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and safety guidelines began. Hurdling industry obstacles and participating in various successful projects, Lyras became the CEO and President of Corcon Inc., a position he continues to hold today.

Through his involvement in the company, as well as in the coatings industry, Lyras has been described as instrumental in changing the face of the industrial contractor. He has published numerous articles and presentations and developed *Bridge Brothers*, a documentary film about industrial bridge painters.

Lyras is currently running for congress in Ohio, where he hopes to serve the 13th District.

TOP EDUCATOR

Russell Roden, Atlantic Design, Inc.

Having been involved in the coatings industry for over 35 years, Russell Roden has been recognized for his work in design, manufacturing, upgrading and retrofitting equipment for the blasting and painting industry. According to *The Avenue News*, the mechanical engineer—who was jobless at the time—started his company, Atlantic Design Inc. (Baltimore, Maryland), in 1997 with a credit card.

Since the endeavor, the family-owned and operated business has taken pride in providing innovative and efficient solutions for its



Russell Roden

customer's needs and has grown to become a national player in abrasiveblasting equipment. In 2013, the company expanded its facilities in Middle River, Maryland, where it more than doubled its former location.

One nominator has described Roden as, "Tirelessly striving for the safest, easiest-to-use and most dependable equipment on the market. He is vigilant to take quality insight and feedback from our loyal customers in the field and make those ideas a part of our equipment design."

Currently, Roden owns three innovative patents that have affected the industry: redesigned modular stackable units used by the marine industry, a rotating belt screen that utilizes gravity to separate contaminants from reusable abrasive, and a safety-enhancing deadman switch that allows remote access to blasting controls.

In his efforts to educate others involved in the coatings industry, Roden has shared his vision, experience and education through various employment training sessions, published articles, guest speeches and panel engagements.

Top Innovations

The coatings industry could not advance without its continued growth and developing innovations. This year, the 2019 Prestige Awards sought to recognize recent innovations in coatings and equipment.

In order to be eligible for this honor, the nominated technology or product must have been brought to market between January 2018 and January 2019, provide a solution to an existing industry challenge, be demonstrably different from other products on the market, benefit the contractor's work experience and have been deployed successfully in actual projects. The following awardees have been chosen as the most innovative of 2019.

TOP COATING

FIRETEX FX6002 Ultra-Fast Drying Intumescent, Sherwin-Williams Protective & Marine

Providing a greater scope of protection to lighter steelwork, Sherwin-Williams' FIRETEX FX6002, a second-generation technology, is an ultra-fast-drying intumescent coating designed to delay steel from reaching a critical failure temperature in the event of a fire. Having been installed in no less than 25 structures since its release, the coatings technology has proved to be durable, damage-resistant, and is aesthetically pleasing, while providing a smooth







architectural finish, superior to other epoxy intumescent coatings on the market. Created to have a reduced thickness, the coatings material has also shown a reduction in labor and product costs. However, according to Sherwin-Williams, the greatest benefit of the coating lies in its ease and speed of use for both in-shop and on-site projects.

TOP EQUIPMENT

e-Xtreme Electric Airless Sprayers, Graco

Reported to be the world's first electric sprayer for protective coatings approved for hazardous locations, the Graco e-Xtreme Electric Airless Sprayer operates on a more reliable, convenient and available electric power source. Although the e-Xtreme product line was first introduced in Europe in 2016, the new electric airless sprayers show improvements in jobsite inefficiencies associated with compressors and eliminate pulsation and motor icing. Contractors are reported to express positivity about the technology because it doesn't require them to bring a compressor on-site, and if an air compressor goes down, production doesn't have to cease.



Top Products

In addition to leading people and innovations within the coatings industry, PaintSquare also sought to recognize new equipment and coating products that have a significant impact on the industry and have been deemed most useful. Top Products were voted on by PaintSquare readers through an online ballot. The following have received the popular vote, naming them as the Prestige Award Top Products for 2019.

SURFACE PREP

Winoa/W Abrasives: WA Clean

Designed using technology from Winoa Group (W Abrasives), the WA Clean tool provides objective, reliable and repeatable cleanliness results in addition to preparation grades of surfaces based on optical analysis and mathematical values. The WA Clean tool has recently been accredited by the International Organization for Standardization (ISO) for use to support visual assessment of surface preparation. The technology is reported to use a unique electronic optical method designed to evaluate the surface cleanliness after abrasive blast-cleaning has been conducted. Its main benefits include the reduction of re-blasting and over-blasting, and objective and repeatable cleanliness control. The WA Clean tool also includes an internal storage space, different working modes and a magnetic adaptor used to fit curved or flat surfaces.

