

FABTECH CANADA SHOW ISSUE



CFCM

CANADIAN FINISHING & COATINGS MANUFACTURING MAGAZINE

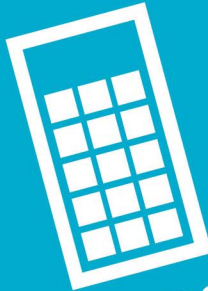
**CORPORATE
PROFILE
ISSUE**



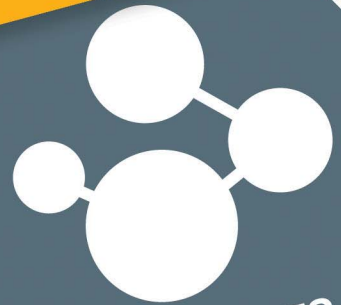
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PRODUCTS

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JANUARY/FEBRUARY 2016

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Innovative choices offering product-based answers to green formulation challenges and VOC regulation.

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For almost 90 years, Univar has connected the paint and coatings industry with the world's premier chemical manufacturers, and has served Canada for over 60 of those years. Today, Univar Canada, Ltd. is Canada's leading chemical distributor, and serves industrial chemical and agricultural chemical needs from over 20 facilities coast-to-coast, from British Columbia to Newfoundland. Univar supplies its CASE (Coatings, Adhesives, Sealants and Elastomers) customers with a comprehensive line of raw materials ranging from core products to specialty chemicals. Our extensive distribution network, global reach and unparalleled logistical expertise provide our customers a consistent and reliable source of supply.

We take great pride in maintaining hands-on relationships with our customers, linking them with the latest technologies and products. In today's rapidly changing regulatory landscape, our business development specialists can provide unique insights on new market opportunities and advanced product development, offering assistance with green and alternative formulations, including low-VOC.

Our commitment to the Specialties Industries includes:

- A knowledgeable team of technical specialists
- Real solutions to green formulation challenges
- Expertise in safety and legislation
- An extensive warehousing network and dedicated logistics. Our team of technical experts has over 120 years of formulating experience to help our customers with solutions to the problems that may arise in any stage of the production process, from concept and formulation through to commercialization.

Our unique Specialties Product Selection Guides gives a detailed overview of products we offer, and there are seven guides available, segmented by market focus and application: Architectural, Powder coatings, Epoxy, Polyurethane, Plastics, Rubber and Low-VOC.

Our CASE product line includes:

- Adhesion promoters • Algaecides
- Antiblock and slip aids • Antifoams
- Anti-setting agents • Biocides
- Block copolymers • Coalescents
- Coupling agents • Cross linkers
- Cure agents • Defoamers
- Dispersants • Epoxies
- Epoxy vinyl esters • Functional Extenders and Fillers
- Flame retardants • Flexibilizers
- Monomers, reactants and intermediates
- Pigments, opacifiers and colorants
- Plasticizers • Polyols
- Resins, rosins and tackifiers • Rheology modifiers
- Rust inhibitors • Solvents
- Surfactants • Thickeners
- Urethanes • Vinyl esters
- Wax additives • Wetting agents

Product Availability and Inventory Management

Our key role in the supply chain also gives us access to chemicals in times of short supply. Our global distribution network permits us to stock products locally to enhance just-in-time delivery and provide outsourced inventory management.

Blending and Repackaging Services

We provide a full suite of blending and repackaging services. Leveraging our technical expertise, we can create specialty chemical formulations to meet specific performance demands. Additionally, we can fulfill small orders through our repackaging services, enabling customers to maintain smaller inventories.

Other available services include:

- Application development expertise
- Automated documentation (C of A, MSDS, Labeling, Bar Coding)
- Consolidated invoicing (summary billing)
 - Custom blending
 - Document control
 - E-Blasts (new product introductions and market trends)
 - Environmental and regulatory expertise
 - Paint testing lab
 - Private label packaging
 - REACH advice
 - Remote Sentry bulk tank storage monitoring
 - Vendor-managed inventory

Safety, health and the environment — our number one priority.

