - Novolac Epoxy Technologies Inc
ARCOR S-15
Epoxy/Epoxy 100% Solids
Arma Coatings
Arma 901 60D
Polyurea Pure (1, 2, or 3 Coats)
ArmorThane USA Inc.
UltraTech
Polyurea Pure (1, 2, or 3 Coats)
BASF Corporation–Construction Systems
MasterSeal 350
Epoxy 100% Solids (1 or 2 Coats)
Bowers Industrial
Duromar
Epoxy 100% Solids (1 or 2 Coats)
Carboline Company
Carboguard
Epoxy/Epoxy/Epoxy
ChemCo Systems
CCS General Purpose
Epoxy 100% Solids (1 or 2 Coats)
Chemline Inc
Bridge-Tech
Polyurea Pure (1, 2, or 3 Coats)
ChemMasters, Inc.
Safe-Cure & Seal EPX / Duraguard 310CRU
Epoxy (1-2 Coats)/Urethane
CIM Industries
CIM 1000
Epoxy (1-2 Coats)/Urethane
Cloverdale Paint Inc.
Clovamastic/Armourshield
Epoxy (1-2 Coats)/Urethane
Coatings For Industry, Inc.
U-Series
Urethane/Urethane
Copps Industries, Inc.
Armorgard 202
Epoxy/Epoxy 100% Solids
Cortec Corporation
VpCI-386
Alkyd/Acrylic/Acrylic
Cote-L Industries Inc.
Durabak 18
Urethane/Urethane
Creative Material Technologies, Ltd.
Water Chasing Primer
Polyurea Hybrid (1, 2, or 3 Coats)
CSL Silicones Inc.
SiCoat 401
Siloxane/Siloxane
Dampney Co., Inc.
Epodur
Other
Diamond Vogel Inc.
Mult-E-Poxy 180/Multi-Thane 330 or 340
Epoxy (1-2 Coats)/Urethane
Duromar, Inc.
DF-1310, DF-5610, HydroFlor
Organic Zinc/Epoxy 100% Solids
ENECON Corporation
Eneseal
Other
ErgonArmor
Novocoat SP2410
Epoxy/Epoxy/Epoxy

Euclid Chemical Company
Baracade
Siloxane/Siloxane
Euronavy Engineering, S.A.
Euronavy Engineering EE01
Epoxy 100% Solids (1 or 2 Coats)
Flexcrete Technologies Ltd
Cemprotec
Other

PROFESSIONAL
EDUCATION WEBINARS

PAINTSQUARE FIREPROOFING SERIES

Smart Machines Are the Future: How Modern PFP Equipment is Changing the Market

Have you ever thought about changing from a fixed ratio sprayer to a variable ratio sprayer and wondered what the differences are? This webinar is an introduction into the different types of PFP sprayers on the market and how new technology is helping contractors spray new intumescent fireproofing materials quicker and easier than ever before. With machines getting smarter, set up and application of today's thick film coatings has never been simpler.

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FSC Coatings Inc.
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Alkyd/Acrylic/Acrylic
GCP Applied Technologies
Eliminator Bridge Deck Waterproofing Membrane
Other
Gemite Products Inc.
Tuff-Flex CA
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic / CT-370 Acrylic Aliphatic Poly.
Epoxy (1-2 Coats)/Urethane
H-I-S Coatings
Life-Kote
Epoxy/Epoxy/Epoxy
Induron Coatings, LLC
Perma-Gloss
Epoxy (1-2 Coats)/Fluorourethane
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil888
Thermal Spray
Jessup Manufacturing Company
Jessup Safety Track
Tape Wraps
Jotun Paints Inc.
Pen-O-Prep / Penguard Express/Hardtop AX
Epoxy (1-2 Coats)/Urethane
Kaufman Products, Inc.
SurePoxy HiBild
Epoxy 100% Solids (1 or 2 Coats)
KCC Corrosion Control Co.
KCC Techni-Plus VE 40
Vinyl Ester/Vinyl Ester/Vinyl Ester
Key Resin Company/Flowcrete
Key MMA/Flowfast MMA
Methyl Methacrylate/Methyl Methacrylate
Klaas Coatings (Norh America) LLC
Si-Rex03
Other
Lalita Infraprojects Pvt Ltd
Duarithane 10
Urethane/Urethane
Monopole, Inc.
Monochem 610
Urethane/Urethane
NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)
New Guard Coatings Inc.
Jotamastic/Amerlock
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)
Normac Adhesive Products Inc.
NR-80/95LVHS
Urethane/Urethane
Nukote Coating Systems International
Nukote ST
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy/Epoxy 100% Solids
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard AS Polyaspartic
Polyurea Hybrid (1, 2, or 3 Coats)
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Amerlock / Amercoat 450H
Epoxy (1-2 Coats)/Urethane
Premier Coating Systems Inc
PCS-#1111 / PCS-#4300
Epoxy (1-2 Coats)/Fluorourethane
Professional Products of Kansas, Inc
Professional Water Sealant/ & Anti-Graffitiant
Siloxane/Siloxane
Randolph Products
Polysiloxane Nonskid
Epoxy/Epoxy/Siloxane
REMA Corrosion Control, Inc.
Coroflake
Vinyl Ester/Vinyl Ester/Vinyl Ester
Rhino Linings
Rhino Linings Epoxy
Epoxy/Epoxy 100% Solids
Riley Paint Company
Riley Paint
Epoxy (1-2 Coats)/Urethane
Roadware
MatchCrete Clear
Polyurea Hybrid (1, 2, or 3 Coats)

SHERWIN WILLIAMS.

Sherwin-Williams
Macropoxy 646 / Polylon HP
Other
Specialty Products, Inc. (SPI)
HT-100F UB, K5 UB, Aquaseal Hi Rise X3, AMP-100 UB
Polyurea Pure (1, 2, or 3 Coats)
Synavax, Inc.
Energy Protect
Thermal Spray
Termarust Technologies Inc.
Termarust TR2000 HRCSA Series
Calcium Sulphonate
Textured Coatings of America
Bridge Cote
Alkyd/Acrylic/Acrylic
Thermion
Thermion
Thermal Spray
Thin Film Technology, Inc.
Bio-Gard 258
Epoxy/Epoxy 100% Solids
TMS Metalizing Systems, Ltd.
TMS Metalizing Systems
Thermal Spray
Tnemec Company, Inc.
Epoxoline/Enviro-Crete
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)
Transpo Industries Inc.
Transpo T-70, T-78, T17, Color-Safe
Methyl Methacrylate/Methyl Methacrylate
Vertic Zinc Wire OY
VerZn
Thermal Spray
Watson Coatings, Inc.
Armor-Shield
Calcium Sulphonate

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EXTERIOR PLANT EXPOSURE - MODERATE TO SEVERE CHEMICAL, WEATHERING & UV

AcryliCon Flooring Solutions
AcryliCon Decor
Other

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane

Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane

AkzoNobel
International
Organic Zinc/Epoxy/Urethane

ARCOR - Novolac Epoxy Technologies Inc
ARCOR S-15
Epoxy Novolac (1 or 2 Coats)

Arma Coatings
Arma Polyaspartic
Polyurea Pure (1, 2, or 3 Coats)

Bowers Industrial
Duromar
Epoxy 100% Solids (1 or 2 Coats)

Carboline Company
Carboguard/Carbothane
Epoxy (1-2 Coats)/Urethane

Ceilcote (International Paint LLC)
Ceilcote/Ceilcrete
Vinyl Ester/Vinyl Ester/Vinyl Ester

ChemCo Systems
CCS High Chem
Epoxy/Epoxy 100% Solids

Chemline Inc
Chemline ARC
Polyurea Pure (1, 2, or 3 Coats)

CIM Industries
CIM
Urethane Elastomeric (1 Coat)

Cloverdale Paint Inc.
Armourshield
Epoxy (1-2 Coats)/Urethane

Coatings For Industry, Inc.
U-Series
Epoxy (1-2 Coats)/Urethane

Concrete Solutions by Rhino Linings
Concrete Solutions HP Urethane
Urethane/Urethane

Copps Industries, Inc.
Armorgard 502
Epoxy/Epoxy 100% Solids

Cortec Corporation
VpCI 395/384
Epoxy (1-2 Coats)/Urethane

Cote-L Industries Inc.
Durabak 18
Urethane/Urethane

Creative Material Technologies, Ltd.
Dyna-Pur 9556
Polyurea Pure (1, 2, or 3 Coats)

Dampney Co., Inc.
Epodur
Other

Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy (1-2 Coats)/Urethane

Diamond Vogel Inc.
Mult-E-Poxy 180/Multi-Thane 330 or 340
Epoxy (1-2 Coats)/Urethane

Dudick, Inc.
Protecto-Flex
Epoxy/Vinyl Ester/Vinyl Ester

Duromar, Inc.
HPL-1110/ HPL-1110
Epoxy 100% Solids (1 or 2 Coats)

East Earth Co., Ltd.
MAXBON
Epoxy/Vinyl Ester/Vinyl Ester

ENECON Corporation
Chemclad XC
Epoxy Novolac (1 or 2 Coats)

ErgonArmor
Novocoat SC3300 Series
Epoxy Novolac (1 or 2 Coats)

Euronavy Engineering, S.A.
Euronavy Engineering EE01
Epoxy (1-2 Coats)/Urethane

Flexcrete Technologies Ltd
Cemprotec
Other

Florock Polymer Flooring
Florock FloroSpartic Polyaspartic Coating
Other

FSC Coatings Inc.
Rustop/Bio-Safe MaxLife
Urethane/Urethane

Gemite Products Inc.
Corro-Chem 100
Other

Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)

Goodwest Linings and Coatings
Carboline Semstone 800
Vinyl Ester/Vinyl Ester/Vinyl Ester

Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic / CT-370 Acrylic Aliphatic Poly.
Epoxy (1-2 Coats)/Urethane

H&H Painting Co., Inc.
Sherwin Williams
Epoxy (1-2 Coats)/Urethane

Hempel (USA), Inc.
Hempadur Preprep/Hempadur/Hempathane Series
Epoxy (1-2 Coats)/Urethane

H-I-S Coatings
H-I-S Coatings
Epoxy (1-2 Coats)/Urethane

Induron Coatings, LLC
Perma-Gloss
Epoxy (1-2 Coats)/Fluoropolymer

Industrial Solutions USA, LLC.
Nano-Clear Industrial Coating
Polyurea Hybrid (1, 2, or 3 Coats)

Insulating Coatings Corporation
Astec 2000 System
Alkyd/Acrylic/Acrylic

Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic

International Metalizing Corporation
Reddevil888
Thermal Spray

IXS Coatings/Ultimate Linings
UL XP 6613
Polyurea Pure (1, 2, or 3 Coats)

Jessup Manufacturing Company
Jessup Safety Track
Tape Wraps

Jotun Paints Inc.
Pen-O-Prep / Penguard Express / Hardtop AX
Epoxy (1-2 Coats)/Urethane

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KARNAK
502 RC-W Elastomeric
Sheet Lining, Thermoplastic

Kaufman Products, Inc.
K Pro CRS
Epoxy 100% Solids (1 or 2 Coats)

KCC Corrosion Control Co.
KCC Techni-Plus AEP 20
Other

Key Resin Company/Flowcrete
Key 630, Key 633
Epoxy/Epoxy Novolac/Epoxy Novolac

Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic

Milamar Coatings
ICO Hi Guard
Epoxy/Epoxy Novolac/Epoxy Novolac

NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)

National Polymers Inc.
Private label
Epoxy (1-2 Coats)/Urethane

New Guard Coatings Inc.
Jotamastic/Hardtop - Amerlock/Amershield
Epoxy (1-2 Coats)/Urethane

Nukote Coating Systems International
Nukote ST
Polyurea Pure (1, 2, or 3 Coats)

Oak Ridge Foam & Coating Systems, Inc
Oak Ridge Brand
Polyurea Pure (1, 2, or 3 Coats)

Peerless Industrial Systems
Epigen
Epoxy/Epoxy 100% Solids

Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)

Polymer Group Ltd.
Enduracoat
Epoxy/Epoxy/Epoxy

Polyset
Ply-Guard AS Polyaspartic
Polyurea Hybrid (1, 2, or 3 Coats)

PPC Coatings (MTR)
PPC Coatings
Other

PPG
Amerlock/ Durethane DTM
Epoxy (1-2 Coats)/Urethane

Premier Coating Systems Inc
PCS-#1111 / PCS-#4300
Epoxy (1-2 Coats)/Fluorourethane

Randolph Products
Randogrip Navy G
Epoxy/Epoxy

REMA Corrosion Control, Inc.
Coroflake
Vinyl Ester/Vinyl Ester/Vinyl Ester

Rhino Linings
Rhino Extreme
Polyurea Pure (1, 2, or 3 Coats)

Riley Paint Company
Riley Paint
Epoxy (1-2 Coats)/Urethane

Sauereisen, Inc.
Sauereisen
Epoxy/Epoxy 100% Solids

Sherwin-Williams
Macropoxy 646 / Acrolon 218 HS
Epoxy (1-2 Coats)/Urethane

Specialty Products, Inc. (SPI)
PTU UB, ElastaFLEX CR, HT-100F UB, Aquaseal Hi Rise
Polyurea Pure (1, 2, or 3 Coats)

Synavax, Inc.
Energy Protect
Thermal Spray

Textured Coatings of America
CLEAR-GARD
Epoxy (1-2 Coats)/Urethane

Thermion
Thermion
Thermal Spray

Thin Film Technology, Inc.
Bio-Gard 255
Epoxy/Epoxy 100% Solids

TMS Metalizing Systems, Ltd.
TMS Metalizing Systems
Thermal Spray

Tnemec Company, Inc.
Epoxoline/Enviro-Crete
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)

VCI Coatings
VCI Primer
Other

Versatile Building Products
Roll on Rock
Epoxy (1-2 Coats)/Urethane

Westcoat
Westcoat
Epoxy/Epoxy Novolac/Epoxy Novolac

Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

SECONDARY CONTAINMENT

3M Corrosion Protection Products
Scotchkote
Epoxy (1-2 Coats)/Urethane

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane

Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane

AkzoNobel
International
Epoxy Novolac (1 or 2 Coats)

Andek Corporation
Polafloor PUR
Urethane/Urethane

ARCOR - Novolac Epoxy Technologies Inc
ARCOR EE-11
Epoxy/Epoxy 100% Solids

Arma Coatings
Arma Polyurea 901
Polyurea Pure (1, 2, or 3 Coats)

Blome International
Blome
Epoxy/Epoxy Novolac/Epoxy Novolac

Bowers Industrial
Duromar
Epoxy 100% Solids (1 or 2 Coats)

Carboline Company
Semstone
Epoxy 100% Solids (1 or 2 Coats)

Ceilcote (International Paint LLC)
Ceilcote/Flakeline MR
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled

ChemCo Systems
CCS Concentrated Sulfuric Acid Resistance
Epoxy/Epoxy Novolac/Epoxy Novolac

Chemline Inc.
Chemline ARC
Polyurea Pure (1, 2, or 3 Coats)

CIM Industries
CIM
Urethane Elastomeric (1 Coat)

Cloverdale Paint Inc.
ClovaLine
Epoxy Novolac (1 or 2 Coats)

Concrete Solutions by Rhino Linings
Concrete Solutions Epoxy 700 Plus
Epoxy 100% Solids (1 or 2 Coats)

Copps Industries, Inc.
Armorgard 502
Epoxy/Epoxy 100% Solids

CORCHEM Corporation of Texas
NOVA 525
Epoxy/Epoxy 100% Solids

Cortec Corporation
VpCI 395/2026
Epoxy/Epoxy Novolac/Epoxy Novolac

Corvixx Polymers Corporation
Corvixx CXE-403
Epoxy Novolac (1 or 2 Coats)

Cote-L Industries Inc.
Durabak/ Durabak smooth
Urethane/Urethane

Creative Material Technologies, Ltd.
Nano-Pur 1376
Polyurea Pure (1, 2, or 3 Coats)
Diamond Vogel Inc.
Mult-E-Poxy 180/Multi-Thane 330 or 340
Epoxy (1-2 Coats)/Urethane
Dudick, Inc.
Protecto-Flex
Epoxy/Vinyl Ester/Vinyl Ester
Duromar, Inc.
DF-4301 / DF-4301
Epoxy 100% Solids (1 or 2 Coats)
ENECON Corporation
Chemclad
Epoxy 100% Solids (1 or 2 Coats)
Enviroline (International Paint LLC)
Enviroline
Epoxy 100% Solids (1 or 2 Coats)
ErgonArmor
Novocoat ER2000 Series
Epoxy Novolac (1 or 2 Coats)
Euclid Chemical Company
Duraltex 1807
Epoxy/Epoxy Novolac/Epoxy Novolac
Euronavy Engineering, S.A.
Euronavy Engineering EF27
Epoxy 100% Solids (1 or 2 Coats)
Fabick, Inc. - Coatings and Sealants
Fabick
Polyurea Pure (1, 2, or 3 Coats)
Flexcrete Technologies Ltd
Cemprotec
Other
Florock Polymer Flooring
Florock FloroPoxy Novolac
Epoxy/Epoxy Novolac/Epoxy Novolac
FSC Coatings Inc.
Rustop Metallic 6000
Urethane/Urethane
Gemite Products Inc.
Corro-Chem 100
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Goodwest Linings and Coatings
Endura-Flex 1988
Urethane Elastomeric (1 Coat)
Gulf Coast Paint Mfg., Inc.
PC-555 / PC-1500 Epoxy Novolac
Epoxy/Epoxy Novolac/Epoxy Novolac
Hempel (USA), Inc.
Hempaline Series
Epoxy 100% Solids (1 or 2 Coats)
Heresite Protective Coatings, LLC
Heresite CSE-6200
Epoxy/Epoxy/Epoxy
Induron Coatings, LLC
PetroChem 100
Epoxy 100% Solids (1 or 2 Coats)
Industrial Solutions USA, LLC.
Polycoat
Polyurea Hybrid (1, 2, or 3 Coats)
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil888
Thermal Spray
IXS Coatings/Ultimate Linings
UL XP 6613
Polyurea Pure (1, 2, or 3 Coats)
Jessup Manufacturing Company
Jessup Safety Track
Tape Wraps
Jotun Paints Inc.
Pen-O-Prep / Penguard Express / Hardtop AX
Epoxy (1-2 Coats)/Urethane
KCC Corrosion Control Co.
KCC Elasti-Liner system
Other
Key Resin Company/Flowcrete
Key 630, Key 633
Epoxy/Epoxy Novolac/Epoxy Novolac
Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic
Milamar Coatings
ICO Hi Guard
Epoxy/Epoxy Novolac/Epoxy Novolac
NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)
National Polymers Inc.
Private label
Epoxy/Epoxy Novolac/Epoxy Novolac
Normac Adhesive Products Inc.
NR-80LVHS, NR-95LVHS
Urethane/Urethane
NSP Specialty Products
NSP-120 High Performance Epoxy Coating
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote GT
Polyurea Pure (1, 2, or 3 Coats)
Oak Ridge Foam & Coating Systems, Inc
Oak Ridge Brand
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy Novolac (1 or 2 Coats)
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polymer Group Ltd.
Enduracoat
Epoxy/Epoxy Phenolic/Epoxy Phenolic
Polyset
Ply-Guard EP/Ply-Guard EP (Novolac) Epoxy
Epoxy/Epoxy Novolac/Epoxy Novolac
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Novaguard
Epoxy Phenolic/Epoxy Phenolic/Epoxy Phenolic
Premier Coating Systems Inc
PCS-#1100
Epoxy/Epoxy 100% Solids
Quantum Chemical
Precidium
Polyurea Pure (1, 2, or 3 Coats)
REMA Corrosion Control, Inc.
Coroflake, Coroflake MR
Vinyl Ester/Vinyl Ester/Vinyl Ester
Rhino Linings
Rhino Hybrid
Polyurea Hybrid (1, 2, or 3 Coats)
Riley Paint Company
Riley Paint
Epoxy/Epoxy 100% Solids
Sauereisen, Inc.
Sauereisen
Epoxy 100% Solids (1 or 2 Coats)
Sherwin-Williams
Cor-Cote VEN, Magnalux 304
Epoxy/Epoxy Phenolic/Epoxy Phenolic
Sika Corporation
Sikafloor
Epoxy/Epoxy Novolac/Epoxy Novolac
Specialty Products, Inc. (SPI)
Polyshield HT, PTU, ElastaFLEX III
Polyurea Pure (1, 2, or 3 Coats)