SAFETY

Bullard: GVX

Described as the lightest, coolest, most comfortable, and most dependable helmet on the market, Bullard has recently released the GVX. In using





cont. from p. 21 no plenum or inner shell, the high-density polyethylene construction product offers a superior strength-to-weight ratio. The helmet also offers the most cooling options through its cooling air accessed from the integrated airflow tunnel that surrounds one's head, and removable and customizable pads for increased stability and comfort. For increased head protection, the safety product also has a "Grit Guard" visor and injection-molded door that provides a tight seal.

INSPECTION

DeFelsko Corp.: PosiTest HHD High-Voltage Holiday Detector

New to the market, the PosiTest HHD High-Voltage Holiday Detector possesses unique features not commonly found in most holiday detectors, such

as a built-in certified voltmeter, handheld wand accessory, used pulse DC technology, and can be used with wide range of DeFelsko or competitive brush and spring electrodes. The American-made PosiTest HHD also offers a user-adjustable voltage range from 0.5 to 35 kV for detecting holidays, pinholes and other discontinuities in coatings up to 20 mm (780 mils) thick. Ideal for testing hard-to-reach areas, the holiday detector is reported to be lightweight, provides an ergonomic design



that promotes comfortable for all-day use, aids to eliminate operator fatigue and can work up to 40 hours of continuous measurement—fully rechargeable in three hours.

COATING

Sherwin-Williams Protective & Marine: FIRETEX FX6002 Ultra-Fast Drying Intumescent

Designed as an intumescent coating capable of ultra-fast drying and delaying steel from reaching critical failing temperatures in the event of a fire, in addition to being essential for life safety and asset protection, FIRETEX FX6002 is a second-generation technology reported to increase in-shop and on-site efficiency, as well as reduce labor and product costs. PSP

PRODUCT SPOTLIGHT

Between the Cracks

The ABCs of Concrete Coatings

FRED GOODWIN, BASF CORPORATION

n many cases, more than one concrete coating system may provide satisfactory service but might vary significantly in cost, service life, aesthetics or degree of performance. Every application will also vary according to the condition of the concrete, the installation environment and schedule, use conditions, exposures, expected life and budget. System selection for a specific application should involve the recommendation of material manufacturers to ensure proper performance and achievement of expectations.

There is nothing wrong with good-quality concrete exposed to "normal" conditions. Concrete has a service history of hundreds of years without coatings, but conditions can require coatings for different aesthetic appearance, protection from water ingress, chemical attack, improved abrasion resistance and other performance considerations.

Different surface treatments are commonly required for vertical or horizontal concrete applications, although penetrating sealers can be used in either application (although they're typically formulated for specific characteristics). Sealers are used to densify the surface and reduce the porosity of the concrete, but they provide limited protection from chemical exposure or abrasive environments. Penetrating sealers can allow the concrete to breathe and are typically silane-, silicate-, siliconate-, siloxane- and silicone-based.

Vertical coatings provide weather resistance to concrete and may be formulated to enhance carbonation resistance and/or bridge small cracks. They may be textured or have varying degrees of dirt pickup resistance.

Horizontal concrete coatings can be generally classified by thickness of application ranging from penetrating sealers (which do not produce any film), thin-film coatings from 1–20 mils (.02–.5 mm), high-build coatings from 20–50 mils (0.5–1.3 mm), self-leveling/slurries from 50–125 mils (1.3–3 mm), to toppings/overlays 125 mils–> $\frac{1}{2}$ inch (3–>12 mm). Thicker horizontal coatings also typically contain aggregate to provide improved hiding of concrete substrate defects and are used to increase slip resistance, facilitate maintenance, reduce concrete dusting, improve light reflectivity and provide chemical resistance or waterproofing.



The intended service and thickness of a coating are properties designed into its formulation and in all cases, the manufacturer's installation instructions should be followed. The expected life of a concrete coating is dependent upon the material properties, conditions of use, traffic, cleaning schedule and exposure to chemicals and environmental elements. Thicker coating applications tend to have improved durability and system chemistries include acrylic dispersions (latex), polymer-cement mortars, epoxies, methacrylates, polyesters and vinyl esters, polyureas, polyaspartics, polyurethanes, urethane-cements and silicon materials such as alkali silicate and organosilicon, each with their own attributes of chemical resistance, durability and application characteristics. Each product system is formulated with various flexibilizers, extenders, diluents, aggregates and fillers to facilitate application and modify performance properties, and can also include hybrids and multiple layers of different chemistries.

There is a great deal of information on coatings for concrete available from SSPC certification programs on concrete coatings, as well as ongoing work from committees C7 and C8. The guidelines from ICRI Committee 710 cover the topics of coatings and waterproofing of concrete. Further information on chemical attack of concrete and appropriate protective systems for concrete can be found in ACI 515.2R. NACE International also offers a comprehensive program around coatings of all types for corrosion protection. PSP

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Painstquare's Product of the Year category Surface Preparation Award.



Unique patented technology Electronically measures surface blast-cleaning grades Objective and reliable blasting process control ISO/TR 22770 approved