The highest priority in our business is safety and environmental protection. Univar mandates commitment to this priority, requiring thorough compliance with our own stringent standards and all government regulations. Our operations are guided by the Distributor Code of Practice, the industry standard developed by the Canadian Association of Chemical Distributors (CACD). We participate in the Canadian Paint and Coatings Association (CPCA), and the Canadian Chemical Producers (CCPA) Responsible Care Program.

Our major locations are registered to ISO 9002 standards. Our commitment to these codes and standards is paramount.

Quality Policy

Univar is committed to contributing to the success of customers, suppliers and partners by providing value added products and services that consistently meet requirements. Univar's Quality Improvement Process is a fundamental tool to achieve the company's mission and to focus on customers. The Quality Process is integrated into all aspects of our business practices. Quality is woven into strategic planning, training, and all the daily activities of our core work processes and the processes that support them.

For more information, speak to a Univar CASE Specialties technical specialist

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Finisher

Deater Harp
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Pinellas Paint &
Industrial Finishes, Inc.

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Vice President Industrial Sales
Pinellas Paint &
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“The Varicure Clear System is a great match for our business. It has a clear, durable finish and works right out of the bucket. It’s easy to apply, and tool friendly – we get less buildup in our hoses and guns, and that means reduced cleaning time and lower solvent costs. And, it’s dry to stack time is very fast, which has helped increase our production.”

Deater Harp, Foreman
Creative Woodworking Concepts
Tarpon Springs, FL



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to locate your
nearest distributor.

Founded in 1984, Creative Woodworking Concepts manufacturers and installs custom architectural millwork for hotels, restaurants and other commercial customers. They are shown here with their Chemcraft distributor, Pinellas Paint & Industrial Finishes, Inc.

Let our history improve your future. For more than 200 years, the world's leading manufacturers of cabinetry, furniture, flooring and building products have depended on AkzoNobel industrial wood coatings to beautify and protect their products.

We have some of the brightest minds in the business in our strategically placed R&D laboratories around the world, set up to collaborate and share knowledge with each other. That gives our customers a resource for innovation that we feel is unmatched anywhere and ensures that our customers stay ahead of regulatory and environmental requirements.

Our market leading wood coating systems are robust and efficient, and are designed to be user-friendly and provide optimum performance in any production environment. We offer a complete line of stains, lacquers, catalyzed coatings, urethanes, polyesters, and UV-cured wood coatings all backed by experienced support teams of technicians, chemists, engineers and sales representatives to ensure the highest efficiency and performance of our coatings.

Our experts work closely with our customers providing market-leading custom formulations and systems that adapt to the unique complexities of their product design, substrate, finish and manufacturing requirements. And, our industry leading trends, color styling and design services helps our customers maintain market leadership

Global innovation and local customization backed with outstanding customer support and service. It's no small wonder that our finishes protect and beautify more wood products than any other company in the world.

Explore our Website, www.akzonobel.com/wood to learn more about how AkzoNobel can solve your finishing challenges and help your business thrive. Don't hesitate to contact us with questions or requests.

Environmental Concerns

AkzoNobel welcomes our role in helping to preserve our planet and currently are ranked #1 on the Dow Jones Sustainability Index. Beyond merely following the regulations governing manufacturing and our products, we strive to exceed the most stringent environmental standards without compromising the look, durability, or ease of use that distinguish our coatings.

We continue to drive and be the leader in "green" technology with a large percentage of our R & D time being spent coming up with new solutions to this growing requirement.

With the emergence of L.E.E.D. and GREENGUARD® driving the move to lower VOC and removal of formaldehyde we have complete systems to meet these finishing requirements with both conventional and UV cured technology. AkzoNobel has introduced the Airguard® line of products which are GREENGUARD® certified coatings. The Airguard® line of products includes both pre-catalyzed and post-catalyzed technologies.



AkzoNobel

We developed a full line of 275 VOC g/l coatings in anticipation of regulatory changes. Our carefully tested, fully compliant coatings will enable our customers to keep producing without delays when the stricter standards take effect. AkzoNobel offers creative, customized system changes to reduce your VOC tonnage.

Tell us about your environmental concerns. We've probably already solved them. If your dilemma is new to us, we will eagerly seek out the creative, economical solution that's best for you. We owe our success to such partnerships. Your challenges are our opportunities.