SpeedCove, Inc.
SpeedCove Precast Cove Base Systems
Other
Sprayroq
SprayWall
Urethane/Urethane
Subsea Industries NV
Ecospeed
Vinyl Ester/Vinyl Ester/Vinyl Ester
Synavax, Inc.
Energy Protect
Thermal Spray
Tennant Coatings, Inc.
EcoCrete
Urethane/Urethane
Thermal-Chem Corp.
Acid-Guard
Epoxy Novolac (1 or 2 Coats)
Thin Film Technology, Inc.
Bio-Gard 255
Epoxy 100% Solids (1 or 2 Coats)
TMS Metalizing Systems, Ltd.
TMS Metalizing Systems
Thermal Spray
Tnemec Company, Inc.
Epoxoprime/ChemBloc/ChemBloc
Epoxy/Epoxy Novolac/Epoxy Novolac
Versatile Building Products
Roll on Rock
Epoxy/Epoxy
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

FOOD/BEVERAGE & PHARMACEUTICAL PLANTS

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INTERIOR PROCESS AREAS

Concrete Walls, Ceilings

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane

Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane

ARCOR - Novolac Epoxy Technologies Inc
ARCOR 1321
Epoxy/Epoxy 100% Solids

Arma Coatings
Arma Polyaspartic
Polyurea Pure (1, 2, or 3 Coats)

Blome International
Blome
Epoxy/Epoxy Novolac/Epoxy Novolac

Bowers Industrial
Key Resin
Epoxy 100% Solids (1 or 2 Coats)

Carboline Company
Sanitile
Epoxy/Epoxy Novolac/Epoxy Novolac

Ceilcote (International Paint LLC)
Ceilcote/Flakeline
Vinyl Ester/Vinyl Ester/Vinyl Ester

ChemCo Systems
CCS FC (Food Contact)
Epoxy 100% Solids (1 or 2 Coats)

Chemline Inc
Chemline ARC
Polyurea Pure (1, 2, or 3 Coats)

Cloverdale Paint Inc.
Clovamastic
Epoxy/Epoxy/Epoxy

Coatings For Industry, Inc.
U-Series
Urethane/Urethane

Concrete Solutions by Rhino Linings
Concrete Solutions WB Epoxy
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)

Cortec Corporation
VpCI 395/386
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)

Corvixx Polymers Corporation
Corvixx CXE-203 Coating
Epoxy 100% Solids (1 or 2 Coats)

Cote-L Industries Inc.
Durabak/Durabak smooth
Urethane/Urethane

Creative Material Technologies, Ltd.
Dyna-Pur
Polyurea Pure (1, 2, or 3 Coats)

Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy/Epoxy/Epoxy

Diamond Vogel Inc.
Vers-E-Poxy 122
Epoxy/Epoxy/Epoxy

Dudick, Inc.
Steri-Coat P and Steri-Glass
Epoxy 100% Solids (1 or 2 Coats)

Duromar, Inc.
HPL-1110 / HPL-1110
Epoxy 100% Solids (1 or 2 Coats)

East Earth Co., Ltd.
MAXBON
Epoxy/Epoxy 100% Solids

ENECON Corporation
Eneseal HR
Other

ErgonArmor
Novocoat SP2000
Epoxy 100% Solids (1 or 2 Coats)

Euclid Chemical Company
Duralkote 240
Epoxy/Epoxy 100% Solids

Euronavy Engineering, S.A.
Euronavy Engineering EE01
Epoxy 100% Solids (1 or 2 Coats)

Fabick, Inc. - Coatings and Sealants
Fabick
Polyurea Pure (1, 2, or 3 Coats)

Flexcrete Technologies Ltd
Biodex
Other

Florock Polymer Flooring
FloroPoxy
Epoxy 100% Solids (1 or 2 Coats)

FSC Coatings Inc.
Bio-SAFE Prime & Seal/MaxLife
Alkyd/Acrylic/Acrylic

Gemite Products Inc.
Cem-Kote Flex ST
Other

Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)

Goodwest Linings and Coatings
Reactamine 760
Urethane Elastomeric (1 Coat)

Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic
Epoxy/Epoxy/Epoxy

H&H Painting Co., Inc.
Sherwin Williams
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)

Hempel (USA), Inc.
Wall-Gard HD
Epoxy (1-2 Coats)/Urethane

Heresite Protective Coatings, LLC
Heresite VR-500
Other

Hy-Tech Thermal Solutions
Ceramic Satin
Other

Induron Coatings, LLC
Perma-Clean II
Epoxy/Epoxy/Epoxy

Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic

International Cellulose Corporation
K-13, SonaSpray "fc"
Other

IXS Coatings/Ultimate Linings
UL XT 66
Polyurea Hybrid (1, 2, or 3 Coats)

Jessup Manufacturing Company
Jessup Safety Track
Tape Wraps

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Kaufman Products, Inc.
SurePoxy HiBild
Epoxy 100% Solids (1 or 2 Coats)
KCC Corrosion Control Co.
KCC Techni-Plus EP 14
Other
Key Resin Company/Flowcrete
Key 544, Key 467-HS,
Epoxy (1-2 Coats)/Urethane
Mascoat
MI-DTI
Alkyd/Acrylic/Acrylic
Milamar Coatings
ICO Glaze
Epoxy Novolac (1 or 2 Coats)
National Polymers Inc.
Private Label
Epoxy/Epoxy/Epoxy
New Guard Coatings Inc.
Rust-Oleum/PPG/Jotun
Other
Normac Adhesive Products Inc.
NR-80LVHS, NR-95LVHS
Urethane/Urethane
NSP Specialty Products
NSP-120 High Performance Epoxy Coating
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Premera PAC
Polyurea Pure (1, 2, or 3 Coats)
Oak Ridge Foam & Coating Systems, Inc
Oak Ridge Btand
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy 100% Solids (1 or 2 Coats)
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polymer Group Ltd.
InhibitCoat
Other
Polyset
Ply-Guard EP Epoxy (Walls)
Epoxy 100% Solids (1 or 2 Coats)
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Amerlock
Epoxy/Epoxy
Quantum Chemical
Illustrium
Urethane Elastomeric (1 Coat)
REMA Corrosion Control, Inc.
Corogard
Epoxy 100% Solids (1 or 2 Coats)
Rhino Linings
Rhino Extreme
Polyurea Pure (1, 2, or 3 Coats)
Sauereisen, Inc.
Sauereisen
Epoxy 100% Solids (1 or 2 Coats)

Sherwin-Williams
SaniFlex 100% Solids Flexible Epoxy
Epoxy/Epoxy 100% Solids
Sika Corporation
Sikagard
Urethane/Urethane
Specialty Products, Inc. (SPI)
Ultra Bond-HT-FC, HT-100F UB, AMP-100 UB
Polyurea Pure (1, 2, or 3 Coats)

SpeedCove, Inc.
SpeedCove Precast Cove Base Systems
Other
Synavax, Inc.
Energy Protect
Thermal Spray
Textured Coatings of America
Color Cote
Alkyd/Acrylic/Acrylic
Thermal-Chem Corp.
WallGard
Epoxy/Epoxy 100% Solids
Thermion
Thermion
Thermal Spray
Thin Film Technology, Inc.
Bio-Gard 258
Epoxy 100% Solids (1 or 2 Coats)
Tnemec Company, Inc.
Epoxoprime/Stranlok
Epoxy 100% Solids (1 or 2 Coats)
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

INTERIOR PROCESS AREAS

Concrete Floors

AcryliCon Flooring Solutions
AcryliCon Decor
Other
Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
American Industrial
TerraChip
Epoxy Flake Filled/Epoxy Flake Filled
ARCOR - Novolac Epoxy Technologies Inc
ARCOR EE-71
Epoxy/Epoxy 100% Solids
Arma Coatings
Arma Polyaspartic
Polyurea Pure (1, 2, or 3 Coats)
BASF Corporation–Construction Systems
UCRETE
Urethane/Urethane
Blome International
Blome
Brick and Tile, Acid-Resistant
Bowers Industrial
Duromar
Epoxy 100% Solids (1 or 2 Coats)
Carboline Company
Carboseal
Epoxy/Epoxy 100% Solids
Ceilcote (International Paint LLC)
Ceilcote/Coroline
Epoxy/Epoxy/Epoxy
ChemCo Systems
CCS FC (Food Contact)
Epoxy/Epoxy 100% Solids
Chemline Inc.
Chemline 3725
Polyurea Pure (1, 2, or 3 Coats)
Cloverdale Paint Inc.
Cloverdale Floor Coatings
Epoxy 100% Solids (1 or 2 Coats)
Coatings For Industry, Inc.
WearCOAT
Epoxy (1-2 Coats)/Urethane
Concrete Solutions by Rhino Linings
Concrete Solutions Epoxy 200
Epoxy 100% Solids (1 or 2 Coats)
Copps Industries, Inc.
Armorgard 500
Epoxy/Epoxy 100% Solids
Cortec Corporation
VpCI 2026
Epoxy 100% Solids (1 or 2 Coats)
Corvixx Polymers Corporation
Corvixx CXE-202 Trowelable or RE-201 Self Level
Epoxy/Epoxy 100% Solids
Cote-L Industries Inc.
Durabak/ Durabak smooth
Urethane/Urethane
Creative Material Technologies, Ltd.
Dyna-Pur 9016
Polyurea Pure (1, 2, or 3 Coats)
Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy/Epoxy/Epoxy
Diamond Vogel Inc.
Vers-E-Poxy 122
Epoxy/Epoxy/Epoxy
Dudick, Inc.
Steri-Flor and Steri Soft
Epoxy (1-2 Coats)/Urethane
Duromar, Inc.
HPL-1110 / HPL-1110
Epoxy 100% Solids (1 or 2 Coats)
East Earth Co., Ltd.
MAXBON
Epoxy/Epoxy 100% Solids
ENECON Corporation
Chemclad
Epoxy 100% Solids (1 or 2 Coats)
ErgonArmor
PennChem Mortar
Brick and Tile, Acid-Resistant
Euclid Chemical Company
Duraltex 1705
Epoxy/Epoxy 100% Solids
Euronavy Engineering, S.A.
Euronavy Engineering EF27 + CARGO
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled

FOOD/BEVERAGE & PHARMACEUTICAL PLANTS

SPONSORED BY

Fabick, Inc. - Coatings and Sealants
Fabick
Polyurea Pure (1, 2, or 3 Coats)
Flexcrete Technologies Ltd
Cemprotec E-Floor
Other
Florock Polymer Flooring
FloroCrete
Urethane/Urethane
FSC Coatings Inc.
Rustop 6000/Graf Max
Urethane/Urethane
Garon Products, Inc.
Garon Guard
Epoxy 100% Solids (1 or 2 Coats)
Gemite Products Inc.
Corro-Chem 100
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Goodwest Linings and Coatings
Reactamine 760
Urethane Elastomeric (1 Coat)
Gulf Coast Paint Mfg., Inc.
PC-1850 100% Solids Epoxy
Epoxy/Epoxy 100% Solids
H&H Painting Co., Inc.
Sherwin Williams
Epoxy/Epoxy 100% Solids
Hempel (USA), Inc.
Neocrete SL
Epoxy (1-2 Coats)/Urethane
Induron Coatings, LLC
Perma-Tuff SL
Epoxy 100% Solids (1 or 2 Coats)
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
IXS Coatings/Ultimate Linings
UL XT 66
Polyurea Hybrid (1, 2, or 3 Coats)
Jessup Manufacturing Company
Jessup Safety Track
Tape Wraps
Kaufman Products, Inc.
K Pro CRS
Epoxy 100% Solids (1 or 2 Coats)
KCC Corrosion Control Co.
KCC Techni-Plus EP 60 SL
Other
Key Resin Company/Flowcrete
Urecon Urethane Cement/Flowfresh Urethane Cement
Urethane/Urethane
Milamar Coatings
1200 CS ESD
Epoxy/Epoxy Novolac/Epoxy Novolac
NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)
National Polymers Inc.
Private Label
Epoxy Novolac (1 or 2 Coats)
New Guard Coatings Inc.
Rust-Oleum
Other
Normac Adhesive Products Inc.
NR-80LVHS, NR-95LVHS
Urethane/Urethane
NSP Specialty Products
NSP-122 Industrial Floor Coating
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote ST
Polyurea Hybrid (1, 2, or 3 Coats)
Oak Ridge Foam & Coating Systems, Inc
Oak Ridge Brand
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy/Epoxy 100% Solids
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polymer Group Ltd.
InhibitCoat
Urethane/Urethane
Polyset
Ply-Guard EP Epoxy
Epoxy 100% Solids (1 or 2 Coats)
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Amerlock
Epoxy/Epoxy
Quantum Chemical
Precidium
Polyurea Pure (1, 2, or 3 Coats)
Randolph Products
Randolph Products RP 2500
Epoxy/Epoxy 100% Solids
REMA Corrosion Control, Inc.
Corofloor
Epoxy/Epoxy Novolac/Epoxy Novolac
Rhino Linings
Fast Floor
Epoxy (1-2 Coats)/Urethane
Roadware
Concrete Mender
Urethane/Urethane
Sauereisen, Inc.
Sauereisen
Epoxy 100% Solids (1 or 2 Coats)
Sherwin-Williams
FasTop 12S Urethane Cement Slurry
Urethane/Urethane
Sika Corporation
Sikafloor
Epoxy Flake Filled/Epoxy Flake Filled
Specialty Products, Inc. (SPI)
Ultra Bond-HT-FC,Polyshield HT SLOW, AMP 100
Polyurea Pure (1, 2, or 3 Coats)

SpeedCove, Inc.
SpeedCove Precast Cove Base Systems
Other
Textured Coatings of America
Cool Tex
Epoxy (1-2 Coats)/Urethane
Thermal-Chem Corp.
Thermal-Crete Urethane Cement
Urethane/Urethane
Thermion
Thermion
Thermal Spray
Thin Film Technology, Inc.
Bio-Flor 182
Epoxy/Epoxy 100% Solids
Tnemec Company, Inc.
Epoxoprime/Power-Tread
Epoxy 100% Solids (1 or 2 Coats)
Versatile Building Products
Roll on Rock
Epoxy/Epoxy/Epoxy
Westcoat
Westcoat
Epoxy/Epoxy 100% Solids
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

Ron and Patty Thomas / Getty Images

CHEMICAL/WATER EXPOSURE - CAUSTIC OR ACID

3M Corrosion Protection Products
Scotchkote
Epoxy/Epoxy/Epoxy

AcryliCon Flooring Solutions
AcryliCon Decor
Other

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane

Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane

AkzoNobel
Ceilcote
Vinyl Ester/Vinyl Ester/Vinyl Ester

AP/M Permaform
Cor+Gard EPM
Epoxy/Epoxy 100% Solids

ARCOR - Novolac Epoxy Technologies Inc
ARCOR EE-11
Epoxy Novolac (1 or 2 Coats)

Arma Coatings
Arma 901
Polyurea Pure (1, 2, or 3 Coats)

Blome International
Blome
Epoxy/Epoxy Novolac/Epoxy Novolac

Bowers Industrial
Duromar
Epoxy 100% Solids (1 or 2 Coats)

Carboline Company
Semstone
Epoxy/Epoxy Novolac/Epoxy Novolac

Ceilcote (International Paint LLC)
Ceilcote/Flakeline MR
Vinyl Ester/Vinyl Ester/Vinyl Ester

ChemCo Systems
CCS High Chemical Resistance
Epoxy 100% Solids (1 or 2 Coats)

CIM Industries
CIM
Urethane Elastomeric (1 Coat)

Cloverdale Paint Inc.
Clovaline
Epoxy Novolac (1 or 2 Coats)

Coatings For Industry, Inc.
WearCOAT
Epoxy/Epoxy Novolac/Epoxy Novolac

Copps Industries, Inc.
Armorgard 500
Epoxy/Epoxy 100% Solids

Cortec Corporation
VpCI 395/2026
Epoxy/Epoxy Novolac/Epoxy Novolac

Corvixx Polymers Corporation
Corvixx CXE-402
Epoxy Novolac (1 or 2 Coats)

Diamond Vogel Inc.
Mult-E-Poxy 180/Multi-Thane 330 or 340
Epoxy (1-2 Coats)/Urethane

Dudick, Inc.
Protecto-Coat
Epoxy/Vinyl Ester/Vinyl Ester

Duromar, Inc.
HPL-1301,DF-4301
Epoxy 100% Solids (1 or 2 Coats)

East Earth Co., Ltd.
MAXBON
Epoxy 100% Solids (1 or 2 Coats)

ENECON Corporation
Chemclad
Epoxy/Epoxy 100% Solids

Enviroline (International Paint LLC)
Enviroline
Epoxy Novolac (1 or 2 Coats)

ErgonArmor
Novocoat SC3300 Series
Epoxy Novolac (1 or 2 Coats)

Euclid Chemical Company
Duraltex 1805
Epoxy Novolac (1 or 2 Coats)

FSC Coatings Inc.
Bio-SAFE System
Alkyd/Acrylic/Acrylic

Gemite Products Inc.
Corro-Chem 100
Other

Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)

Goodwest Linings and Coatings
Carboline Reactimine, Enduraflex, Utilithane
Urethane Elastomeric (1 Coat)

Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic / PC-517 Cyclo-Aliphatic Epoxy
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled

Hempel (USA), Inc.
Hempaline Series
Epoxy 100% Solids (1 or 2 Coats)

Induron Coatings, LLC
PermaSafe 100 Ceramic Epoxy
Epoxy 100% Solids (1 or 2 Coats)

Industrial Solutions USA, LLC
Nano-Clear Industrial Coating
Polyurea Hybrid (1, 2, or 3 Coats)

Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic

International Metalizing Corporation
Reddevil 888
Thermal Spray

IXS Coatings/Ultimate Linings
UL XP 6613
Polyurea Pure (1, 2, or 3 Coats)

Jotun Paints Inc.
Chemflake Special
Vinyl Ester/Vinyl Ester/Vinyl Ester

Kaufman Products, Inc.
K Pro CRS
Epoxy 100% Solids (1 or 2 Coats)

KCC Corrosion Control Co.
KCC Elasti-Liner system
Other

Key Resin Company/Flowcrete
Key 630, Key 633
Epoxy/Epoxy Novolac/Epoxy Novolac

Milamar Coatings
ICO Hi Guard Coating
Epoxy/Epoxy Novolac/Epoxy Novolac

National Polymers Inc.
Private Label
Epoxy Novolac (1 or 2 Coats)

New Guard Coatings Inc.
Jotun/PPG
Other

Normac Adhesive Products Inc.
NR-80LVHS, NR-95LVHS
Urethane/Urethane

NSP Specialty Products
NSP-120 High Performance Epoxy Coating
Epoxy 100% Solids (1 or 2 Coats)

Nukote Coating Systems International
Nukote XT Plus
Polyurea Hybrid (1, 2, or 3 Coats)

POWER PLANTS

Oak Ridge Foam & Coating Systems, Inc
Oak Ridge Brand
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen Chemproof
Epoxy/Epoxy Novolac/Epoxy Novolac
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard EP (Novolac) Epoxy
Epoxy/Epoxy Novolac/Epoxy Novolac
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Novaguard
Epoxy 100% Solids (1 or 2 Coats)
Randolph Products
Randolph Products RP 250LV
Other
REMA Corrosion Control, Inc.
Coroflake MR,Coroflake
Vinyl Ester/Vinyl Ester/Vinyl Ester
Rhino Linings
Rhino HiChem
Polyurea Hybrid (1, 2, or 3 Coats)
Riley Paint Company
Riley Paint
Epoxy/Epoxy 100% Solids
Sauereisen, Inc.
Sauereisen
Epoxy 100% Solids (1 or 2 Coats)
Sherwin-Williams
ExpressCote 150
Epoxy/Epoxy 100% Solids
Sika Corporation
Sikafloor
Urethane/Urethane
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, PTU-UB, Polyshield HT-100F UB,
Polyurea Pure (1, 2, or 3 Coats)
SpeedCove, Inc.
SpeedCove Precast Cove Base Systems
Other
Synavax, Inc.
Heat Shield EPX-H20
Epoxy/Epoxy/Epoxy
Thermal-Chem Corp.
755 Acid-Guard
Epoxy Novolac (1 or 2 Coats)
Thermion
Thermion
Thermal Spray
Thin Film Technology, Inc.
Bio-Gard 255
Epoxy/Epoxy 100% Solids
Tnemec Company, Inc.
Tneme-Liner/Tank Armor
Epoxy/Epoxy 100% Solids
Versatile Building Products
Roll on Rock
Epoxy (1-2 Coats)/Urethane
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