Safety First

AkzoNobel takes the safety of our personnel as our top priority. We have successfully implemented several new safety programs in our facilities, which are monitored by the personnel on the shop floor as well as management at all facilities. AkzoNobel has re-engineered several pieces of equipment with the goal of a safe work environment for all AkzoNobel employees. AkzoNobel globally recognizes Safety Day's throughout the year with all of our employees continuing to take the following pledge "No one will be injured on my watch, in my work area, on my team, or in my location." This is "Every Employee's Responsibility"

Distribution

The Chemcraft® Distribution brand continues to be the brand of choice throughout our strong distribution network. Chemcraft® distributors have factory trained staff to help you with all your finishing requirements and applications. This network allows our technology and local expertise to be available to all businesses. To find a distributor near you along with information and tools regarding the Chemcraft® brand products please use our distribution website.

www.chemcraft.com

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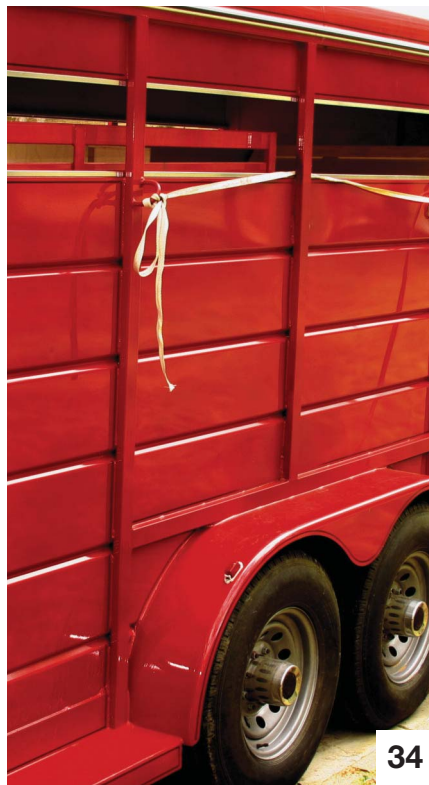
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FABTECH CANADA 2016

Canada's Leading Exclusive Fabricating, Welding, Metal Forming and Finishing Event

Finishing is now a big part of FABTECH Canada, scheduled for March 22 – 24 at the Toronto Congress Centre, Toronto, ON. With a great line up of finishing exhibitors and conference sessions, if you are performing finishing operations in your facility you don't want to miss FABTECH Canada.

FABTECH Canada provides a convenient venue where you can meet with world-class suppliers, see the latest industry products and developments, find the tools to improve productivity, and discover new solutions to all of your metal forming, fabricating, welding, and finishing needs.

Three days at FABTECH Canada puts you face-to-face with more companies, people, technologies, industries and equipment than you could review in months on your own. Even better, FABTECH Canada is where you'll find new ideas – unexpected solutions you didn't even know you needed.

FABTECH Canada only happens every two years – so don't miss this chance to make new connections, strengthen your business and increase profits.

Who should attend?

- Presidents/CEOs/Executives
- Plant Managers
- Shop Floor Employees
- Machine Operators
- Planning and Design Engineers
- Quality Managers
- Welding Engineers
- Job Shop Owners
- Production Managers
- Welders, Welding Operators
- Welding Distributors
- Paint & Powder Coating Managers & Engineers
- Manufacturing Engineers

FINISHING Pavilion Exhibitors (as of 02/01/2016)

Anoplate Corp.
ATS Applied Tech Systems LLC
Bex Engineering Ltd.
Blastech Corp.
Caps N Plugs
Canadian Finishing & Coatings Manufacturing
Chemical Coaters Assoc Int'l
Colourific Coatings Ltd.
Decora Powder Coatings Ltd.
DuBois Chemicals Inc.*
Dynabrade Inc.
ECE CANADA LTD.
Eisenmann Corp.*
Exel North America Inc.*
Fischer Technology Inc.
Gema USA Inc.
Gemtex Abrasives
Global Finishing Solutions*
IHI Ionbond Inc.
IST International Surface Technologies
Latem and Plastico Ind Ltd.
M/S Surface International
Nilfisk Industrial Vacuums

Performance Abrasives Group
Pneu-Mech Systems Mfg.*
*Products Finishing Magazine**
Prona Tools Inc.
Rapid Cure Technologies
sia Abrasives
Spraying Systems Co.
Superfici America Inc.
Supreme Galvanizing
Tanis Inc.
Tiger Vac International Inc.
Therma-Tron-X Inc.*
Vibra Finish Ltd.
WEICON Inc.



*CCAI Corporate Member

March 22 - 24, 2016 | Toronto, ON CANADA

FINISHING Conference Sessions

TUESDAY, MARCH 22 10:30AM – 12:00PM

C10: POWDER COATING BASICS

This presentation will discuss the requirements of a well-designed, high-performing powder coating system, from pretreatment, powder material selection to powder application and recovery, to curing. Learn how to make the right choices for a system to best meet your needs.

Larry Fenik, *Nordson Corp.*, Robert Ablamowicz, *Axalta Coating Systems*, Russ Green, *Midwest Finishing Systems*

TUESDAY, MARCH 22 2:00 PM – 3:30 PM

C20: THE FUTURE OF LIQUID INDUSTRIAL FINISHING AUTOMATION – THE FUTURE OF INDUSTRIAL FINISHING

Automation is a growing trend in manufacturing and a necessity for many companies to remain competitive. This session will explore automation in the finishing area, including benefits, trends, and tips for assessing if automation is right for your company and the keys to implementation.

Peter Struwing, *Graco Inc.*

MATERIAL SAVINGS WITH ADVANCED PROPORTIONING SYSTEMS

The use of plural component coatings has many benefits but use of 2K materials can be costly. Because the material hardens through a chemical reaction, care must be taken to use mixed 2K material prior to the expiration of the pot life. Advanced proportioning systems are designed to minimize waste that saves money, time and has a lot of environmental benefits as well.

Blake Erickson, *Graco Inc.*

TURN-KEY PAINT SHOP SOLUTIONS

In today's competitive manufacturing environment, efficiency is essential to both survival and growth. Inconsistent finish quality, inefficient pumping technologies, and material degradation can quickly erode margins. Learn how simple it can be to improve the efficiency and control of a painting operation by easily automating processes within your paint shop.

Bill Heuer, *Graco Inc.*



WEDNESDAY, MARCH 23 10:30 AM – 12:00 PM

C30: OLD VS. NEW: ARE YOU READY FOR PRETREATMENT CHANGE?

Advanced pretreatments offer huge cost savings in the form of reduced energy requirements, waste treatment costs, manpower, and other operational costs. As with any introduction of a new technology there were growing pains. This presentation will cover some of the lessons learned when the technologies were introduced into production, along with the corrective actions, and the latest development in the advanced pretreatments.

Suresh Patel, *Chemetail*

C31: OPTIMIZING A BATCH POWDER COATING OPERATION

The ten critical steps required to optimize your process, your system and the quality of your finished product will be discussed. The steps will include density, efficiency, energy and process parameters to name a few. By targeting these ten areas, you can make improvements to an existing system that will assist as you start a batch operation and help you be confident in the quality and volume you will achieve.

Ryan Allen, *GEMA USA*, Rodger Talbert, *Col-Met Engineered Finishing Solutions*

WEDNESDAY, MARCH 23 2:00 PM – 3:30 PM

C40: THE SECRETS OF PURCHASING A FINISHING SYSTEM CHOOSING THE BEST SPRAY BOOTH TECHNOLOGY

This presentation will provide the technical basis for selecting the best paint booth based upon the system operational requirements. Topics include: decision criteria for selecting the right technology, technologies available, differences in manual vs. robotic application booths, innovations in water wash booth technology, innovations in dry filter booths, air supply technology for spray booths, waste disposal of paint over spray for different technologies.

Richard Goelz, *Eisenmann Corp.*

THE SECRETS TO BUYING EQUIPMENT FROM A SUPPLIER'S POINT OF VIEW

Can you use the internet to help in the difficult and time consuming process of buying equipment? Do you have the resources to sort through the mountains of websites and articles? Can you believe what you read? How do you get the performance that your operation needs without spending too much? This presentation is about the buying process. What makes for a good customer and what makes for a good supplier? Learn how the buying process has changed and how to make the process as painless as possible for your company.