CHEMICAL/WATER EXPOSURE - WET FLY ASH

AcryliCon Flooring Solutions
AcryliCon Decor
Other
Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
AkzoNobel
International
Epoxy Novolac (1 or 2 Coats)
ARCOR - Novolac Epoxy Technologies Inc
ARCOR S-20
Epoxy Novolac (1 or 2 Coats)
Arma Coatings
Arma 901 60D
Polyurea Pure (1, 2, or 3 Coats)
Blome International
Blome
Vinyl Ester/Vinyl Ester/Vinyl Ester
Bowers Industrial
Duromar
Epoxy 100% Solids (1 or 2 Coats)
Carboline Company
Reactamine
Polyurea Hybrid (1, 2, or 3 Coats)
Ceilcote (International Paint LLC)
Ceilcote/Coroline
Epoxy/Epoxy/Epoxy
ChemCo Systems
CCS General Purpose
Epoxy/Epoxy 100% Solids
Copps Industries, Inc.
Armorgard 600T
Epoxy/Epoxy 100% Solids
Cortec Corporation
VpCI 395/2026
Epoxy/Epoxy Novolac/Epoxy Novolac
Creative Polymers LLC
PliaThane 4975
Urethane Elastomeric (1 Coat)
Dudick, Inc.
Protecto-Coat
Vinyl Ester/Vinyl Ester/Vinyl Ester
Duromar, Inc.
HPL-1301, DF-4301
Epoxy 100% Solids (1 or 2 Coats)
ENECON Corporation
Chemclad
Epoxy 100% Solids (1 or 2 Coats)
ErgonArmor
Novocoat SP3300 Series
Epoxy Novolac (1 or 2 Coats)
Flexcrete Technologies Ltd
Cemprotec
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)
FSC Coatings Inc.
Rustop Metallic
Urethane/Urethane
Gemite Products Inc.
Cem-Kote Flex ST
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic / PC-517 Cyclo-Aliphatic Epoxy
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
Induron Coatings, LLC
PermaSafe 100 Ceramic Epoxy
Epoxy 100% Solids (1 or 2 Coats)
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
UL XP 6613
Polyurea Pure (1, 2, or 3 Coats)
Jotun Paints Inc.
Chemflake Special
Vinyl Ester/Vinyl Ester/Vinyl Ester
KCC Corrosion Control Co.
KCC Elasti-Liner System
Other
Key Resin Company/Flowcrete
Key 630, Key 633
Epoxy/Epoxy Novolac/Epoxy Novolac
Milamar Coatings
Milamar 2600 LS
Epoxy/Epoxy/Epoxy
National Polymers Inc.
Private Label
Epoxy/Epoxy/Epoxy
New Guard Coatings Inc.
Jotun/PPG
Other
Normac Adhesive Products Inc.
NR-80LVHS, NR-95LVHS
Urethane/Urethane
NSP Specialty Products
NSP-120 High Performance epoxy Coating
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote ST
Polyurea Pure (1, 2, or 3 Coats)
Oak Ridge Foam & Coating Systems, Inc
Oak Ridge Brand
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy 100% Solids (1 or 2 Coats)
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard UR Polyurea
Polyurea Pure (1, 2, or 3 Coats)
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Novaguard
Epoxy 100% Solids (1 or 2 Coats)
REMA Corrosion Control, Inc.
Coroflake, Coroflake MR
Vinyl Ester/Vinyl Ester/Vinyl Ester
Rhino Linings
Rhino Extreme
Polyurea Pure (1, 2, or 3 Coats)
Riley Paint Company
Riley Paint
Epoxy/Epoxy 100% Solids
Sauereisen, Inc.
Sauereisen
Epoxy 100% Solids (1 or 2 Coats)
Sherwin-Williams
Cor-Cote VEN TF
Vinyl Ester/Vinyl Ester/Vinyl Ester
Sika Corporation
Sikafloor
Urethane/Urethane
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, K5-UB, Polyshield HT-100F UB
Polyurea Pure (1, 2, or 3 Coats)

SpeedCove, Inc.
SpeedCove Precast Cove Base Systems
Other
Synavax, Inc.
Heat Shield EPX-H20
Epoxy/Epoxy/Epoxy
Thermal-Chem Corp.
755 Acid-Guard
Epoxy Novolac (1 or 2 Coats)
Thermion
Thermion
Thermal Spray
Versatile Building Products
Roll on Rock
Epoxy (1-2 Coats)/Urethane
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

CIRCULATING WATER PIPE

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
AkzoNobel
International
Epoxy/Epoxy/Epoxy
ARCOR - Novolac Epoxy Technologies Inc
ARCOR S-30
Epoxy 100% Solids (1 or 2 Coats)
Blome International
Blome
Epoxy/Epoxy 100% Solids
Bowers Industrial
Duromar
Epoxy 100% Solids (1 or 2 Coats)
Carboline Company
Plasite/Phenoline
Epoxy 100% Solids (1 or 2 Coats)
Ceilcote (International Paint LLC)
Ceilcote/Flakeline MR
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
ChemCo Systems
CCS High Chemical Resistance
Epoxy/Epoxy 100% Solids
Coatings For Industry, Inc.
U-Series
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)
Copps Industries, Inc.
Armorgard 600
Epoxy/Epoxy 100% Solids
Cortec Corporation
VpCI 395/395
Epoxy/Epoxy
Creative Material Technologies, Ltd.
Dyna-Pur 9556
Polyurea Pure (1, 2, or 3 Coats)
Diamond Vogel Inc.
Mult-E-Poxy 180/Multi-Thane 330 or 340
Epoxy (1-2 Coats)/Urethane
Duromar, Inc.
HPL-2510 / HPL-2510-FR
Epoxy 100% Solids (1 or 2 Coats)
ENECON Corporation
Chemclad
Epoxy 100% Solids (1 or 2 Coats)
Enviroline (International Paint LLC)
Enviroline
Epoxy Phenolic/Epoxy Phenolic/Epoxy Phenolic
ErgonArmor
Novocoat SP2000
Epoxy/Epoxy 100% Solids
Flexcrete Technologies Ltd
Cemprotec
Other
Gemite Products Inc.
Cem-Kote Flex ST
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic
Epoxy/Epoxy/Epoxy
Hempel (USA), Inc.
Hempaline Series
Epoxy 100% Solids (1 or 2 Coats)
Induron Coatings, LLC
Perma-Clean 100 Ceramic Epoxy
Epoxy 100% Solids (1 or 2 Coats)
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
UL XP 6613
Polyurea Pure (1, 2, or 3 Coats)
Jotun Paints Inc.
Pen-O-Prep / Marathon
Epoxy/Epoxy
Kaufman Products, Inc.
K Pro CRS
Epoxy 100% Solids (1 or 2 Coats)
New Guard Coatings Inc.
Jotun/PPG
Other
Normac Adhesive Products Inc.
NR-80LVHS, NR-95LVHS
Urethane/Urethane
NSP Specialty Products
NSP-120 High Performance Epoxy Coating
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote ST
Polyurea Pure (1, 2, or 3 Coats)
Oak Ridge Foam & Coating Systems, Inc
Oak Ridge Brand
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy 100% Solids (1 or 2 Coats)
Plastocor Inc.
Plastocor
Epoxy/Epoxy 100% Solids
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard UR Polyurea
Polyurea Pure (1, 2, or 3 Coats)
PPG
Novaguard
Epoxy 100% Solids (1 or 2 Coats)
REMA Corrosion Control, Inc.
Coroflake
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
Rhino Linings
Rhino Extreme PW
Polyurea Pure (1, 2, or 3 Coats)

Sherwin-Williams
Dura-Plate UHS
Epoxy/Epoxy 100% Solids
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, Polyshield HT, Polyshield HT-10
Polyurea Pure (1, 2, or 3 Coats)
Synavax, Inc.
Energy Protect
Thermal Spray
Thermion
Thermion
Thermal Spray
Thin Film Technology, Inc.
BIO-DUR 560
Epoxy 100% Solids (1 or 2 Coats)
Tnemec Company, Inc.
MortarClad/Epoxoline
Epoxy/Epoxy 100% Solids
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

SECONDARY CONTAINMENT

3M Corrosion Protection Products
Scotchkote
Epoxy (1-2 Coats)/Urethane
Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
AkzoNobel
International
Epoxy Novolac (1 or 2 Coats)
Andek Corporation
Polafloor PUR
Urethane/Urethane
ARCOR - Novolac Epoxy Technologies Inc
ARCOR EE-71
Epoxy/Epoxy 100% Solids
Arma Coatings
Arma 901 50D
Polyurea Pure (1, 2, or 3 Coats)
Blome International
Blome
Epoxy/Epoxy Novolac/Epoxy Novolac
Bowers Industrial
Duromar
Epoxy 100% Solids (1 or 2 Coats)
Carboline Company
Semstone
Epoxy Novolac (1 or 2 Coats)
Ceilcote (International Paint LLC)
Ceilcote/Flakeline MR
Epoxy/Epoxy/Epoxy
ChemCo Systems
CCS High Chemical Resistance
Epoxy 100% Solids (1 or 2 Coats)
Chemline Inc
Chemline ARC
Polyurea Pure (1, 2, or 3 Coats)

POWER PLANTS

CIM Industries
CIM
Urethane Elastomeric (1 Coat)
Cloverdale Paint Inc.
Clovaline
Epoxy/Epoxy 100% Solids
Copps Industries, Inc.
Armorgard 600T
Epoxy/Epoxy 100% Solids
Corvixx Polymers Corporation
Corvixx CXE-403
Epoxy Novolac (1 or 2 Coats)
Creative Material Technologies, Ltd.
Nano-Pur 1376
Polyurea Pure (1, 2, or 3 Coats)
Diamond Vogel Inc.
Mult-E-Poxy 180/Multi-Thane 330 or 340
Epoxy (1-2 Coats)/Urethane
Dudick, Inc.
Protecto-Flex
Epoxy/Vinyl Ester/Vinyl Ester
Duromar, Inc.
HPL-1301 / DF-4301
Epoxy 100% Solids (1 or 2 Coats)
ENECON Corporation
Chemclad XC
Epoxy/Epoxy Novolac/Epoxy Novolac
Enviroline (International Paint LLC)
Enviroline
Epoxy Novolac (1 or 2 Coats)
ErgonArmor
Novocoat ER2000 Flexible Lining
Epoxy/Epoxy 100% Solids
Euclid Chemical Company
Duraltex 1807
Epoxy Flake Filled/Epoxy Flake Filled
Flexcrete Technologies Ltd
Cemprotec
Other
FSC Coatings Inc.
Rustop Metallic 6000
Urethane/Urethane
Gemite Products Inc.
Corro-Chem 100
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Goodwest Linings and Coatings
Carboline Semstone 145
Epoxy/Epoxy Novolac/Epoxy Novolac
Gulf Coast Paint Mfg., Inc.
PC-1500 Epoxy Novolac
Epoxy/Epoxy Novolac/Epoxy Novolac
Hempel (USA), Inc.
Hempaline Series
Inorganic Zinc/Epoxy 100% Solids
Heresite Protective Coatings, LLC
Heresite CSE-6200
Epoxy/Epoxy/Epoxy
Induron Coatings, LLC
PetrohChem 100
Epoxy 100% Solids (1 or 2 Coats)
Industrial Solutions USA, LLC.
Polycoat
Polyurea Pure (1, 2, or 3 Coats)
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
UL XP 6613
Polyurea Pure (1, 2, or 3 Coats)
Jotun Paints Inc.
Pen-O-Prep / Marathon
Epoxy/Epoxy
KCC Corrosion Control Co.
KCC Elasti-Liner System
Other
Key Resin Company/Flowcrete
Key Vinyl Ester
Vinyl Ester/Vinyl Ester/Vinyl Ester
Milamar Coatings
ICO Hi Guard
Epoxy/Epoxy Novolac/Epoxy Novolac
NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)
National Polymers Inc.
Private Label
Epoxy Novolac (1 or 2 Coats)
New Guard Coatings Inc.
Jotun/PPG
Other
Normac Adhesive Products Inc.
NR-80LVHS, NR-95LVHS
Urethane/Urethane
NSP Specialty Products
NSP-120 High Performance Epoxy coating
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote XT Plus
Polyurea Hybrid (1, 2, or 3 Coats)
Oak Ridge Foam & Coating Systems, Inc
Oak Ridge Brand
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen chemproof
Epoxy/Epoxy Novolac/Epoxy Novolac
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard EP/Ply-Guard EP (Novolac) Epoxy
Epoxy/Epoxy Novolac/Epoxy Novolac
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Novaguard
Epoxy/Epoxy/Epoxy
Premier Coating Systems Inc
PCS-#1100
Epoxy/Epoxy 100% Solids
Quantum Chemical
Precidium
Polyurea Pure (1, 2, or 3 Coats)
REMA Corrosion Control, Inc.
Coroflake, Coroflake MR, Topline
Vinyl Ester/Vinyl Ester/Vinyl Ester
Rhino Linings
Rhino Hybrid
Polyurea Hybrid (1, 2, or 3 Coats)
Riley Paint Company
Riley Paint
Epoxy/Epoxy 100% Solids
Sauereisen, Inc.
Sauereisen
Epoxy 100% Solids (1 or 2 Coats)
Sherwin-Williams
ExpressCote 150
Epoxy/Epoxy Novolac/Epoxy Novolac
Sika Corporation
Sikafloor
Epoxy/Epoxy Novolac/Epoxy Novolac
Specialty Products, Inc. (SPI)
Ultra Bond-100, Polyshield HT-100F UB, Elasta FLEX II
Polyurea Pure (1, 2, or 3 Coats)
SpeedCove, Inc.
SpeedCove Precast Cove Base Systems
Other
Synavax, Inc.
Energy Protect
Thermal Spray
Thermal-Chem Corp.
755 Acid-Guard
Epoxy/Epoxy Novolac/Epoxy Novolac
Thin Film Technology, Inc.
Bio-Gard 255
Epoxy/Epoxy 100% Solids
Tnemec Company, Inc.
Epoxoprime/ChemBloc/ChemBloc
Epoxy/Epoxy Novolac/Epoxy Novolac
Versatile Building Products
Roll on Rock
Epoxy/Epoxy
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

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EXTERNAL OF BURIED PIPE

3M Corrosion Protection Products
Scotchkote
Epoxy (1-2 Coats)/Urethane

AcryliCon Flooring Solutions
AcryliCon Laquer or Variant
Other

Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane

AkzoNobel
International
Epoxy Novolac (1 or 2 Coats)

Arma Coatings
Arma 901 Polyurea
Polyurea Pure (1, 2, or 3 Coats)

Bowers Industrial
Quest
Polyurea Hybrid (1, 2, or 3 Coats)

Carboline Company
Polyclad
Urethane/Urethane

CCI Con-Tech of California, Inc.
Hydro-Pox
Epoxy/Epoxy 100% Solids

Ceilcote (International Paint LLC)
Ceilcote/ Flakeline MR
Epoxy/Epoxy/Epoxy

Cloverdale Paint Inc.
LifeLast
Urethane Elastomeric (1 Coat)

Copps Industries, Inc.
Armorgard 500
Epoxy/Epoxy 100% Solids

CORCHEM Corporation of Texas
NOVA 525
Epoxy 100% Solids (1 or 2 Coats)

Cortec Corporation
VpCI-395/395
Epoxy/Epoxy

Cote-L Industries Inc.
Durabak/Durabak smooth
Urethane/Urethane

Creative Material Technologies, Ltd.
Nano-Pur 1376
Polyurea Pure (1, 2, or 3 Coats)

Daubert Cromwell
Nox Rust 5100
Coal Tar/Asphalt

Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy/Epoxy/Epoxy

Diamond Vogel Inc.
Cerami-Tar
Epoxy Coal Tar High Build (1 or 2 Coats)

Duromar, Inc.
HPL-2510 / HPL-2510
Epoxy 100% Solids (1 or 2 Coats)

ENECON Corporation
Chemclad
Epoxy/Epoxy 100% Solids

Enviroline (International Paint LLC)
Enviroline
Epoxy Novolac (1 or 2 Coats)

ErgonArmor
Novocoat SP2000
Epoxy 100% Solids (1 or 2 Coats)

Flexcrete Technologies Ltd
Cemprotec
Other

Gemite Products Inc.
Cem-Kote Flex ST
Other

Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)

Hempel (USA), Inc.
Hempadur Series
Epoxy (1-2 Coats)/Urethane

Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic

International Metalizing Corporation
Reddevil 888
Thermal Spray

IXS Coatings/Ultimate Linings
Spray Foam
Polyurea Hybrid (1, 2, or 3 Coats)

Jotun Paints Inc.
Pen-O-Prep / Marathon 1000 GF / Marathon 1000 GF
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled

Lalita Infraprojects Pvt Ltd
Duaripoxy 10
Organic Zinc/Epoxy 100% Solids

NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)

New Guard Coatings Inc.
Jotun/PPG
Other

Normac Adhesive Products Inc.
LVHS Series
Urethane/Urethane

NSP Specialty Products
NSP-120 High Performance Epoxy Coating
Epoxy 100% Solids (1 or 2 Coats)

Nukote Coating Systems International
Nukote HT
Polyurea Pure (1, 2, or 3 Coats)

Peerless Industrial Systems
Epigen
Epoxy 100% Solids (1 or 2 Coats)

Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)

Polyset
Ply-Guard UR Polyurea
Polyurea Pure (1, 2, or 3 Coats)

PPG
Sigmashield
Epoxy/Epoxy

Rhino Linings
Rhino Extreme
Polyurea Pure (1, 2, or 3 Coats)

Sauereisen, Inc.
Sauereisen
Epoxy 100% Solids (1 or 2 Coats)

Sherwin-Williams
EnviroLastic AR 425
Polyurea Pure (1, 2, or 3 Coats)

PIPELINE

Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, Polyshield HT-SL UB, K5 UB
Polyurea Pure (1, 2, or 3 Coats)
Sprayroq
SprayShield Green 2
Urethane/Urethane
Synavax, Inc.
Heat Shield EPX-H20
Epoxy/Epoxy/Epoxy
Thermion
Thermion
Thermal Spray
Thin Film Technology, Inc.
BIO-DUR 560
Epoxy 100% Solids (1 or 2 Coats)
Vertic Zinc Wire OY
VerZn
Thermal Spray
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

INTERNAL OF BURIED PIPE

3M Corrosion Protection Products
Scotchkote
Fusion-Bonded Epoxy (1-2 Coats)
AcryliCon Flooring Solutions
AcryliCon Laquer
Other
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
AkzoNobel
International
Epoxy/Epoxy Novolac/Epoxy Novolac
Bowers Industrial
Duromar
Epoxy/Epoxy 100% Solids
Carboline Company
Reactamine
Urethane Elastomeric (1 Coat)
CCI Con-Tech of California, Inc.
Hydro-Pox
Epoxy/Epoxy 100% Solids
Ceilcote (International Paint LLC)
Ceilcote/ Flakeline MR
Vinyl Ester/Vinyl Ester/Vinyl Ester
ChemCo Systems
CCS General Purpose
Epoxy 100% Solids (1 or 2 Coats)
Cloverdale Paint Inc.
LifeLast
Urethane Elastomeric (1 Coat)
Copps Industries, Inc.
Armorgard 500
Epoxy/Epoxy 100% Solids
CORCHEM Corporation of Texas
NOVA 525
Epoxy 100% Solids (1 or 2 Coats)
Cortec Corporation
VpCI-395/395
Epoxy/Epoxy
Cote-L Industries Inc.
Durabak/Durabak Smooth
Urethane/Urethane
Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy/Epoxy Novolac/Epoxy Novolac
Duromar, Inc.
HPL-2510 / HPL-2510
Epoxy 100% Solids (1 or 2 Coats)
ENECON Corporation
Chemclad
Epoxy/Epoxy 100% Solids
Enviroline (International Paint LLC)
Enviroline
Epoxy Novolac (1 or 2 Coats)
ErgonArmor
Novocoat SP2000
Epoxy/Epoxy 100% Solids
Flexcrete Technologies Ltd
Cemprotec
Other
Gemite Products Inc.
Cem-Kote Flex ST
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Hempel (USA), Inc.
Hempadur Series
Other
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
Spray Foam
Polyurea Hybrid (1, 2, or 3 Coats)
Jotun Paints Inc.
Tankguard SF 1
Epoxy Novolac (1 or 2 Coats)
Lalita Infraprojects Pvt Ltd
Duarithane 10
Urethane/Urethane
Linabond
Linabond Pipeline Structural Polymer System
Sheet Lining, Thermoplastic
New Guard Coatings Inc.
Jotun/PPG
Other
NSP Specialty Products
NSP-120 High Performance Epoxy Coating
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote ST
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy 100% Solids (1 or 2 Coats)
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
PPG
Novaguard
Epoxy/Epoxy 100% Solids
Rhino Linings
Pipeliner
Polyurea Hybrid (1, 2, or 3 Coats)
Sauereisen, Inc.
Sauereisen
Epoxy 100% Solids (1 or 2 Coats)
Sherwin-Williams
Corobond 100/Dura-Plate UHS
Epoxy 100% Solids (1 or 2 Coats)
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, Watersafe-UB, Polyshield HT-100
Polyurea Pure (1, 2, or 3 Coats)
Sprayroq
SprayWall
Urethane/Urethane
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