Marty Sawyer, *Trimac Industrial Systems*

Register now: www.fabtechcanada.com

L.V. Lomas Becomes Bayferrox Distributor

L.V. Lomas is the new exclusive distributor of Lanxess' Bayferrox inorganic pigments in Canada, starting November 1. The Brampton, ON-based company will add the construction market to its existing exclusive distribution responsibilities of Bayferrox and Colortherm pigments for the coatings, plastics and specialties markets in this country.

"We are pleased to expand our relationship with L.V. Lomas to the construction industry," said Peter Baldus, vice-president of Lanxess' Inorganic Pigments Group, Americas region. "L.V. Lomas has earned a reputation as a professional, customer-focused partner for our products in the coatings, plastics and specialties markets, and we are excited to work together to deliver the same level of service to our Canadian construction customers."

Lanxess is a major manufacturer of iron oxides and a leading producer of inorganic pigments based on chromium oxides. The IPG business unit is part of Lanxess' Performance Chemicals segment, which recorded sales of EUR 2.2-billion in fiscal 2014.

JBC Surface Finishing to Represent Plating Electronic

Plating Electronic GmbH (Denzlingen, Germany) has appointed JBCSurface Finishing Systems Ltd. as the authorized Canadian partner for its DC and pulse-reverse power supplies within the general metal and plastic surface finishing industry sectors. Plating Electronic (PE) is a global supplier of DC and pulse-reverse switch mode power supplies.

"JBC is well established within Canada, is extremely knowledgeable with regards to rectifiers within the plating industry and their new ownership exudes the same dedication we do towards total customer service and solutions" said Karl Rieder, general manager, Plating Electronic.

PE has manufactured power supply solutions in Germany for 30 years, and maintains global representation. Industries it serves include electroplating, PCB, anodizing and water treatment. It focuses on high frequency switch mode technology, offering a wide selection of DC and pulse power supplies for a broad spectrum of applications.

Metal Finishing Rules Progressing in Ontario

The Ontario Ministry of the Environment is continuing to progress with its Metal Finishers Industry Standards and Registration Process. This program was initiated in 2011, at the instigation of the Canadian Association for Surface Finishing. The Ministry is developing a technical standard to address challenges in meeting air standards for hexavalent chromium compounds, and has also added nickel and nickel compounds at CASF's request. The new air standards are slated to come into effect on July 1 next year.

Kelly Miki, an air pollution control engineer with the Ministry, told CASF's 2015 Conference on November 18 that the process is now consulting on the technical standard, and had also gained considerable understanding of the manufacturing processes that need to be monitored.

"General exhaust," she noted, "was found to be a major source of pollutants with nickel." With chromium, it tends to be the exhausts from decorative electroplating and hard electroplating processes, then general ventilation and atmospheric ventilators. The plating efficiency of nickel, at 97 percent, is significantly higher than that for electroplated hexavalent chrome compounds, which is at between 10 and 20 percent.

"You need to understand the air-pressure in your building," Miki noted. "For example, you need negative pressure in certain areas, and you need to maintain your ventilation systems. Also, you need to maintain drawings of the system — that's something I found to be very important when I worked inside a plant myself."

Additionally, there needs to be a designated ventilation coordinator, to avoid buck-passing when an issue arises. This individual needs a table of in- and out-flows, and has to keep assessing changes that are made to the ventilation system.

Lastly, there needs to be a 'no backsliding' rule in place so that there is no degradation of air-pollution controls in place at the time of a company's registration.

Wagner Group buys C.A. Technologies

The Wagner Group has acquired C.A. Technologies LLC, of Louisville, CO, a US manufacturer of spray guns and paint finishing equipment. Its products include the C14 Air-Assist-Airless (AAA) Pump System, the CAT-X Gravity Spray Gun, and the Panther Glue Gun. C.A. Technologies was



LG Bobcat spray gun from C.A. Technologies

founded in 1997.

Company head Jim Jacquemard said, "C.A. Technologies is proud and excited to be joining the Wagner Group. Together, we look forward to achieving advancements in development and innovation, while continuing to provide stellar customer service and support. This partnership will advance our product portfolio and expand our global presence."