FIELD JOINT COATING OF BURIED PIPE

3M Corrosion Protection Products
Scotchkote
Epoxy/Epoxy 100% Solids
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
Arma Coatings
Arma 90AS
Polyurea Pure (1, 2, or 3 Coats)
Bowers Industrial
Duromar
Epoxy/Epoxy 100% Solids
Carboline Company
Polyclad
Urethane/Urethane
CCI Con-Tech of California, Inc.
Hydro-Pox
Epoxy/Epoxy 100% Solids
Ceilcote (International Paint LLC)
Ceilcote/ Flakeline MR
Vinyl Ester/Vinyl Ester/Vinyl Ester
ChemCo Systems
CCS High Chemical Resistance
Epoxy/Epoxy 100% Solids
ChemMasters, Inc.
Mastergard Series
Coal Tar/Asphalt
Cloverdale Paint Inc.
LifeLast
Urethane Elastomeric (1 Coat)
CORCHEM Corporation of Texas
NOVA 525
Epoxy 100% Solids (1 or 2 Coats)
Cortec Corporation
VpCI-395/395
Epoxy/Epoxy
Cote-L Industries Inc.
Durabak/Durabak smooth
Urethane/Urethane
Creative Material Technologies, Ltd.
HYDRALOK
Polyurea Pure (1, 2, or 3 Coats)
Daubert Cromwell
Versil-Pak
Wax
Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy/Epoxy/Epoxy
Diamond Vogel Inc.
Cerami-Tar
Epoxy Coal Tar High Build (1 or 2 Coats)
Duromar, Inc.
SAR
Epoxy 100% Solids (1 or 2 Coats)
Enviroline (International Paint LLC)
Enviroline
Epoxy Novolac (1 or 2 Coats)
ErgonArmor
Novocoat ER2000, Flexible Epoxy Lining
Epoxy 100% Solids (1 or 2 Coats)
Flexcrete Technologies Ltd
Cemprotec
Other
Gemite Products Inc.
Fibre-Prime
Other

Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
Spray Foam
Polyurea Hybrid (1, 2, or 3 Coats)
NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)
New Guard Coatings Inc.
Jotun/PPG
Other
Normac Adhesive Products Inc.
LVHS Series
Urethane/Urethane
NSP Specialty Products
NSP-120 High Performance Epoxy Coating
Epoxy/Epoxy 100% Solids
Nukote Coating Systems International
Nukote LP
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen kis
Other
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
PPG
Novaguard
Epoxy 100% Solids (1 or 2 Coats)
Rhino Linings
Rhino Linings Epoxy
Inorganic Zinc/Epoxy 100% Solids
Sauereisen, Inc.
Sauereisen
Epoxy 100% Solids (1 or 2 Coats)
Sherwin-Williams
Corobond HS/Envirolastic AR 425
Polyurea Pure (1, 2, or 3 Coats)
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, Polyshield HT-UB, EPL-9
Polyurea Pure (1, 2, or 3 Coats)
Sprayroq
SprayShield Green 2
Urethane/Urethane
Synavax, Inc.
Heat Shield EPX-H20
Epoxy/Epoxy/Epoxy
Thermion
Thermion
Thermal Spray
Vertic Zinc Wire OY
VerZn
Thermal Spray
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

ABOVE GROUND PIPE EXTERIORS

AcryliCon Flooring Solutions
AcryliCon Laquer
Other
Acrymax Technoloiges, Inc.
AF-110
Alkyd/Acrylic/Acrylic
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
Arma Coatings
Arma 901 Polyurea & Aspartic
Polyurea Pure (1, 2, or 3 Coats)
Bowers Industrial
Duromar
Epoxy 100% Solids (1 or 2 Coats)
Carboline Company
Carboguard
Epoxy/Epoxy/Epoxy
Ceilcote (International Paint LLC)
Ceilcote/ Flakeline MR
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
Chemline Inc
Chemline ARC
Polyurea Pure (1, 2, or 3 Coats)
ChemMasters, Inc.
Colorlastic
Alkyd/Acrylic/Acrylic
Cloverdale Paint Inc.
LifeLast
Urethane Elastomeric (1 Coat)
Coatings For Industry, Inc.
U-Series
Epoxy (1-2 Coats)/Urethane
Copps Industries, Inc.
Armorgard 500
Epoxy/Epoxy 100% Solids
Cortec Corporation
VpCI-395/386
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)
Cote-L Industries Inc.
Durabak18/Durabak18 smooth
Urethane/Urethane
Creative Material Technologies, Ltd.
Dyna-Pur
Polyurea Pure (1, 2, or 3 Coats)
Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy (1-2 Coats)/Urethane
Diamond Vogel Inc.
Mult-E-Poxy 180/Multi-Thane 330
Epoxy (1-2 Coats)/Urethane
Duromar, Inc.
HPL-1110 / HPL-1110
Epoxy 100% Solids (1 or 2 Coats)
ENECON Corporation
Eneseal HR
Other
Enviroline (International Paint LLC)
Enviroline
Epoxy Novolac (1 or 2 Coats)
ErgonArmor
Novocoat SP2000 Series
Epoxy 100% Solids (1 or 2 Coats)
Farwest Corrosion Control Company
Trenton
Tape Wraps
Flexcrete Technologies Ltd
Cemprotec
Other
FSC Coatings Inc.
Bio-SAFE Prime & Seal/MaxLife
Alkyd/Acrylic/Acrylic
Gemite Products Inc.
Cem-Kote Flex ST
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
H&H Painting Co., Inc.
Sherwin Williams
Epoxy (1-2 Coats)/Urethane
Heresite Protective Coatings, LLC
CSE-6200/UC-5500
Epoxy (1-2 Coats)/Urethane
H-I-S Coatings
H-I-S Coatings
Epoxy (1-2 Coats)/Urethane
Hy-Tech Thermal Solutions
RC-233
Other
Industrial Solutions USA, LLC.
Nano-Clear Industrial Coating
Polyurea Hybrid (1, 2, or 3 Coats)
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
UL XP 6613
Polyurea Pure (1, 2, or 3 Coats)
Jotun Paints Inc.
Pen-O-Prep / Penguard Express / Hardtop AX
Epoxy (1-2 Coats)/Urethane
New Guard Coatings Inc.
Jotun/PPG
Other
NSP Specialty Products
NSP-120 High Performance Epoxy Coating
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote PA II
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy 100% Solids (1 or 2 Coats)
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard UR Polyurea
Polyurea Pure (1, 2, or 3 Coats)
PPG
Amercoat / Durethane
Epoxy (1-2 Coats)/Urethane
Premier Coating Systems Inc
PCS-#1111/PCS-#4300
Epoxy (1-2 Coats)/Fluorourethane
Rhino Linings
Rhino SolarMax
Urethane/Urethane
Sauereisen, Inc.
Sauereisen
Urethane/Urethane
Sherwin-Williams
Macropoxy 646 FC Epoxy/Acrolon Ultra
Epoxy (1-2 Coats)/Urethane
Specialty Products, Inc. (SPI)
AMP 100 UB, Polyshield HT-100F UB, Polyshield HT-SL
Polyurea Pure (1, 2, or 3 Coats)
Synavax, Inc.
Heat Shield EPX-H20
Thermal Spray
Thin Film Technology, Inc.
Bio-Gard 258
Epoxy 100% Solids (1 or 2 Coats)
Vertic Zinc Wire OY
VerZn
Thermal Spray
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

WASTEWATER TREATMENT PLANTS, MUNICIPAL

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EXTERIOR WEATHERING, UV & MILD CHEMICAL

3M Corrosion Protection Products
Scotchkote
Epoxy (1-2 Coats)/Urethane

AcryliCon Flooring Solutions
AcryliCon Decor
Other

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane

Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane

AkzoNobel
International
Epoxy (1-2 Coats)/Urethane

ARCOR - Novolac Epoxy Technologies Inc
ARCOR 1321
Epoxy 100% Solids (1 or 2 Coats)

Arma Coatings
Arma 6000 Polyurea
Polyurea Pure (1, 2, or 3 Coats)

Blome International
Blome
Epoxy 100% Solids (1 or 2 Coats)

Bowers Industrial
Duromar
Epoxy/Epoxy 100% Solids

Carboline Company
Carboguard/Phenoline/Plasite
Epoxy/Epoxy/Epoxy

CIM Industries
CIM
Urethane Elastomeric (1 Coat)

Cloverdale Paint Inc.
Clovamastic/Armourshield
Epoxy (1-2 Coats)/Urethane

Coatings For Industry, Inc.
U-Series
Epoxy (1-2 Coats)/Urethane

Concrete Solutions by Rhino Linings
Concrete Solutions Epoxy 200
Epoxy/Epoxy 100% Solids

Copps Industries, Inc.
Armorgard 700UV
Epoxy/Epoxy 100% Solids

Cortec Corporation
VpCI 395/386
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)

Creative Material Technologies, Ltd.
Dyna-Pur
Polyurea Pure (1, 2, or 3 Coats)

Creative Polymers LLC
PliThane 4975
Polyurea Hybrid (1, 2, or 3 Coats)

Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy (1-2 Coats)/Urethane

Diamond Vogel Inc.
Vers-Acryl 300/Vers-Acryl 222
Other

Duromar, Inc.
HPL-1110 / HPL-1110
Epoxy 100% Solids (1 or 2 Coats)

East Earth Co., Ltd.
MAXBON
Epoxy/Epoxy 100% Solids

ENECON Corporation
Chemclad
Epoxy/Epoxy 100% Solids

ErgonArmor
Novocoat SP2410 Series
Epoxy/Epoxy 100% Solids

Euclid Chemical Company
Tammscoat
Alkyd/Acrylic/Acrylic

Flexcrete Technologies Ltd
Cemprotec
Other

FSC Coatings Inc.
Bio-SAFE Prime & Seal/MaxLife
Alkyd/Acrylic/Acrylic

Gemite Products Inc.
Cem-Kote ST
Other

Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)

Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic / CT-370 Acrylic Aliphatic Poly.
Epoxy (1-2 Coats)/Urethane

H&H Painting Co., Inc.
Sherwin Williams
Epoxy (1-2 Coats)/Urethane

Hempel (USA), Inc.
Hempadur Series/Hempathane Series
Epoxy (1-2 Coats)/Urethane

Heresite Protective Coatings, LLC
CSE-6200/UC-5500
Epoxy (1-2 Coats)/Urethane

H-I-S Coatings
H-I-S Coatings
Epoxy (1-2 Coats)/Urethane

Hy-Tech Thermal Solutions
Insul-Flex
Other

Induron Coatings, LLC
Indurethane 6600 Plus
Epoxy (1-2 Coats)/Urethane

Insulating Coatings Corporation
Astec 2000 System
Alkyd/Acrylic/Acrylic

Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic

International Metalizing Corporation
Reddevil 888
Thermal Spray

IXS Coatings/Ultimate Linings
UL XT 66
Polyurea Hybrid (1, 2, or 3 Coats)

Jessup Manufacturing Company
Jessup Safety Track
Tape Wraps

Jotun Paints Inc.
Pen-O-Prep / Penguard Express / Hardtop AX
Epoxy (1-2 Coats)/Urethane

Kaufman Products, Inc.
SurePoxy HIBild
Epoxy 100% Solids (1 or 2 Coats)

KCC Corrosion Control Co.
KCC Elasti-Liner System
Other

Key Resin Company/Flowcrete
Evonik/Degadur
Methyl Methacrylate/Methyl Methacrylate

Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic

Milamar Coatings
ICO Primer LV/PM-500
Epoxy/MCU/MCU

National Polymers Inc.
Private Label
Epoxy (1-2 Coats)/Urethane
New Guard Coatings Inc.
Jotun/PPG
Other
Nukote Coating Systems International
Nukote PA II
Polyurea Pure (1, 2, or 3 Coats)
Oak Ridge Foam & Coating Systems, Inc
Oak Ridge
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy/Epoxy 100% Solids
Plastic Maritime Corporation
Wearlon
Epoxy/Epoxy/Siloxane
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard UR (Polyurea)/Ply-Guard AS (Polyaspartic)
Polyurea Pure (1, 2, or 3 Coats)
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Amercoat / Durethane
Epoxy (1-2 Coats)/Urethane
Premier Coating Systems Inc
PCS-#1111/PCS-#4300
Epoxy (1-2 Coats)/Fluorourethane
Quantum Chemical
Precidium
Polyurea Pure (1, 2, or 3 Coats)
Randolph Products
Randolph Products RP 75
Other
Rhino Linings
Rhino SolarMax
Urethane/Urethane
Sauereisen, Inc.
Sauereisen
Epoxy 100% Solids (1 or 2 Coats)
Sherwin-Williams
Macropoxy 5500 / Acrolon Ultra
Epoxy (1-2 Coats)/Urethane
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, Polyshield HT-100F UB, AMP 100
Polyurea Pure (1, 2, or 3 Coats)
Synavax, Inc.
Energy Protect
Thermal Spray
Tnemec Company, Inc.
Epoxoline/Endura-Shield
Epoxy (1-2 Coats)/Urethane
Versatile Building Products
Roll on Rock
Epoxy (1-2 Coats)/Urethane
Vertic Zinc Wire OY
VerZnAl or VerZn
Thermal Spray
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

INTERIOR EXPOSURE ENVIRONMENT

Concrete Walls, Ceilings

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
AkzoNobel
Ceilcote
Epoxy Flake Filled/Epoxy Flake Filled
ARCOR - Novolac Epoxy Technologies Inc
ARCOR S-15
Epoxy 100% Solids (1 or 2 Coats)
Arma Coatings
Arma 6000 UV stable
Polyurea Pure (1, 2, or 3 Coats)
Blome International
Blome
Epoxy 100% Solids (1 or 2 Coats)
Bowers Industrial
Duromar
Epoxy/Epoxy 100% Solids
Carboline Company
Sanitile
Epoxy/Epoxy 100% Solids
CCI Con-Tech of California, Inc.
Hydro-Pox
Epoxy/Epoxy 100% Solids
Ceilcote (International Paint LLC)
Ceilcote/ Flakeline
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
ChemCo Systems
CCS HiChem Resistance
Epoxy 100% Solids (1 or 2 Coats)
ChemMasters, Inc.
Colorcoat
Alkyd/Acrylic/Acrylic
Cloverdale Paint Inc.
Clovamastic
Epoxy/Epoxy
Coatings For Industry, Inc.
U-Series
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)
Cortec Corporation
VpCI 386
Alkyd/Acrylic/Acrylic
Corvixx Polymers Corporation
Corvixx CXE-207
Epoxy/Epoxy 100% Solids
Creative Material Technologies, Ltd.
Dyna-Pur
Polyurea Pure (1, 2, or 3 Coats)
Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy/Epoxy/Epoxy
Diamond Vogel Inc.
Vers-Acryl 300/Vers-Acryl 222
Other
Dudick, Inc.
Protecto-Coat
Epoxy/Vinyl Ester/Vinyl Ester
DuraSeal, LLC
DuraLine
Epoxy/Epoxy 100% Solids
Duromar, Inc.
HPL-1110 / HPL-1110
Epoxy 100% Solids (1 or 2 Coats)
East Earth Co., Ltd.
MAXBON
Epoxy 100% Solids (1 or 2 Coats)
ENECON Corporation
Chemclad
Epoxy/Epoxy 100% Solids
ErgonArmor
Novocoat SP2410 Series
Epoxy 100% Solids (1 or 2 Coats)
Euclid Chemical Company
Duralkote/Eucothane
Epoxy (1-2 Coats)/Urethane
Flexcrete Technologies Ltd
Biodex
Other
Florock Polymer Flooring
FloroPoxy
Epoxy/Epoxy 100% Solids
FSC Coatings Inc.
Bio-SAFE Prime & Seal/MaxLife
Alkyd/Acrylic/Acrylic
Gemite Products Inc.
Tuff-Flex CA
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic
Epoxy/Epoxy/Epoxy
H&H Painting Co., Inc.
Sherwin Williams
Epoxy (1-2 Coats)/Urethane
Heresite Protective Coatings, LLC
Heresite VR-500
Other
H-I-S Coatings
H-I-S Coatings
Epoxy (1-2 Coats)/Urethane
Hy-Tech Thermal Solutions
BARRIER COAT
Other
Induron Coatings, LLC
Perma-Clean II
Epoxy/Epoxy/Epoxy
Industrial Solutions USA, LLC.
Nano-Clear Industrial Coating
Polyurea Hybrid (1, 2, or 3 Coats)
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Cellulose Corporation
K-13
Thermal Spray
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
UL XT 66
Polyurea Hybrid (1, 2, or 3 Coats)
Jessup Manufacturing Company
Jessup Safety Track
Tape Wraps
Jotun Paints Inc.
Jotamastic 90 / Hardtop AX
Epoxy (1-2 Coats)/Urethane
Kaufman Products, Inc.
SurePoxy HiBild
Epoxy 100% Solids (1 or 2 Coats)
KCC Corrosion Control Co.
KCC Techni-Plus AEP 20
Other
Key Resin Company/Flowcrete
Key 544, Key 467-HS
Epoxy (1-2 Coats)/Urethane

Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic
Milamar Coatings
PolyMax 250V-550
Epoxy (1-2 Coats)/Urethane
NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)
National Polymers Inc.
Private Label
Epoxy/Epoxy 100% Solids
New Guard Coatings Inc.
Jotun/PPG
Other
NSP Specialty Products
NSP-120 High Performance Epoxy Coating
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote ARU
Polyurea Hybrid (1, 2, or 3 Coats)
Oak Ridge Foam & Coating Systems, Inc
Oak Ridge
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy/Epoxy 100% Solids
Plastic Maritime Corporation
Wearlon
Epoxy/Epoxy/Siloxane
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard EP Epoxy (Walls)
Epoxy 100% Solids (1 or 2 Coats)
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Amercoat
Epoxy/Epoxy/Epoxy
REMA Corrosion Control, Inc.
Corogard
Epoxy 100% Solids (1 or 2 Coats)
Rhino Linings
Rhino Extreme
Polyurea Pure (1, 2, or 3 Coats)
Sauereisen, Inc.
Sauereisen
Epoxy 100% Solids (1 or 2 Coats)
Sherwin-Williams
Pro Industrial Waterbased Catalyzed Epoxy
Epoxy/Epoxy
Sika Corporation
Sikagard
Urethane Elastomeric (1 Coat)
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, Polyshield HT-100F UB, Ultra Bond
Polyurea Pure (1, 2, or 3 Coats)
SpeedCove, Inc.
SpeedCove Precast Cove Base Systems
Other
Sprayroq
SprayShield Green 2
Urethane Elastomeric (1 Coat)
Synavax, Inc.
Energy Protect
Thermal Spray
Tennant Coatings, Inc.
Mat Wall
Epoxy (1-2 Coats)/Urethane
Textured Coatings of America
Color Cote
Alkyd/Acrylic/Acrylic
Thermal-Chem Corp.
775 WallGard E
Epoxy/Epoxy 100% Solids
Tnemec Company, Inc.
Epoxoline
Epoxy/Epoxy/Epoxy
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