Martin Kuerzinger, CEO of the Wagner Group's industrial solutions division, added: "C.A. Technologies is a perfect fit for our Industrial Solutions business strategy. It offers a complementary product line to Wagner's existing liquid coating, powder coating, and dispensing solutions along with excellent application and customer service expertise."

New Research into Sputter Coating

A new approach to applying advanced thin-film coatings to high-value engineering products is being developed in the UK by Teer Coatings, Cobham Technical Services and The Open University. The collaborative project, co-funded by a \$900,000 award from Innovate UK, the country's national innovation agency, will develop a practical tool for simulating sputter coating, thus helping deliver a right-first-time process.

The development project brings together experts on non-equilibrium plasma physics, computer-aided engineering software for modeling and simulating electromagnetic and related physics effects, and the design and use of the physical vapor deposition (PVD) magnetron sputtering tools to apply coatings used with a wide range of high-value manufacturing applications. The key aim is to develop a practical software-guided approach to thin-film coating that is both accurate and fast.

A family run business since 1954, Dempsey's guiding principle has always been to exceed clients' expectations. Founder Frank E. Dempsey believed in building a full-service specialty products distribution business with a sales team who were both passionate and efficient.

Today, in its third generation, Dempsey continues to distinguish itself by representing world class manufacturers and by hiring quality people to serve their customers. In sales, technical support, distribution and customer service, Dempsey meets the unique needs of each client by focusing on thorough product knowledge and excellent service.

Celebrating their 62nd year, Dempsey continues to offer the best technical expertise in raw materials for your coatings applications and puts forward quality innovative products to your R&D department.

With a headquarters in Toronto, Dempsey offers a comprehensive product line from Coatings & Inks to Plastics, Adhesives, Construction and Personal Care across the country. Warehouses are located in Toronto and Montreal, with third party warehouses across Canada.

In addition, Dempsey offers a full application laboratory, complete with state of the art equipment in order to assist you with your project needs.

Dempsey is proud to provide you with quality raw materials from the following manufacturers:

- **BASF** Light stabilizers, pigments and antioxidants for plastic applications
- **BYK** anti-settling additives, defoamers, surface additives, dispersants, nano-additives, rheology, wax additives and also clay-based additives
- **CR Minerals Company** Navajo pumice and amorphous silica
- **DSM NeoResins** acrylic and styrene resin, alkyd emulsion, solvent-based resin, polyurethane dispersion (PUD), vinyl and acrylic emulsion (Haloflex), moisture cure polyurethane, blister pack resins, crosslinkers, UV oligomers and monomers
- **Halox** corrosion inhibitors, tannin stain inhibitors and flash rust inhibitors
- **Indulor Resins** for graphic arts, solid resins, resin solutions and colloid emulsions
- **LanXess** plasticizers, flame retardants; chelation complexing & dispersing agents and bonding agents
- **Borregaard LignoTech** binders, emulsifiers and dispersants
- **Nabaltec** aluminium trihydrate (ATH) and fire retardant

Keep an eye out for the **Dempsey Industrial Seminars** happening across Canada the week of June 13th, 2016. This is a technically focused educational event presented by top technical staff from many of the industrial companies represented by Dempsey. An event not to be missed!

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This tool will provide an intelligent and automated analysis of a proposed deposition process to help users optimize the performance of a coating tool and the characteristics of a surface coating applied to work pieces. Such an approach will potentially prototyping and trials, and will be relevant to intelligent and optimized surface coatings, enabling performance advances in a wide range of engineering sectors.

The collaborative project runs until September 2016. A team from The UK's Open University will advise on the physics of the magnetically confined plasmas that are generated in magnetron tools to vaporize coating materials for deposition onto the work pieces, and provide feedback on the actual performance of the new software-guided process. The project is led by Teer Coatings, part of the Miba Coating Group.

Platform Specialty Products Acquires Alent

Platform Specialty Products Corp., a global diversified specialty chemicals company, has acquired Alent plc. The closing of this transaction will prompt the launch of MacDermid Performance Solutions, a division of Platform that will combine the original MacDermid operations with businesses from Alent (Enthone and Alpha and their subsidiary company, Fernox), along with the recently acquired OM businesses.