INTERIOR EXPOSURE ENVIRONMENT

Concrete Floors

AcryliCon Flooring Solutions
AcryliCon Decor
Other
Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
AkzoNobel
Ceilcote
Epoxy/Vinyl Ester/Vinyl Ester
ARCOR - Novolac Epoxy Technologies Inc
ARCOR EE-71
Epoxy/Epoxy 100% Solids
Arma Coatings
Arma 6000
Polyurea Hybrid (1, 2, or 3 Coats)
Blome International
Blome
Epoxy/Epoxy Novolac/Epoxy Novolac
Bowers Industrial
Duromar
Organic Zinc/Epoxy 100% Solids
Carboline Company
Carboseal
Epoxy/Epoxy 100% Solids
CCI Con-Tech of California, Inc.
Hydro-Pox
Epoxy/Epoxy 100% Solids
Ceilcote (International Paint LLC)
Ceilcote/ Flakeline MR
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
ChemCo Systems
CCS HiChem Resistance
Epoxy 100% Solids (1 or 2 Coats)
Chemline Inc
Chemline 3725
Polyurea Pure (1, 2, or 3 Coats)
ChemMasters, Inc.
Duraguard 100 Series
Epoxy/Epoxy/Epoxy
CIM Industries
CIM
Urethane Elastomeric (1 Coat)
Cloverdale Paint Inc.
Clovamastic
Epoxy/Epoxy
Coatings For Industry, Inc.
WearCOAT
Epoxy (1-2 Coats)/Urethane
Concrete Solutions by Rhino Linings
Concrete Solutions Epoxy 200
Epoxy/Epoxy 100% Solids
Copps Industries, Inc.
Armorgard 500
Epoxy/Epoxy 100% Solids
Cortec Corporation
VpCI 2026
Epoxy Novolac (1 or 2 Coats)
Corvixx Polymers Corporation
Corvixx CXE-201
Epoxy/Epoxy 100% Solids
Creative Material Technologies, Ltd.
Dyna-Prime
Polyurea Hybrid (1, 2, or 3 Coats)
Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy/Epoxy/Epoxy
Diamond Vogel Inc.
Vers-E-Poxy 122
Epoxy/Epoxy/Epoxy
Dudick, Inc.
Protecto-Coat
Epoxy/Vinyl Ester/Vinyl Ester
Duromar, Inc.
HydroFlor Sealer, HydroFlor
Epoxy 100% Solids (1 or 2 Coats)
East Earth Co., Ltd.
MAXBON
Epoxy/Epoxy 100% Solids
ENECON Corporation
Chemclad
Epoxy/Epoxy 100% Solids
ErgonArmor
Novocoat 1500 Series Flooring
Epoxy/Epoxy 100% Solids
Euclid Chemical Company
Duraltex 1705
Epoxy/Epoxy 100% Solids
Flexcrete Technologies Ltd
Cemprotec E-Floor
Other
Florock Polymer Flooring
FloroThane
Epoxy/MCU/MCU
FSC Coatings Inc.
AWR Super Sealer
Methyl Methacrylate/Methyl Methacrylate
Gemite Products Inc.
Gem-Crete TWM Plus
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic
Epoxy/Epoxy/Epoxy
H&H Painting Co., Inc.
Sherwin Williams
Epoxy (1-2 Coats)/Urethane
Hempel (USA), Inc.
Neocrete SL
Urethane/Urethane
H-I-S Coatings
Rustoleum
Epoxy/Epoxy
Induron Coatings, LLC
Perma-Tuff SL
Epoxy/Epoxy 100% Solids
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
UL XT 66
Polyurea Hybrid (1, 2, or 3 Coats)

WASTEWATER TREATMENT PLANTS, MUNICIPAL

Jessup Manufacturing Company
Jessup Safety Track
Tape Wraps
Jotun Paints Inc.
Jotamastic 90 / Hardtop AX
Epoxy (1-2 Coats)/Urethane
Kaufman Products, Inc.
K Pro CRS
Epoxy 100% Solids (1 or 2 Coats)
KCC Corrosion Control Co.
KCC Techni-Plus EP 60 SL
Other
Key Resin Company/Flowcrete
Key 630, Key 633
Epoxy/Epoxy Novolac/Epoxy Novolac
Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic
Milamar Coatings
3800 FS
Epoxy/Epoxy 100% Solids
NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)
National Polymers Inc.
Private Label
Epoxy Novolac (1 or 2 Coats)
New Guard Coatings Inc.
Rust-Oleum
Other
NSP Specialty Products
NSP-122 Industrial Floor Coating
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote ST
Polyurea Hybrid (1, 2, or 3 Coats)
Oak Ridge Foam & Coating Systems, Inc
Oak Ridge
Urethane Elastomeric (1 Coat)
Peerless Industrial Systems
Epigen
Epoxy/Epoxy 100% Solids
Plastic Maritime Corporation
Wearlon
Epoxy/Epoxy/Siloxane
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard EP Epoxy
Epoxy 100% Solids (1 or 2 Coats)
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Amerlock
Epoxy/Epoxy
Randolph Products
Randolph Products Randogrip Navy G
Other
REMA Corrosion Control, Inc.
Corofloor, Coroflake
Epoxy/Epoxy Novolac/Epoxy Novolac
Rhino Linings
FastFloor
Epoxy (1-2 Coats)/Urethane
Roadware
Concrete Mender
Urethane/Urethane
Sauereisen, Inc.
Sauereisen
Epoxy 100% Solids (1 or 2 Coats)

Sherwin-Williams
Armorseal 1000HS/Armorseal 1000HS
Epoxy/Epoxy
Sika Corporation
Sikafloor
Urethane/Urethane
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, Polyshield HT-100F UB, Ultra Bond
Polyurea Pure (1, 2, or 3 Coats)
SpeedCove, Inc.
SpeedCove Precast Cove Base Systems
Other
Sprayroq
SprayWall
Urethane/Urethane
Tennant Coatings, Inc.
EcoCrete
Urethane/Urethane
Textured Coatings of America
Cool Tex
Epoxy (1-2 Coats)/Urethane
Thermal-Chem Corp.
731 ArmorBond Resufacer
Epoxy/Epoxy 100% Solids
Tnemec Company, Inc.
Epoxoprime/Tneme-Glaze
Epoxy/Epoxy 100% Solids
Versatile Building Products
Roll on Rock
Epoxy (1-2 Coats)/Urethane
Vertic Zinc Wire OY
VerZn
Thermal Spray
Westcoat
Westcoat
Epoxy/Epoxy 100% Solids
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

IMMERSION - WASTEWATER COLLECTION, PRIMARY TREATMENT, SECONDARY TREATMENT

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
AkzoNobel
Ceilcote
Epoxy Flake Filled/Epoxy Flake Filled
AP/M Permaform
Cor+Gard and Cor+Gard EPM
Epoxy/Epoxy 100% Solids
ARCOR - Novolac Epoxy Technologies Inc
ARCOR EE-71
Epoxy/Epoxy 100% Solids
Arma Coatings
Arma 901 50D Polyurea
Polyurea Pure (1, 2, or 3 Coats)
Blome International
Blome
Epoxy/Epoxy Novolac/Epoxy Novolac
Bowers Industrial
Quest
Polyurea Hybrid (1, 2, or 3 Coats)
Carboline Company
Reactamine
Urethane Elastomeric (1 Coat)
CCI Con-Tech of California, Inc.
Hydro-Pox
Epoxy/Epoxy 100% Solids
Ceilcote (International Paint LLC)
Ceilcote/ Flakeline MR
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
ChemCo Systems
CCS HiChem Resistance
Epoxy/Epoxy 100% Solids
Chemline Inc
Chemline ARC
Polyurea Pure (1, 2, or 3 Coats)
CIM Industries
CIM
Urethane Elastomeric (1 Coat)
Cloverdale Paint Inc.
LifeLast
Urethane Elastomeric (1 Coat)
Copps Industries, Inc.
Armorgard 500
Epoxy/Epoxy 100% Solids
Cortec Corporation
VpCI 395/2026
Epoxy/Epoxy Novolac/Epoxy Novolac
Corvixx Polymers Corporation
Corvixx CXE-406
Epoxy/Epoxy Novolac/Epoxy Novolac
Creative Material Technologies, Ltd.
Dyna-Prime
Polyurea Hybrid (1, 2, or 3 Coats)
Creative Polymers LLC
PliaThane 4975
Urethane Elastomeric (1 Coat)
Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy/Epoxy/Epoxy
Diamond Vogel Inc.
Mult-E-Poxy 180
Epoxy/Epoxy/Epoxy
DuraSeal, LLC
DuraLine
Epoxy/Epoxy 100% Solids
Duromar, Inc.
HPL-2510 / HPL-2510
Epoxy 100% Solids (1 or 2 Coats)
East Earth Co., Ltd.
MAXBON
Epoxy/Epoxy 100% Solids
ENECON Corporation
Chemclad
Epoxy/Epoxy 100% Solids
ErgonArmor
Novocoat SG2500 Highbuild Novolac
Epoxy Novolac (1 or 2 Coats)
Euclid Chemical Company
Duralkote 500
Epoxy Novolac (1 or 2 Coats)
Flexcrete Technologies Ltd
Cemprotec
Other
Gemite Products Inc.
Cem-Kote Flex CR
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)

Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic / PC-590 Wet Surface Epoxy
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
Hempel (USA), Inc.
Hempaline Series
Epoxy 100% Solids (1 or 2 Coats)
Heresite Protective Coatings, LLC
Heresite CSE-6200
Epoxy/Epoxy/Epoxy
H-I-S Coatings
Rustoleum
Epoxy/Epoxy
Induron Coatings, LLC
PermaSafe 100 Ceramic Epoxy
Epoxy 100% Solids (1 or 2 Coats)
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
UL XT 66
Polyurea Hybrid (1, 2, or 3 Coats)
Jotun Paints Inc.
Pen-O-Prep / Marathon 1000 GF / Marathon 1000 GF
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
KCC Corrosion Control Co.
KCC Elasti-Liner System
Other
Key Resin Company/Flowcrete
Key 630, Key 633
Epoxy/Epoxy Novolac/Epoxy Novolac
Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic
Milamar Coatings
2300 LS
Epoxy/Epoxy 100% Solids
NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)
National Polymers Inc.
Private Label
Epoxy/Epoxy Novolac/Epoxy Novolac
New Guard Coatings Inc.
Jotun/PPG
Other
Normac Adhesive Products Inc.
NR=95LVHS, NR-80LVHS
Urethane/Urethane
NSP Specialty Products
NSP-120 High Performance Epoxy Coating
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote ST
Polyurea Hybrid (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy 100% Solids (1 or 2 Coats)
Plastic Maritime Corporation
Wearlon
Epoxy/Epoxy/Siloxane
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard UR Polyurea
Polyurea Pure (1, 2, or 3 Coats)
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Novaguard
Epoxy/Epoxy/Epoxy
REMA Corrosion Control, Inc.
Coroflake, Coroflake MR
Epoxy/Epoxy/Epoxy
Rhino Linings
HiChem
Urethane Elastomeric (1 Coat)
Sauereisen, Inc.
Sauereisen
Urethane/Urethane
Sherwin-Williams
SherFlex
Urethane Elastomeric (1 Coat)
Sika Corporation
Sikafloor
Urethane/Urethane

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Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, Ultra Bond-100, ElastaFLEX III
Polyurea Pure (1, 2, or 3 Coats)

Sprayroq
SprayWall
Urethane/Urethane

Tnemec Company, Inc.
MortarClad/Perma-Shield
Epoxy/Epoxy 100% Solids

Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

IMMERSION - TERTIARY TREATMENT

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane

Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane

AkzoNobel
Ceilcote
Epoxy Flake Filled/Epoxy Flake Filled

Arma Coatings
Arma 901 55D Polyurea
Polyurea Pure (1, 2, or 3 Coats)

Blome International
Blome
Epoxy/Epoxy Novolac/Epoxy Novolac

Bowers Industrial
Duromar
Epoxy/Epoxy 100% Solids

Carboline Company
Reactamine
Urethane Elastomeric (1 Coat)

CCI Con-Tech of California, Inc.
Hydro-Pox
Epoxy/Epoxy 100% Solids

Ceilcote (International Paint LLC)
Ceilcote/ Flakeline MR
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled

ChemCo Systems
CCS HiChem Resistance
Epoxy/Epoxy 100% Solids

CIM Industries
CIM
Urethane Elastomeric (1 Coat)

Cloverdale Paint Inc.
ClovaLine
Epoxy/Epoxy 100% Solids

Copps Industries, Inc.
Armorgard 500
Epoxy/Epoxy 100% Solids

Cortec Corporation
VpCI 395/2026
Epoxy/Epoxy Novolac/Epoxy Novolac

Creative Material Technologies, Ltd.
Dyna-Pur
Polyurea Hybrid (1, 2, or 3 Coats)

Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy/Epoxy/Epoxy

Diamond Vogel Inc.
Cerami-Tar
Epoxy Coal Tar High Build (1 or 2 Coats)

DuraSeal, LLC
DuraLine
Epoxy/Epoxy 100% Solids

Duromar, Inc.
HPL-1301, DF-4301
Epoxy 100% Solids (1 or 2 Coats)

ENECON Corporation
Chemclad
Epoxy/Epoxy 100% Solids

ErgonArmor
Novocoat SP2000 Series
Epoxy/Epoxy Novolac/Epoxy Novolac

Flexcrete Technologies Ltd
Cemprotec
Other

Gemite Products Inc.
Corro-Chem 100
Other

Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)

Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic / PC-590 Wet Surface Epoxy
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled

Hempel (USA), Inc.
Hempaline Series
Epoxy 100% Solids (1 or 2 Coats)

Induron Coatings, LLC
PermaSafe 100 Ceramic Epoxy
Epoxy 100% Solids (1 or 2 Coats)

Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic

International Metalizing Corporation
Reddevil 888
Thermal Spray

IXS Coatings/Ultimate Linings
UL XT 66
Polyurea Hybrid (1, 2, or 3 Coats)

Jotun Paints Inc.
Pen-O-Prep / Marathon 1000 GF / Marathon 1000 GF
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled

KCC Corrosion Control Co.
KCC Techni-Plus EN 25.5
Other

Key Resin Company/Flowcrete
Key 630, Key 633
Epoxy/Epoxy Novolac/Epoxy Novolac

Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic

Milamar Coatings
2300 LS
Epoxy/Epoxy 100% Solids

National Polymers Inc.
Private Label
Epoxy Novolac (1 or 2 Coats)

New Guard Coatings Inc.
Jotun/PPG
Other

Normac Adhesive Products Inc.
NR-95LVHS, NR-80LVHS
Urethane/Urethane

NSP Specialty Products
NSP-120 High Performance Epoxy Coating
Epoxy 100% Solids (1 or 2 Coats)

Nukote Coating Systems International
Nukote ST
Polyurea Pure (1, 2, or 3 Coats)

Peerless Industrial Systems
Epigen
Epoxy 100% Solids (1 or 2 Coats)

Plastic Maritime Corporation
Wearlon
Epoxy/Epoxy/Siloxane

Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)

Polyset
Ply-Guard UR Polyurea
Polyurea Pure (1, 2, or 3 Coats)

PPC Coatings (MTR)
PPC Coatings
Other

PPG
Novagaurd
Epoxy Phenolic/Epoxy Phenolic/Epoxy Phenolic

REMA Corrosion Control, Inc.
Coroflake MR, Corofloor,
Epoxy 100% Solids (1 or 2 Coats)

Rhino Linings
Rhino Extreme
Polyurea Pure (1, 2, or 3 Coats)

Sauereisen, Inc.
Sauereisen
Urethane/Urethane

Sherwin-Williams
SherFlex
Urethane Elastomeric (1 Coat)

Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, Ultra Bond-100, Polyshield HT-1
Polyurea Pure (1, 2, or 3 Coats)

Sprayroq
SprayWall
Urethane/Urethane

Tnemec Company, Inc.
Epoxoline
Epoxy/Epoxy/Epoxy

Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

SECONDARY CONTAINMENT

3M Corrosion Protection Products
Scotchkote
Epoxy (1-2 Coats)/Urethane

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane

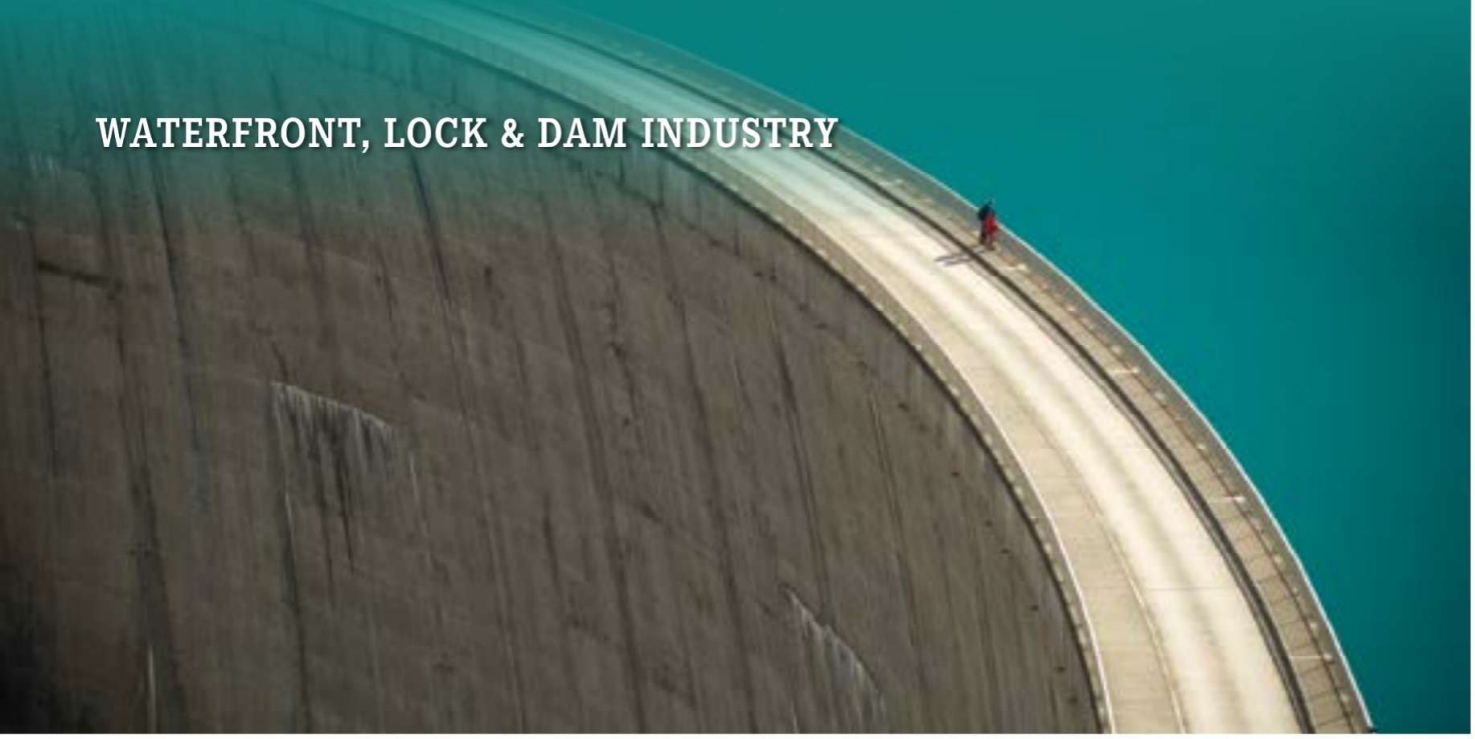
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane

AkzoNobel
International
Epoxy/Epoxy Novolac/Epoxy Novolac

Andek Corporation
Polafloor PUR
Urethane/Urethane

ARCOR - Novolac Epoxy Technologies Inc
ARCOR EE-71
Epoxy/Epoxy 100% Solids
Arma Coatings
Arma 90AS Polyurea
Polyurea Pure (1, 2, or 3 Coats)
Blome International
Blome
Epoxy/Epoxy Novolac/Epoxy Novolac
Bowers Industrial
Quest
Polyurea Hybrid (1, 2, or 3 Coats)
Carboline Company
Semstone
Epoxy/Epoxy 100% Solids
CCI Con-Tech of California, Inc.
Hydro-Pox
Epoxy/Epoxy 100% Solids
Ceilcote (International Paint LLC)
Ceilcote/ Flakeline MR
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
ChemCo Systems
CCS HiChem Resistance
Epoxy 100% Solids (1 or 2 Coats)
Chemline Inc
Chemline ARC
Polyurea Pure (1, 2, or 3 Coats)
CIM Industries
CIM
Urethane Elastomeric (1 Coat)
Cloverdale Paint Inc.
ClovaLine
Epoxy 100% Solids (1 or 2 Coats)
Concrete Solutions by Rhino Linings
Concrete Solutions Epoxy 200
Epoxy/Epoxy 100% Solids
Copps Industries, Inc.
Armorgard 500
Epoxy/Epoxy 100% Solids
Cortec Corporation
VpCI 395/2026
Epoxy/Epoxy Novolac/Epoxy Novolac
Corvixx Polymers Corporation
Corvixx CXE-403
Epoxy Novolac (1 or 2 Coats)
Creative Material Technologies, Ltd.
Nano-Pur 1376
Polyurea Pure (1, 2, or 3 Coats)
Diamond Vogel Inc.
Mult-E-Poxy 180/Multi-Thane 330 or 340
Epoxy (1-2 Coats)/Urethane
Dudick, Inc.
Protecto-Flex
Epoxy/Vinyl Ester/Vinyl Ester
DuraSeal, LLC
DuraLine
Epoxy/Epoxy 100% Solids
Duromar, Inc.
HPL-1301, DF-4301
Epoxy 100% Solids (1 or 2 Coats)
ENECON Corporation
Chemclad
Epoxy/Epoxy Novolac/Epoxy Novolac
ErgonArmor
Novocoat SP2000 Series
Epoxy/Epoxy Novolac/Epoxy Novolac
Euclid Chemical Company
Duraltex 1807
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
Fabick, Inc. - Coatings and Sealants
Fabick
Polyurea Pure (1, 2, or 3 Coats)
Flexcrete Technologies Ltd
Cemprotec
Other
Florock Polymer Flooring
FloroCrete
Urethane/Urethane
FSC Coatings Inc.
Rustop Metallic 6000
Urethane/Urethane
Gemite Products Inc.
Cem-Kote Flex CR
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Goodwest Linings and Coatings
Utilithane, Endura-Flex
Urethane Elastomeric (1 Coat)
Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic / PC-590 Wet Surface Epoxy
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
Hempel (USA), Inc.
Hempaline Series
Epoxy 100% Solids (1 or 2 Coats)
Heresite Protective Coatings, LLC
Heresite CSE-6200
Epoxy/Epoxy/Epoxy
Induron Coatings, LLC
PermaSafe 100 Ceramic Epoxy
Epoxy/Epoxy 100% Solids
Industrial Solutions USA, LLC.
Polycoat
Urethane Elastomeric (1 Coat)
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
UL XT 66
Polyurea Hybrid (1, 2, or 3 Coats)
Jotun Paints Inc.
Tankguard SF1 / Tankguard SF1
Epoxy/Epoxy 100% Solids
KCC Corrosion Control Co.
KCC Elasti-Liner System
Other
Key Resin Company/Flowcrete
Key Vinyl Ester
Vinyl Ester/Vinyl Ester/Vinyl Ester
Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic
Milamar Coatings
ICO Hi Guard
Epoxy/Epoxy Novolac/Epoxy Novolac
NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)
National Polymers Inc.
Private Label
Epoxy/Epoxy Novolac/Epoxy Novolac
New Guard Coatings Inc.
Jotun/PPG
Other
NSP Specialty Products
NSP-120 High Performance Epoxy Coating
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote XT Plus
Polyurea Hybrid (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen chemproof
Epoxy/Epoxy Novolac/Epoxy Novolac
Plastic Maritime Corporation
Wearlon
Epoxy/Epoxy/Siloxane
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard EP (Novolac) Epoxy
Epoxy/Epoxy Novolac/Epoxy Novolac
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Novaguard
Epoxy Phenolic/Epoxy Phenolic/Epoxy Phenolic
Quantum Chemical
Precidium
Polyurea Pure (1, 2, or 3 Coats)
REMA Corrosion Control, Inc.
Coroflake MR, Corofloor
Epoxy 100% Solids (1 or 2 Coats)
Rhino Linings
Rhino Extreme
Polyurea Pure (1, 2, or 3 Coats)
Sauereisen, Inc.
Sauereisen
Urethane/Urethane
Sherwin-Williams
Corobond VE Primer / Cor-Cote VEN / Cor-Cote VEN
Vinyl Ester/Vinyl Ester/Vinyl Ester
Sika Corporation
Sikafloor
Epoxy/Epoxy Novolac/Epoxy Novolac
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, Ultra Bond-100, Polyshield HT-1
Polyurea Pure (1, 2, or 3 Coats)
SpeedCove, Inc.
SpeedCove Precast Cove Base Systems
Other
Synavax, Inc.
Energy Protect
Thermal Spray
Tennant Coatings, Inc.
ChemXP
Vinyl Ester/Vinyl Ester/Vinyl Ester
Thermal-Chem Corp.
755 AcidGuard
Epoxy/Epoxy Novolac/Epoxy Novolac
Tnemec Company, Inc.
Epoxoprime/ChemBloc/ChemBloc
Epoxy/Epoxy Novolac/Epoxy Novolac
Versatile Building Products
Roll on Rock
Epoxy/Epoxy
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

WATERFRONT, LOCK & DAM INDUSTRY



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ONSHORE ATMOSPHERIC EXPOSURE - WEATHERING, UV & AIRBORNE SALT

AcryliCon Flooring Solutions
AcryliCon Decor
Other

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane

Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane

AkzoNobel
Polibrid
Urethane Elastomeric (1 Coat)

Arma Coatings
Arma 901 & Arma 6000
Polyurea Pure (1, 2, or 3 Coats)

Autonomic Materials.
AMP-ZINC 100
Zinc-rich, organic

Bowers Industrial
Duromar
Epoxy/Epoxy 100% Solids

Carboline Company
Carboguard
Epoxy/Epoxy/Epoxy

ChemMasters, Inc.
Aquanil / SpallGuard
Siloxane/Siloxane

Coatings For Industry, Inc.
U-Series
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)

Cortec Corporation
VpCI 395/384
Epoxy (1-2 Coats)/Urethane

Cote-L Industries Inc.
Durabak18/Durabak18 Smooth
Urethane/Urethane

Creative Material Technologies, Ltd.
Dyna-Pur
Polyurea Pure (1, 2, or 3 Coats)

Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy (1-2 Coats)/Urethane

Diamond Vogel Inc.
Mult-F-Poxy 180/Multi-Thane 330 or 340
Epoxy (1-2 Coats)/Urethane

Duromar, Inc.
HPL-1110 / HPL-1110
Epoxy 100% Solids (1 or 2 Coats)

ENECON Corporation
Chemclad
Epoxy/Epoxy 100% Solids

ErgonArmor
Novocoat SP1510
Epoxy 100% Solids (1 or 2 Coats)

Flexcrete Technologies Ltd
Cemprotec
Other

FSC Coatings Inc.
Bio-SAFE Prime & Seal/MaxLife
Alkyd/Acrylic/Acrylic

Gemite Products Inc.
Tuff-Flex CA
Other

Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)

Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic / CT-370 Acrylic Aliphatic Poly.
Epoxy (1-2 Coats)/Urethane

Heresite Protective Coatings, LLC
CSE-6200/UC-5500
Epoxy (1-2 Coats)/Urethane

Induron Coatings, LLC
Indurethane 6600 Plus
Epoxy (1-2 Coats)/Urethane

Industrial Solutions USA, LLC.
Nano-Clear Industrial Coating
Polyurea Hybrid (1, 2, or 3 Coats)

Insulating Coatings Corporation
Astec 2000 System
Alkyd/Acrylic/Acrylic

Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic

International Metalizing Corporation
Reddevil 888
Thermal Spray

IXS Coatings/Ultimate Linings
UL XT 66
Polyurea Hybrid (1, 2, or 3 Coats)

Jessup Manufacturing Company
Jessup Safety Track
Tape Wraps

Jotun Paints Inc.
Pen-O-Prep / Penguard Express / Hardtop AX
Epoxy (1-2 Coats)/Urethane

Kaufman Products, Inc.
SurePoxy HiBild
Epoxy 100% Solids (1 or 2 Coats)

KCC Corrosion Control Co.
KCC Elasti-Liner System
Other

Key Resin Company/Flowcrete
Evonik/Degadur
Methyl Methacrylate/Methyl Methacrylate

Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic

Milamar Coatings
ICO Primer LV/PM-500
Epoxy/MCU/MCU

New Guard Coatings Inc.
Jotun/PPG
Other

Nukote Coating Systems International
Nukote PA II
Polyurea Pure (1, 2, or 3 Coats)

Peerless Industrial Systems
Epigen
Epoxy 100% Solids (1 or 2 Coats)

Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)

Polyset
Ply-Guard AS Polyaspartic
Polyurea Hybrid (1, 2, or 3 Coats)

PPC Coatings (MTR)
PPC Coatings
Other

PPG
Amercoat / Durethane
Epoxy/Epoxy/Siloxane

Premier Coating Systems Inc
PCS-#1111/PCS-#4300
Epoxy (1-2 Coats)/Fluorourethane

Randolph Products
Randolph Products Randogrip Navy G Non-Skid
Other

Rhino Linings
Rhino Extreme
Polyurea Pure (1, 2, or 3 Coats)

Sherwin-Williams
Macropoxy 646 / Hi-Solids Polyurethane
Epoxy (1-2 Coats)/Urethane
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, AMP 100, Ultra Bond-100
Polyurea Pure (1, 2, or 3 Coats)
Synavax, Inc.
Heat Shield High Heat
Thermal Spray
Vertic Zinc Wire OY
VerZnAl or VerZn
Thermal Spray
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

SPLASH ZONE EXPOSURE - WEATHERING, UV, FRESH OR SALTWATER SPLASH & ABRASION

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
AkzoNobel
International
Epoxy/Epoxy/Epoxy
Arma Coatings
Arma 901
Polyurea Pure (1, 2, or 3 Coats)
Bowers Industrial
Quest
Polyurea Hybrid (1, 2, or 3 Coats)
Carboline Company
Bitumastic
Coal Tar/Asphalt
ChemCo Systems
CCS General Purpose
Epoxy 100% Solids (1 or 2 Coats)
Coatings For Industry, Inc.
U-Series
Epoxy (1-2 Coats)/Urethane
Concrete Solutions by Rhino Linings
Concrete Solutions Epoxy 200
Epoxy/Epoxy 100% Solids
Cortec Corporation
VpCI 395/384
Epoxy (1-2 Coats)/Urethane
Cote-L Industries Inc.
Durabak/Durabak smooth
Urethane/Urethane
Creative Material Technologies, Ltd.
Dyna-Prime
Polyurea Hybrid (1, 2, or 3 Coats)
Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy/Epoxy/Epoxy
Diamond Vogel Inc.
Vinyl Zinc Rich/Vinyl Coatings
Other
Duromar, Inc.
HPL-1110 / HPL-1110
Epoxy 100% Solids (1 or 2 Coats)
ENECON Corporation
Chemclad
Epoxy/Epoxy 100% Solids
ErgonArmor
Novocoat SG2500 HB Epoxy
Epoxy 100% Solids (1 or 2 Coats)
Farwest Corrosion Control Company
Carboline Splash Zone
Epoxy 100% Solids (1 or 2 Coats)
Flexcrete Technologies Ltd
Cemprotec
Other
FSC Coatings Inc.
Rustop Aluminum Urethane
Urethane/Urethane
Gemite Products Inc.
Cem-Kote Barrier Coat 100
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic / PC-590 Wet Surface Epoxy
Epoxy/Epoxy 100% Solids
Heresite Protective Coatings, LLC
CSE-6200/UC-5500
Epoxy (1-2 Coats)/Urethane
Induron Coatings, LLC
Indurethane 6600 Plus
Epoxy (1-2 Coats)/Urethane
Industrial Solutions USA, LLC.
Nano-Clear Industrial Coating
Polyurea Hybrid (1, 2, or 3 Coats)
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
UL XT 66
Polyurea Hybrid (1, 2, or 3 Coats)
Jessup Manufacturing Company
Jessup Safety Track
Tape Wraps
Jotun Paints Inc.
Pen-O-Prep / Marathon 1000 GF / Marathon 1000 GF
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
Kaufman Products, Inc.
K Pro CRS
Epoxy 100% Solids (1 or 2 Coats)
Key Resin Company/Flowcrete
Evonik/Degadur
Methyl Methacrylate/Methyl Methacrylate
Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic
Milamar Coatings
ICO Primer LV/Fibercoat
Epoxy/Epoxy 100% Solids
NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)
New Guard Coatings Inc.
Jotun/PPG
Other
Normac Adhesive Products Inc.
NR-95LVHS, NR-80LVHS
Urethane/Urethane
NSP Specialty Products
NSP-120 HPEC High Build
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote ST
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy 100% Solids (1 or 2 Coats)
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard AS Polyaspartic
Polyurea Hybrid (1, 2, or 3 Coats)
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Sigmashield
Epoxy/Epoxy
Premier Coating Systems Inc
PCS-#1200TA
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
Randolph Products
Randolph Products Randogrip Navy G Non-Skid
Other
Rhino Linings
Rhino Extreme
Polyurea Pure (1, 2, or 3 Coats)
Sherwin-Williams
Dura-Plate 154
Epoxy/Epoxy/Epoxy
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, AMP 100, Ultra Bond-100, Elasta
Polyurea Pure (1, 2, or 3 Coats)
Synavax, Inc.
Heat Shield EPX-H20
Thermal Spray
Thermion
Thermion
Thermal Spray
Thin Film Technology, Inc.
BIO-DUR 560
Epoxy/Epoxy 100% Solids
Versatile Building Products
Roll on Rock
Epoxy (1-2 Coats)/Urethane
Vertic Zinc Wire OY
VerZnAl
Thermal Spray
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

IMMERSION EXPOSURE - SEAWATER

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
AkzoNobel
Polibrid
Urethane Elastomeric (1 Coat)
ARCOR - Novolac Epoxy Technologies Inc
ARCOR S-30
Epoxy 100% Solids (1 or 2 Coats)
Arma Coatings
Arma 901 55D Polyurea
Polyurea Pure (1, 2, or 3 Coats)
Bowers Industrial
Quest
Polyurea Hybrid (1, 2, or 3 Coats)
Carboline Company
Reactamine
Urethane Elastomeric (1 Coat)
ChemCo Systems
CCS Marine Coating
Epoxy 100% Solids (1 or 2 Coats)

WATERFRONT, LOCK & DAM INDUSTRY

CIM Industries
CIM
Urethane Elastomeric (1 Coat)
Cloverdale Paint Inc.
LifeLast
Urethane Elastomeric (1 Coat)
Coatings For Industry, Inc.
U-Series
Epoxy/Epoxy
Concrete Solutions by Rhino Linings
Concrete Solutions Epoxy 200
Epoxy/Epoxy 100% Solids
CORCHEM Corporation of Texas
NOVA 525
Epoxy 100% Solids (1 or 2 Coats)
Cortec Corporation
VpCI 395/395
Epoxy/Epoxy
Cote-L Industries Inc.
Durabak/Durabak smooth
Urethane/Urethane
Creative Material Technologies, Ltd.
Dyna-Pur
Polyurea Pure (1, 2, or 3 Coats)
Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy/Epoxy/Epoxy
Diamond Vogel Inc.
Cerami-Tar
Epoxy Coal Tar High Build (1 or 2 Coats)
Duromar, Inc.
HPL-2510 / HPL-2510
Epoxy 100% Solids (1 or 2 Coats)
ENECON Corporation
Chemclad
Epoxy/Epoxy 100% Solids
ErgonArmor
Novocoat SP2000 Series
Epoxy 100% Solids (1 or 2 Coats)
Flexcrete Technologies Ltd
Cemprotec
Other
Gemite Products Inc.
Cem-Kote Barrier Coat 100
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic / PC-590 Wet Surface Epoxy
Epoxy/Epoxy/Epoxy
Heresite Protective Coatings, LLC
Heresite CSE-6200
Epoxy Flake Filled/Epoxy Flake Filled
Induron Coatings, LLC
PermaSafe 100 Ceramic Epoxy
Epoxy/Epoxy 100% Solids
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
UL XT 66
Polyurea Hybrid (1, 2, or 3 Coats)
Jotun Paints Inc.
Pen-O-Prep / Marathon 1000 GF / Marathon 1000 GF
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
Kaufman Products, Inc.
K Pro UC Coating
Epoxy 100% Solids (1 or 2 Coats)
Key Resin Company/Flowcrete
Key 630, Key 633
Epoxy/Epoxy Novolac/Epoxy Novolac
Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic
Milamar Coatings
ICO Glaze
Epoxy/Epoxy 100% Solids
NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)
New Guard Coatings Inc.
Jotun/PPG
Other
Normac Adhesive Products Inc.
NR-95LVHS, NR-80LVHS
Urethane/Urethane
NSP Specialty Products
NSP-120 HPEC High Build
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote ST
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy 100% Solids (1 or 2 Coats)
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard AS Polyaspartic
Polyurea Hybrid (1, 2, or 3 Coats)
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Sigmashield
Epoxy/Epoxy
Randolph Products
Randolph Products RP 7175
Other
Rhino Linings
HiChem
Urethane Elastomeric (1 Coat)

Sherwin-Williams
Dura Plate 235
Epoxy/Epoxy
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, AMP 100, Ultra Bond-100, Elasta
Polyurea Pure (1, 2, or 3 Coats)
Thin Film Technology, Inc.
BIO-DUR 560
Epoxy/Epoxy 100% Solids
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

IMMERSION EXPOSURE - FRESHWATER

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
AkzoNobel
Polibrid
Urethane Elastomeric (1 Coat)
ARCOR - Novolac Epoxy Technologies Inc
ARCOR s-30
Epoxy 100% Solids (1 or 2 Coats)
Arma Coatings
Arma 901 Polyurea
Polyurea Pure (1, 2, or 3 Coats)
Bowers Industrial
Duromar
Epoxy/Epoxy 100% Solids
Carboline Company
Reactamine
Urethane Elastomeric (1 Coat)
ChemCo Systems
CCS Marine Coating
Epoxy 100% Solids (1 or 2 Coats)
CIM Industries
CIM
Urethane Elastomeric (1 Coat)
Cloverdale Paint Inc.
LifeLast
Urethane Elastomeric (1 Coat)
Coatings For Industry, Inc.
U-Series
Epoxy/Epoxy
Concrete Solutions by Rhino Linings
Concrete Solutions Epoxy 200
Epoxy 100% Solids (1 or 2 Coats)

CORCHEM Corporation of Texas
NOVA 525
Epoxy 100% Solids (1 or 2 Coats)
Cortec Corporation
VpCI 395/395
Epoxy/Epoxy
Cote-L Industries Inc.
Durabak/Durabak Smooth
Urethane/Urethane
Creative Material Technologies, Ltd.
Dyna-Pur
Polyurea Pure (1, 2, or 3 Coats)
Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy/Epoxy/Epoxy
Diamond Vogel Inc.
766-E Vinyl
Other
Duromar, Inc.
HPL-1110 / HPL-1110
Epoxy 100% Solids (1 or 2 Coats)
ENECON Corporation
Chemclad
Epoxy/Epoxy 100% Solids
ErgonArmor
Novocoat SP2410
Epoxy 100% Solids (1 or 2 Coats)
Flexcrete Technologies Ltd.
Cemprotec
Other
Gemite Products Inc.
Cem-Kote Barrier Coat 100
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic / PC-590 Wet Surface Epoxy
Epoxy/Epoxy/Epoxy
Heresite Protective Coatings, LLC
Heresite CSE-6200
Epoxy/Epoxy/Epoxy
Induron Coatings, LLC
PermaSafe 100 Ceramic Epoxy
Epoxy/Epoxy 100% Solids
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
UL XT 66
Polyurea Hybrid (1, 2, or 3 Coats)
Jotun Paints Inc.
Pen-O-Prep / Marathon 1000 GF / Marathon 1000 GF
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled
Kaufman Products, Inc.
K Pro UC Coating
Epoxy 100% Solids (1 or 2 Coats)
Key Resin Company/Flowcrete
Key 630, Key 633
Epoxy/Epoxy Novolac/Epoxy Novolac
Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic
Milamar Coatings
ICO Primer XT/Fibercoat
Epoxy/Epoxy 100% Solids
NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)
New Guard Coatings Inc.
Jotun/PPG
Other
Normac Adhesive Products Inc.
NR-95LVHS, NR-80LVHS
Urethane/Urethane
NSP Specialty Products
NSP-120 HPEC High Build
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote ST
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy 100% Solids (1 or 2 Coats)
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard AS Polyaspartic
Polyurea Hybrid (1, 2, or 3 Coats)
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Sigmashield
Epoxy/Epoxy
Randolph Products
Randolph Products RP 7175
Other
Rhino Linings
HiChem
Urethane Elastomeric (1 Coat)
Sherwin-Williams
Dura Plate 235
Epoxy/Epoxy
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, AMP 100, Polyshield HT-100F UB,
Polyurea Pure (1, 2, or 3 Coats)
Thin Film Technology, Inc.
BIO-DUR 560
Epoxy/Epoxy 100% Solids
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

PROFESSIONAL
EDUCATION WEBINARS

PAINTSQUARE FIREPROOFING SERIES

The Dangers of Extrapolation
Properly Estimating Fire Protection Applications

WEDNESDAY, OCTOBER 30, 2019
11:00 AM - NOON ET

Coating thickness errors commonly occur when specifiers make assumptions based on data extrapolated from the Underwriters Laboratories (UL) "Fire Tests of Building Construction and Materials" specification (ANSI/UL 263; ASTM E-119). Testing conducted by fireproofing manufacturers does not necessarily include every possible steel section size, leading some fireproofing manufacturers to make the mistake of extrapolating data and sharing that noncompliant information with specifiers — which can lead to coating thickness errors and the dangerous scenarios noted above.

Tune in to this webinar to discover the dangers of extrapolating coating thickness data and how to avoid mistakes by working with qualified engineers to optimize fire protection coating specifications.

PRESENTED BY

Troy Marshall
Fire Segment Director – The Americas
Sherwin-Williams Protective & Marine Coatings

George Guanci
Project Development Manager
Sherwin-Williams Protective & Marine Coatings

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EXTERIOR EXPOSURE - WEATHERING & UV

AcryliCon Flooring Solutions
AcryliCon Decor
Other

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane

Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane

AkzoNobel
Polibrid
Urethane Elastomeric (1 Coat)

Arma Coatings
Arma 6000 Polyaspartic Polyurea
Polyurea Pure (1, 2, or 3 Coats)

Bowers Industrial
Duromar
Epoxy 100% Solids (1 or 2 Coats)

Carboline Company
Carboguard
Epoxy/Epoxy/Epoxy

Chemline Inc
Chemline ARC
Polyurea Pure (1, 2, or 3 Coats)

Coatings For Industry, Inc.
U-Series
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)

Concrete Solutions by Rhino Linings
Concrete Solutions Epoxy 200
Epoxy/Epoxy 100% Solids

Copps Industries, Inc.
Armorgard 700UV
Epoxy 100% Solids (1 or 2 Coats)

Cortec Corporation
VpCI 386
Alkyd/Acrylic/Acrylic

Cote-L Industries Inc.
Durabak18/Durabak18 smooth
Urethane/Urethane

Creative Material Technologies, Ltd.
Dyna-Pur 9556
Polyurea Pure (1, 2, or 3 Coats)

Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy (1-2 Coats)/Urethane

Diamond Vogel Inc.
Vers-Acryl 300/Vers-Acryl 222
Other

Duromar, Inc.
HPL-1110 / HPL-1110
Epoxy 100% Solids (1 or 2 Coats)

East Earth Co., Ltd.
MAXBON
Epoxy (1-2 Coats)/Urethane

ENECON Corporation
Chemclad
Epoxy/Epoxy 100% Solids

ErgonArmor
Novocoat SP2410
Epoxy 100% Solids (1 or 2 Coats)

Flexcrete Technologies Ltd
Cemprotec
Other

FSC Coatings Inc.
Bio-SAFE Prime & Seal/MaxLife
Alkyd/Acrylic/Acrylic

Gemite Products Inc.
Tuff-Flex CA
Other

Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)

Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic / CT-370 Acrylic Aliphatic Poly.
Epoxy (1-2 Coats)/Urethane

Hempel (USA), Inc.
Hempel's Preprep/Hempadur Series/ Hempathane Series
Epoxy (1-2 Coats)/Urethane

Heresite Protective Coatings, LLC
CSE-6200/UC-5500
Epoxy (1-2 Coats)/Urethane

H-I-S Coatings
H-I-S Coatings
Epoxy (1-2 Coats)/Urethane

Induron Coatings, LLC
AC403 Elastomeric Coating
Other

Industrial Solutions USA, LLC.
Nano-Clear Industrial Coating
Polyurea Hybrid (1, 2, or 3 Coats)

Insulating Coatings Corporation
Astec 2000 System
Alkyd/Acrylic/Acrylic

Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic

International Metalizing Corporation
Reddevil 888
Thermal Spray

IXS Coatings/Ultimate Linings
UL AL 6613
Polyurea Pure (1, 2, or 3 Coats)

Jessup Manufacturing Company
Jessup Safety Track
Tape Wraps

Jotun Paints Inc.
Pen-O-Prep / Penguard Express / Hardtop AX
Epoxy (1-2 Coats)/Urethane

Key Resin Company/Flowcrete
Evonik/Degadur
Methyl Methacrylate/Methyl Methacrylate

Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic

Milamar Coatings
ICO Primer LV/PM-500
Epoxy/Polyester/Polyester

New Guard Coatings Inc.
Jotun/PPG
Other

Nukote Coating Systems International
Nukote PA II
Polyurea Pure (1, 2, or 3 Coats)

Peerless Industrial Systems
Epigen
Epoxy 100% Solids (1 or 2 Coats)

Plastic Maritime Corporation
Wearlon
Epoxy/Epoxy/Siloxane

Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)

Polyset
Ply-Guard AS Polyaspartic
Polyurea Hybrid (1, 2, or 3 Coats)

PPC Coatings (MTR)
PPC Coatings
Other

PPG
Durethane
Urethane/Urethane

Premier Coating Systems Inc
PCS-#1111/PCS-#4300
Epoxy (1-2 Coats)/Fluorourethane
Quantum Chemical
Precidium
Polyurea Pure (1, 2, or 3 Coats)
Rhino Linings
Rhino SolarMax
Urethane/Urethane
Sauereisen, Inc.
Sauereisen
Urethane/Urethane

Sherwin-Williams
Macropoxy 646 / Fluorokem HS
Epoxy (1-2 Coats)/Urethane
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, Polyshield HT-100F UB, AMP 100
Polyurea Pure (1, 2, or 3 Coats)
Synavax, Inc.
Energy Protect
Thermal Spray
Textured Coatings of America
Clear Guard
Epoxy (1-2 Coats)/Urethane
Tnemec Company, Inc.
EpoxoBlock WB/Enviro-Crete
Epoxy (1-2 Coats)/Acrylic (1-2 Coats)
Versatile Building Products
Roll on Rock
Epoxy (1-2 Coats)/Urethane
Vertic Zinc Wire OY
VerZnAl or VerZn
Thermal Spray
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

IMMERSION EXPOSURE - POTABLE WATER APPROVED

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
AkzoNobel
Polibrid
Urethane Elastomeric (1 Coat)
ARCOR - Novolac Epoxy Technologies Inc
ARCOE EE-71
Epoxy 100% Solids (1 or 2 Coats)
Arma Coatings
Arma PW Polyurea
Polyurea Pure (1, 2, or 3 Coats)
Autonomic Materials.
Amp Zinc 100
Zinc-rich, organic
Bowers Industrial
Duromar
Epoxy 100% Solids (1 or 2 Coats)
Carboline Company
Reactamine
Urethane Elastomeric (1 Coat)
CCI Con-Tech of California, Inc.
Hydro-Pox
Epoxy/Epoxy 100% Solids
Chemline Inc
Chemline ARC
Polyurea Pure (1, 2, or 3 Coats)
CIM Industries
CIM
Urethane Elastomeric (1 Coat)
Cloverdale Paint Inc.
LifeLast
Urethane Elastomeric (1 Coat)
Cortec Corporation
VpCI 395/395
Epoxy/Epoxy
Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy/Epoxy/Epoxy
Duromar, Inc.
HPL-1110-PW / HPL-1110-PW
Epoxy 100% Solids (1 or 2 Coats)
East Earth Co., Ltd.
MAXBON
Epoxy 100% Solids (1 or 2 Coats)
ENECON Corporation
Chemclad
Epoxy/Epoxy Novolac/Epoxy Novolac
Enviroline (International Paint LLC)
Enviroline
Epoxy 100% Solids (1 or 2 Coats)
ErgonArmor
Novocoat SP2000 Series
Epoxy Novolac (1 or 2 Coats)
Flexcrete Technologies Ltd
Cementitious Coating 851
Other
Gemite Products Inc.
Cem-Flex ST
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Goodwest Linings and Coatings
Endura-Flex 1988
Urethane Elastomeric (1 Coat)
Induron Coatings, LLC
Perma-Clean 100 Ceramic Epoxy
Epoxy 100% Solids (1 or 2 Coats)
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
UL AL 6613
Polyurea Pure (1, 2, or 3 Coats)
Jotun Paints Inc.
Tankguard DW AV / Tankguard DW AV
Epoxy/Epoxy 100% Solids
Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic
New Guard Coatings Inc.
Jotun/PPG
Other
NSP Specialty Products
NSP-120 High Performance Epoxy Coating
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote ST pw
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy/Epoxy 100% Solids
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard UR (Potable Water) Polyurea
Polyurea Pure (1, 2, or 3 Coats)
PPG
Novagaurd
Epoxy 100% Solids (1 or 2 Coats)
Quantum Chemical
Precidium
Polyurea Pure (1, 2, or 3 Coats)
Rhino Linings
Rhino Extreme
Polyurea Pure (1, 2, or 3 Coats)
Sauereisen, Inc.
Sauereisen
Urethane/Urethane
Sherwin-Williams
SherFlex
Urethane Elastomeric (1 Coat)
Specialty Products, Inc. (SPI)
Watersafe Primer, Watersafe-UB, Watersafe II
Polyurea Pure (1, 2, or 3 Coats)
Sprayroq
SprayWall
Urethane/Urethane
Thermion
Thermion
Thermal Spray
Tnemec Company, Inc.
Pota-Pox
Epoxy/Epoxy/Epoxy
Vertic Zinc Wire OY
VerZnAl or VerZn
Thermal Spray
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

IMMERSION EXPOSURE - NON-POTABLE WATER

Advanced Chemical Technologies, Inc.
SIL-ACT
Siloxane/Siloxane
Advanced Polymer Coatings (APC)
ChemLine
Siloxane/Siloxane
AkzoNobel
Polibrid
Urethane Elastomeric (1 Coat)
Andek Corporation
Andek Industrial Membrane #1
Urethane/Urethane
ARCOR - Novolac Epoxy Technologies Inc
ARCOR S-15
Epoxy 100% Solids (1 or 2 Coats)
Arma Coatings
Arma 901 55D Polyurea
Polyurea Pure (1, 2, or 3 Coats)
Bowers Industrial
Duromar
Epoxy/Epoxy 100% Solids
Carboline Company
Reactamine
Urethane Elastomeric (1 Coat)
CCI Con-Tech of California, Inc.
Hydro-Pox
Epoxy/Epoxy 100% Solids
Ceilcote (International Paint LLC)
Ceilcote/ Flakeline MR
Epoxy/Epoxy Flake Filled/Epoxy Flake Filled

WATER WORKS

ChemCo Systems
CCS General Purpose
Epoxy 100% Solids (1 or 2 Coats)
CIM Industries
CIM
Urethane Elastomeric (1 Coat)
Cloverdale Paint Inc.
LifeLast
Urethane Elastomeric (1 Coat)
Coatings For Industry, Inc.
U-Series
Epoxy/Epoxy
Copps Industries, Inc.
Armorgard 500
Epoxy/Epoxy 100% Solids
Cortec Corporation
VpCI 395/395
Epoxy/Epoxy
Cote-L Industries Inc.
Durabak/Durabak smooth
Urethane/Urethane
Creative Material Technologies, Ltd.
Dyna-Prime
Polyurea Hybrid (1, 2, or 3 Coats)
Devoe High Performance Coatings (International Paint LLC)
Devoe High Performance Coatings
Epoxy/Epoxy/Epoxy
Diamond Vogel Inc.
Mult-E-Poxy 180
Epoxy/Epoxy/Epoxy
Duromar, Inc.
HPL-1110 / HPL-1110
Epoxy 100% Solids (1 or 2 Coats)
East Earth Co., Ltd.
MAXBON
Epoxy 100% Solids (1 or 2 Coats)
ENECON Corporation
Chemclad
Epoxy/Epoxy 100% Solids
Enviroline (International Paint LLC)
Enviroline
Epoxy 100% Solids (1 or 2 Coats)
ErgonArmor
Novocoat SP2000 Series
Epoxy Novolac (1 or 2 Coats)
Flexcrete Technologies Ltd
Cemprotec
Other
Gemite Products Inc.
Cem-Kote CW Plus
Other
Global EcoTechnologies
Endura-Flex
Urethane Elastomeric (1 Coat)
Gulf Coast Paint Mfg., Inc.
CM-15 Epoxy Mastic
Epoxy/Epoxy/Epoxy
H-I-S Coatings
Rustoleum
Epoxy/Epoxy
Induron Coatings, LLC
Perma-Clean 100 Ceramic Epoxy
Epoxy 100% Solids (1 or 2 Coats)
Integument Technologies, Inc.
Flourogrip
Sheet Lining, Thermoplastic
International Metalizing Corporation
Reddevil 888
Thermal Spray
IXS Coatings/Ultimate Linings
UL AL 6613
Polyurea Pure (1, 2, or 3 Coats)
Jotun Paints Inc.
Tankguard SF1 / Tankguard SF1
Epoxy Novolac (1 or 2 Coats)
KCC Corrosion Control Co.
KCC Elasti-Liner System
Other
Linabond
SP Mastic Syst, Structural Polymer Syst, Simulform
Sheet Lining, Thermoplastic
Milamar Coatings
ICO Primer LV/Fibercoat
Epoxy/Epoxy 100% Solids
NanoSOLV Technologies, LLC
NanoSolv 1376
Polyurea Pure (1, 2, or 3 Coats)
National Polymers Inc.
Private Label
Epoxy/Epoxy Novolac/Epoxy Novolac
New Guard Coatings Inc.
Jotun/PPG
Other
Normac Adhesive Products Inc.
NR-95LVHS, NR-80LVHS
Urethane/Urethane
NSP Specialty Products
NSP-120 High Performance Epoxy Coating
Epoxy 100% Solids (1 or 2 Coats)
Nukote Coating Systems International
Nukote ST
Polyurea Pure (1, 2, or 3 Coats)
Peerless Industrial Systems
Epigen
Epoxy 100% Solids (1 or 2 Coats)
Plastic Maritime Corporation
Wearlon
Epoxy/Epoxy/Siloxane
Polibrid Coatings, Inc.
Polibrid 705E
Urethane Elastomeric (1 Coat)
Polyset
Ply-Guard UR Polyurea
Polyurea Pure (1, 2, or 3 Coats)
PPC Coatings (MTR)
PPC Coatings
Other
PPG
Amercoat
Epoxy/Epoxy/Epoxy
Quantum Chemical
Precidium
Polyurea Pure (1, 2, or 3 Coats)
Rhino Linings
Rhino Linings TuffGrip
Polyurea Pure (1, 2, or 3 Coats)
Sauereisen, Inc.
Sauereisen
Urethane/Urethane
Sherwin-Williams
SherFlex
Urethane Elastomeric (1 Coat)
Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, Aquaseal, Polyshield HT-100F UB
Polyurea Pure (1, 2, or 3 Coats)
Sprayroq
SprayWall
Urethane/Urethane
Thermion
Thermion
Thermal Spray
Tnemec Company, Inc.
Epoxoline
Epoxy/Epoxy/Epoxy
Zebron Corporation
Zebron 386
Urethane Elastomeric (1 Coat)

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ANTI-GRAFFITI

3M Corrosion Protection Products
Scotchkote
Epoxy/Urethane (color)/Urethane (clear)

Andek Corporation
Polagard AG
Epoxy/Urethane (color)/Urethane (clear)

ChemMasters, Inc.
Safe-Cure EPX/Duraguard 310CRU/Graffiti Stopper
Epoxy/Urethane (color)/Urethane (clear)

Coatings For Industry, Inc.
U-Series
Epoxy/Urethane (color)/Urethane (clear)

Cortec Corporation
VpCI 395/384
Epoxy/Urethane (color)/Urethane (clear)

Euclid Chemical Company
Tamms AG 400
Epoxy/Urethane (color)/Urethane (clear)

FSC Coatings Inc.
Rustop/Graffiti Max
Epoxy/Urethane (color)/Urethane (clear)

Gemite Products Inc.
Graffiti-Shield WA ST
Epoxy/Urethane (color)/Urethane (clear)

H-I-S Coatings
H-I-S Coatings
Epoxy/Urethane (color)/Urethane (clear)

Induron Coatings, LLC
Indurethane AG
Epoxy/Urethane (color)/Urethane (clear)

Key Resin Company/Flowcrete
Key #467-HS
Epoxy/Urethane (color)/Urethane (clear)

New Guard Coatings Inc.
Jotun/PPG/Rust-Oleum
Epoxy/Urethane (color)/Urethane (clear)

Nukote Coating Systems International
Nukote Staingard
Epoxy/Urethane (color)/Urethane (clear)

Plastic Maritime Corporation
Wearlon
Epoxy/Urethane (color)/Urethane (clear)

PPG
Amercoat / Coraflon
Epoxy (1-2 Coats)/Fluoropolymer

Precision Coatings Inc.
DTM1300/PC3Anti-Graffiti
Epoxy/Urethane (color)/Urethane (clear)

Sherwin-Williams
Kem Cati-Coat / 2K WB Urethane Antigraffiti
Epoxy/Urethane (color)/Urethane (clear)

Textured Coatings of America
Graffiti Gard IV
Epoxy/Urethane (color)/Urethane (clear)

Tnemec Company, Inc.
Epoxoline/Fluoronar
Epoxy (1-2 Coats)/Fluoropolymer

ANTIFOULANT AND FOULANT RELEASE COATINGS

AkzoNobel
International
Fouling Release

Carboline Company
C-Flex
Fouling Release

Creative Material Technologies, Ltd.
Dyna-Hull 9556S
Fouling Release

Euronavy Engineering, S.A.
Euronavy Engineering SP01
Hybrid

Integument Technologies, Inc.
Flourogrip
Fouling Release

International Metalizing Corporation
Reddevil 888
Coventional (Copper Biocide)

Jotun Paints Inc.
SeaLion Repulse
Fouling Release

Linabond
SeaSkin
Fouling Release

Plastic Maritime Corporation
Wearlon
Fouling Release

PPG
ABC
Hydrating (Ablative)

Sherwin-Williams
Seaguard
Fouling Release

Specialty Products, Inc. (SPI)
Aquaseal Hi-Rise X3, Polyshield HT-100F UB, Polyshield
Fouling Release

Thin Film Technology, Inc.
BIO-TUFF 592
Fouling Release

CONCRETE SURFACING MATERIALS

Advanced Polymer Coatings (APC)
ChemLine
Silicon-based Surfacers, Fillers

AkzoNobel
International
Cementitious Modified Surfacer/Patching Compound

Andek Corporation
Polafloor Epoxy Topping
Epoxy Surfacer (two-part)

ARCOR - Novolac Epoxy Technologies Inc
ARCOR Arcrete
Epoxy Surfacer (two-part)

Carboline Company
Sanitile
Epoxy Blockfiller (2-part)

CCI Con-Tech of California, Inc.
Hydro-Pox
Epoxy Surfacer (two-part)

Ceilcote (International Paint LLC)
Ceilcote/Corocrete
Cementitious Modified Surfacer/Patching Compound

PROFESSIONAL
EDUCATION WEBINARS

PAINTSQUARE FIREPROOFING SERIES

How Safe is Your In Situ Passive Fire Protection?