The new entity will pool the experience and resources of each company and unify sales strategies in order to improve processes, drive innovation, and aim to deliver best-in-class products and services at every stage of the supply chain. With combined resources, MacDermid Performance Solutions will, the company says, have one of the largest technological and service oriented forces in the industry, across a diversified global footprint that covers Africa, Asia, Australia, Europe, North America, and South America.

"We are excited to welcome Alent to the Platform family," said Scot Benson, president of MacDermid Performance Solutions. "This transaction propels us into a new chapter for the business. Alent's talent and resources will enhance our flexibility and expertise to develop new and improved products and capabilities. This acquisition represents a great addition in our ability to support our customers through innovation and technical support."

Dow-DuPont Merger Needs Two Years to Close



DuPont Innovation Center in Wilmington, DL

The merger between Dow Chemical Co. and DuPont, announced on December 10, will take until well into 2017 to pass all regulatory hurdles. The all-stock deal, worth US\$130-billion, is intended to result in three operating divisions, representing agricultural products, raw materials and specialty products.

DuPont's chief executive Ed Breen will be CEO of the new company, while Dow Chemical CEO Andrew Liveris will be executive chairman. "This transaction is a game-changer for our industry and reflects the culmination of a vision we have had for more than a decade to bring together these two powerful innovation and material science leaders," Liveris said in a statement.

There will likely be staff reductions in the merged chemicals giants, which both have long histories. DuPont has close to 60,000 employees worldwide, and Dow slightly less.

Fabtech Finishing Pavilion Breaks Previous Record

The Finishing Pavilion and Conference organized by the Chemical Coaters Association International at Fabtech 2015 in November broke records set the previous year. Filling more than 48,000 net sq ft of space in Chicago's McCormick Place, the hundreds of finishing products and services on the show floor attracted more visitors than ever before. A total of 199 companies exhibited in this section of the show.

Additionally, CCAI's technical sessions increased in attendance by 45 percent, the largest audience yet

"Along with our growth on the show floor, our conference sessions continue to grow each year," noted CCAI Executive Director, Anne Goyer. "With nearly 200 attendees filling the Finishing conference sessions this year, it was by far and away our largest conference attendance yet.

"We are very happy to see that more individuals are taking time to attend educational sessions as well as visit the show floor. We feel that the fin-

ishing industry now looks to Fabtech as the place to be for both a dynamic exhibition with everything they might be looking for and outstanding educational opportunities at the same time."

CCAI's board of directors began to partner with Fabtech back in 2010. This year, there were over 10,000 Fabtech attendees who indicated they were there to evaluate finishing.

CCAI Platinum Corporate Member, Greg Dawson of Nordson Corp., commented, "The Finishing Pavilion has grown from being just a mere curiosity to the welding/stamping visitors to being a destination for people with funded powder coating projects. That's a major shift in demographics in five short years."

Planning for Fabtech 2016 in Las Vegas in November is already underway, and the Finishing Pavilion has more than 88 percent of the exhibit space already reserved. "This is the first time our Finishing Pavilion has filled so quickly," notes CCAI Exhibit Manager Andy Goyer.

Fabtech Canada takes place at the Toronto Congress Centre from March 22 to 24, 2016.

Caps'n Plugs is the leading Canadian distributor and custom manufacturer of rubber/silicone high temperature maskings for powder coating, spray painting, e-coating and plating. We have an extensive stock product line of high temperature masking: caps, plugs, tubing and compressible foam. Please visit our new website at www.capsnplugs.com-see the "Masking Products" category. Our sales team is focused on finding solutions for our customers. If a suitable part does not exist in our standard product line, we can design, prototype and produce the correct part for your application. Caps'n Plugs strives to find the best and most economical solution for our customers. Our masking products are of the highest quality and we strive to have the lowest prices in the industry.

Caps'n Plugs has the largest stock of standard masking products in Canada. All our stock silicone or EDPM rubber parts can withstand repeated painting and bake cycles. Our several plug styles can be pushed or pulled into round holes, used for threaded or unthreaded round holes, beveled or unbeveled round holes and will contort to fit off-round holes. Our flexible caps can mask off external round threaded studs, round pins, and they can even stretch to fit odd sizes or irregular shapes. Our flexible silicone foam easily compresses to seal off grooves or holes, and it can seal irregular shaped holes. We also stock two styles of silicone tubing ideal for a variety of applications.