WEDNESDAY, OCTOBER 24, 2019
10:00 AM - 11:00 AM ET

There is no existing standard for assessing the actual fire performance of passive fire protection that has become damaged or is failing. Current guidance is largely qualitative in nature, subsequently passive fire protection (PFP) condition assessments can lead to incorrect remedial actions and possibly uneconomical maintenance and repair expenditures. This webinar will explore a quantitative severity assessment and supportive testing to help aging facilities maintain safe operations.

PRESENTED BY

Dave Wickham
Technical Manager, Fire Protection
Protective Coatings Europe

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Coatings For Industry, Inc.
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Epoxy Surfacer (Two-Part)
Concrete Solutions by Rhino Linings
Concrete Solutions Quick Set Patch Mix
Cementitious Modified Surfacer/Patching Compound
CORCHEM Corporation of Texas
CORCHEM 246
Epoxy Ester Surfacer
Corvixx Polymers Corporation
Corvixx CXE-205
Epoxy Blockfiller (2-part)
Creative Material Technologies, Ltd.
Patch N Go
Other Special Block Filler
Dudick, Inc.
Scratch-Coat
Epoxy Blockfiller (2-part)
ErgonArmor
Novolite Aggregate Repair
Other Special Block Filler
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Euronavy Engineering EP10
Epoxy Sealer
Flexcrete Technologies Ltd
Monomix, Monolite, Fastfill & Monolevel
Cementitious Modified Surfacer/Patching Compound
Florock Polymer Flooring
FloroBuild
Epoxy Surfacer (two-part)
FSC Coatings Inc.
Silox Seal/Prime & Seal 1,2,3
Other Special Block Filler
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Fibre-Patch
Cementitious Modified Surfacer/Patching Compound
Goodwest Linings and Coatings
Enecon
Moisture-cured Urethane Block Filler
Hy-Tech Thermal Solutions
CEM SEAL
Other Special Block Filler
Induron Coatings, LLC
Mortarchem
Epoxy Surfacer (two-part)
Jotun Paints Inc.
Pen-O-Prep
Epoxy Sealer
Milamar Coatings
1000 CS
Epoxy Surfacer (two-part)
Nukote Coating Systems International
Nukote EBF LV
Other Special Block Filler
Peerless Industrial Systems
Epigen
Epoxy Surfacer (two-part)
PPG
Amercoat 100A
Epoxy Surfacer (two-part)
Rhino Linings
Concrete Solutions Quick Set Patch Mix
Cementitious Modified Surfacer/Patching Compound
Sherwin-Williams
Kem Cati HS
Epoxy Blockfiller (2-part)
Specialty Products, Inc. (SPI)
Synergy Series Aquaseal-UB, Aquaseal Hi Rise X3
Other Special Block Filler

SpeedCove, Inc.
SpeedCove Precast Cove Base Systems
Other Special Block Filler
Tennant Coatings, Inc.
HD-HPS
Epoxy Surfacer (two-part)
Textured Coatings of America
Block Filler
Acrylic Blockfiller
Tnemec Company, Inc.
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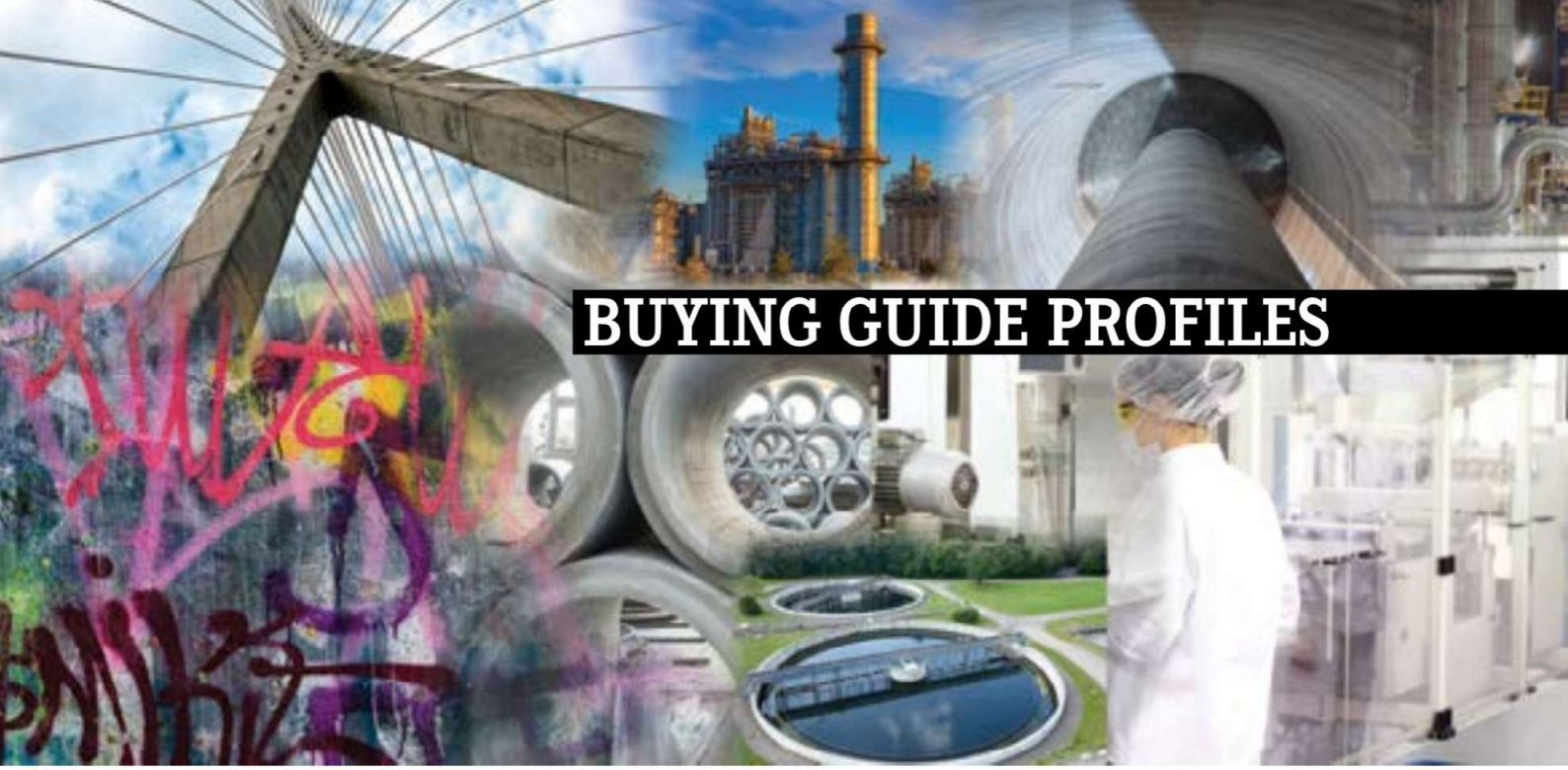

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3M Corrosion Protection Products
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mklatham@mmm.com
3m.com/corrosion

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acryliconpolymers.com

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Advanced Polymer Coatings (APC)
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adv-polymer.com

AkzoNobel
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Houston, TX 77091
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Phone: 800-589-1267
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international-pc.com

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Phone: 918-445-0627
aiflooring.com

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AP/M Permaform
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APV Engineered Coatings
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ARCOR - Novolac Epoxy Technologies Inc.
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master-builders-solutions.basf.us

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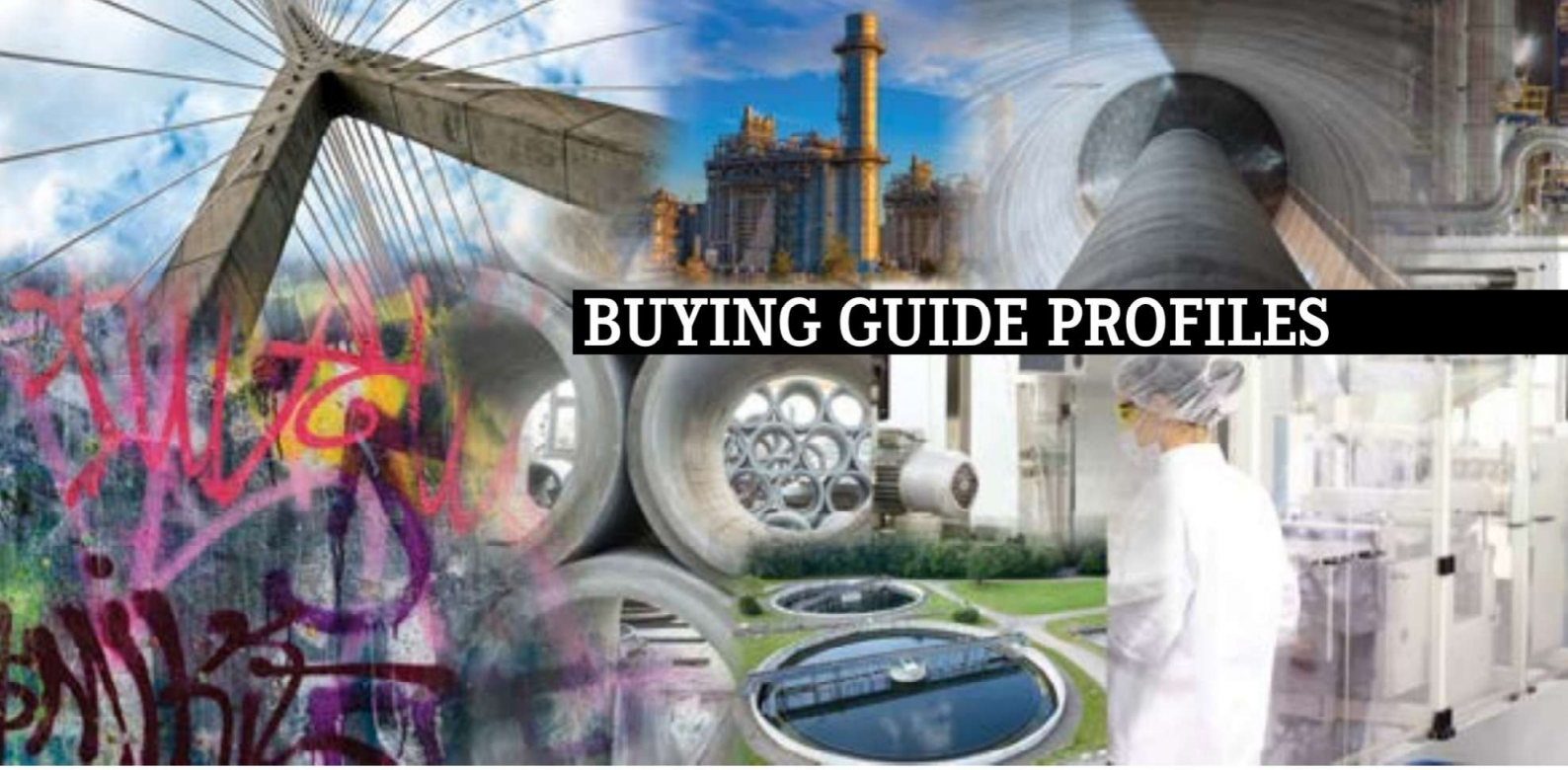
Ceilcote (International Paint LLC)
6001 Antoine Dr.
Houston, TX 77091
Contact: Sales Adminstration
Phone: 800-589-1267
pcmarketing.americas@akzonobel.com
international-pc.com



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acryliconpolymers.com

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chemmasters.net

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cimindustries.com

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319 Township Line Rd.
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cficoatings.com

Concrete Solutions by Rhino Linings
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earchuleta@rhinolinings.com
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coppsind@coppsindustries.com
coppsindustries.com

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corchem.com

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corteccoatings.com

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D

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thurmalox.com

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eastaerth.co.th

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international-pc.com

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Setubal, 2900-383 Portugal
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Bridges: Acrylic Texture Coatings,Stains, or Solvent Stains, Macropoxy 646 / Polylon HP
Chemical & Petrochemical Plants: Macropoxy 646 / Acrolon 218 HS, Cor-Cote VEN, Magnalux 304
Food/Beverage & Pharmaceutical Plants: SaniFlex 100% Solids Flexible Epoxy, FasTop 12S Urethane Cement Slurry
Power Plants: ExpressCote 150, Cor-Cote VEN TF, Dura-Plate UHS, Dura-Plate UHS N
Transmission Pipeline: EnviroLastic AR 425, Corobond 100/Dura-Plate UHS, Corobond HS/Envirolastic AR 425, Macropoxy 646 FC Epoxy/Acrolon Ultra
Wastewater Treatment Plants, Municipal: Macropoxy 5500 / Acrolon Ultra, Pro Industrial Waterbased Catalyzed Epoxy, Armorseal 1000HS/Armorseal 1000HS, SherFlex, Corobond VE Primer / Cor-Cote VEN / Cor-Cote VEN
Waterfront, Lock, and Dam: Macropoxy 646 / Hi-Solids Polyurethane, Dura-Plate 154, Dura Plate 235
Water Works: Macropoxy 646 / Fluorokem HS, SherFlex
Specialty Functions: Kem Cati-Coat / 2K WB Urethane Antigraffiti, SEAGUARD, Kem Cati HS

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SSPC Past President Garry Manous and 2019 Women in Coatings Impact Award winner Judie Blakey. Photo courtesy of SSPC.

Making an Impact: SSPC's Women in Coatings Impact Award

BY MELISSA PINOLINI, SSPC

Throughout the course of its history, SSPC has had the honor of recognizing many people and companies who have had a positive impact on the protective coatings industry.

One of the awards presented each year during the awards luncheon at the SSPC annual conference and exhibition is the Women in Coatings Impact Award, established in 2013 to recognize positive and impactful women who have contributed profoundly to our industry.

Women play a major role in the global economy and ever-growing industry around us. However, recent workforce studies have shown that only 6.6% of the full-time work force in traditionally male-dominated industries is represented by women.

By establishing the Women in Coatings Impact Award, SSPC created a way to identify exemplary women in an industry where they represent the minority. Creating a women-only award gave SSPC staff an opportunity to highlight women who are seen as not only role models, but leaders. SSPC's goal is to recognize that development and equality go hand-in-hand, as well as support camaraderie within the industry.

The Women in Coatings Impact Award brought to light necessary examples of women currently lacking from traditional award nominees at the time. Past recipients have represented several different coatings industry sectors and have continued to encourage women in the industry to be authentic and work hard to pursue what they are passionate about. They ask others like themselves to carry their strengths into a male-dominated industry and to show up for one another.

Past Women in Coatings Impact Award recipients include:

- Lana Ponsonby and Alison Kaelin (2014);
- Deidre Dunkin and Cynthia O'Malley (2015);
- Gail Warner and Lydia Frenzel (2016);
- Margaret Pardy (2017);
- Mary Roley (2018); and
- Judie Blakey (2019).

As women today make up almost half of the overall U.S. workforce, the number of women in industry steadily rises with each passing year. SSPC and its members are honored to recognize an individual who represents this powerful trend in our growing membership. With so many opportunities in skilled trades, we believe that it is a milestone to pave the way for females in the field.

Over the years, SSPC has continued to create events that highlight the recipient of this award. Planning is currently underway for Coatings+ 2020 in Long Beach, California, including a themed session focused on leadership, young professionals and PCS holders. One of our goals for this event is to highlight the 2020 Women in Coatings Impact Award recipient as a guest speaker. Creating an event which showcases leaders in the industry, with the added benefit of providing an opportunity for those in attendance to network with like-minded individuals.

SSPC is currently seeking nominations for this year's Women in Coatings Impact Award recipients. Do you know of a woman in the industry who displays the following qualities?

- She has contributed to creating a positive impact on the culture of the coatings industry.
- She inspires colleagues and team members to take risks and move ahead in their career endeavors.
- She shows commitment to the advancement of the coatings industry.

If you have a nominee in mind, please download the nomination form at sspc.org/awards ad submit a completed form to Christine Lajzo at lajzo@sspc.org by Oct. 8, 2019. Please note that self-nominations will not be accepted.

Index to Advertisers

CALENDAR

NOVEMBER 2019

SSPC COURSES

Course information available at sspc.org

Nov. 4	Estimating, Commerce, CA
Nov. 4–5	C7 Abrasive Blast, Columbus, OH
Nov. 4–8	CCI Conc Ctg Insp, Gibsonia, PA; Newington, NH
Nov. 48	C1 Fundamentals, Norfolk, VA; Leduc, AB
Nov. 4–9	BCI Bridge Ctgs Insp, Portland, OR
Nov. 4–10	PCI Prot Ctgs Insp, Manchester, UK
Nov. 5	Fireproofing, Pittsburgh
Nov. 5–6	Project Mgmnt, Commerce, CA
Nov. 6–7	Project Mgmnt, Pittsburgh
Nov. 6–7	C12 Spray App, Columbus, OH
Nov. 7	Contract, Commerce, CA
Nov. 8	Nav Std Item 009-32, Benicia, CA
Nov. 11–12	C7 Abrasive Blast, Theodore, AL
Nov. 11–14	C3 Lead Pt Removal, Duluth, GA
Nov. 11–15	NBPI NAVSEA Basic Pt Insp, Benicia, CA
Nov. 11–15	C2 Plan/Spec, Minnipeg, MB
Nov. 11–16	BCI Bridge Ctgs Insp, St. Petersburg, FL
Nov. 11–17	PCI Prot Ctgs Insp, Pattaya, Thailand; Rotterdam, Netherlands
Nov. 13–14	C12 Spray App, Theodore, AL
Nov. 13–15	CAS Ctgs App Spclst, Zephyrhills, FL
Nov. 15	C5 Lead Pt Refresher, Duluth, GA
Nov. 16	C5 Lead Pt Worker Safety, Duluth, GA
Nov. 16	PCS Prot Ctgs Scplst, Winnipeg, MB
Nov. 17	Insp Containment, St. Petersburg, FL
Nov. 18–19	C7 Abrasive Blast, Pittsburgh
Nov. 18–19	C13 Water Jet, Commerce, CA
Nov. 18–24	PCI Prot Ctgs Insp, Shah Alam, Malaysia
Nov. 19–20	C12 Spray App, Pittsburgh
Nov. 20–21	C7 Abrasive Blast, Commerce, CA
Nov. 20–22	CAS Ctgs App Spclst, Pittsburgh
Nov. 22–23	C12 Spray App, Commerce, CA
Nov. 22–23	C6 Power Tool, Pittsburgh
Nov. 25–Dec. 1	PCI Prot Ctgs Insp, Seattle
Nov. 29	Nav Std Item 009-32, Norfolk, VA

CONFERENCES & MEETINGS

Nov. 10–14	ESWP Int'l Water Conf, Orlando, eswp.com/water
Nov. 11–14	FABTECH 2019, Chicago, fabtechexpo.com
Nov. 11–13	ICRI 2019 Fall Conv, Philadelphia, icri.org
Nov. 11–13	WJTA-IMCA 2019 Conf/Expo, New Orleans, wjtaimcaexpo.com
Nov. 12–15	TPC Contractor Connect, Tucson, paintsquare.com/contractor_connect/
Nov. 18–21	ASNT Annual Conf, Las Vegas, asnt.org
Nov. 19–21	POWER-GEN 2019, New Orleans, power-gen.com

30 Feet

The depth of the reactor cavity, a large stainless-steel-lined pit that houses the nuclear reactor.
See page 18.

110%

The industry standard capacity for the design of a secondary-containment area, based on the capacity of the primary containment within it.
See page 26.

$250 million

The investment made by Continental Dairy Facilities Southwest LLC to turn a closed denim mill in Littlefield, Texas, into a dairy-processing facility, requiring the preparation of new and existing concrete flooring for the environmental conditions ahead.
See page 32.

SSPC-CTS 1

A recently developed Concrete Coating Texture Standard, created to define texture categories with a corresponding set of tactile comparator coupons to provide a common base of reference for specifiers, owners, contractors, coating manufacturers and maintenance personnel.
See page 11.

10%

The total interior surface area of factory-coated aluminum aquarium tanks exhibiting blistering and corrosion after one year in service.
See page 15.

17

The number of SSPC training and certification courses that will be offered for attendees at SSPC Coatings+ 2020, Feb. 3–6, 2020, in Long Beach, California.
See page 37.