We stock a variety of polyester, polyimide, glass cloth and hi-temp crepe masking tape in logs that we are now able to slit to whatever roll width you require, if it is not already stocked on our shelves.

Most of the popular cut widths of green polyester tape are in stock ready for immediate delivery. Our sandblasting tape are much more efficient at masking off parts during sandblasting (with no adhesive residue) than the commonly used duct tape. Our high temperature masking discs are ideal for masking off holes or the grounding areas around holes. These high temperature masking discs remove cleanly from surfaces with no residue. Again, the popular diameter discs are stocked on our shelves.

If you need to mask off studs, pins, threaded holes or any part of an item that you are painting, powder coating, e-coating, plating or blasting, Caps'n Plugs can help! If you have requirements for a non-standard mask, our custom prototype prices, piece prices and production tooling costs are the lowest available in Canada.

Caps'n Plugs®



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Huber Boosts Calcium Carbonate Output

Huber Carbonates, LLC, a subsidiary of J.M. Huber Corp., is substantially increasing capacity at its ground calcium carbonate (GCC) operation in Marble Hill, GA. "Huber has a long-term, multi-stage plan to increase capacity in ground calcium carbonate, driven by customer demand and new product sales," says Matt O'Brien, vice-president and general manager of Huber's GCC business. The continuous investments in ground calcium carbonate will, he adds, position Huber to continue supporting its customers' growth strategies with increased capacity for both medium fine and fine ground products.

"This expansion — coupled with the recent expansion of our Quincy, IL, GCC facility — is already in motion and targeted for completion in 2016," says Rick Zwingelberg, operations director for Huber's GCC business. "We continue to be well-positioned to meet the growing needs of our customers in a number of markets."

Unimin Raises Filler Prices

Unimin Specialty Minerals Inc., New Canaan, CT, raised prices for all Minex, Imsil, Snobrite and Minbloc brand functional filler products effective February 1, 2016. Price increases will range from four to eight percent, depending on grade.

The company says the increase is necessary to offset rising production costs, critical support and continual reinvestment.

New Process Uses VOC-Free Powder Coatings

AkzoNobel and Chinese automaker JAC Motors say they have commercialized VOC-free powder technology in automotive body coatings. JAC is successfully using AkzoNobel's Interpon powder technology for coating truck bodies at its plant in Mengcheng, China.

The two firms explained their collaboration at an industry forum in Shanghai, organized by the Coating Division of the China Surface Engineering Association. Other participants of the forum include GM Auto, leading auto makers Sinotruk, Geely, and Yogomo.

"AkzoNobel is supporting sustainability in the automotive industry with innovative solutions like these," said Eddie Wang, business director of AkzoNobel's Powder Coatings business in North America. "The application of high-performance powder coating solutions in body coating represents a major technological breakthrough in this sector,

bringing the benefits of minimizing resource wastage and environmental pollution."

Chinese auto makers have worked on ways to meet coatings standards announced in 2006. Though powder coatings are listed as a recommended solution for cleaner manufacturing, this is the first example of their use in volume manufacture. The production line at Mengcheng has been operating successfully using AkzoNobel's Interpon A powder coatings for JAC's SLX truck.

Univar Acquires Polymer Technologies

Univar Ltd., a wholly owned subsidiary of Univar Inc. has acquired all outstanding stock of Polymer Technologies Ltd., a UK-based developer and distributor of UV/EB curable chemistries used to formulate paints, inks, and adhesives.

"The acquisition of Polymer Technologies' enhances our existing offering to several end markets with unique chemistries that enable formulation of environmentally friendly products where solvent-based systems are currently used," said David Jukes, president, Univar EMEA, Latin America, and Asia. "We look forward to building on the solid reputation that Polymer Technologies has earned in the market by leveraging the Univar network to safely deliver the specialty products that enable UV/EB technology to be used in areas that would never have been considered a few years ago."

Added Dr. Glenn McAuliffe, director, Polymer Technologies, "As technology continues to develop, radiation curing is likely to be used in more and more applications. When we explored further opportunities to increase the availability of our branded and imported products to both new and existing markets, Univar was the right fit for our suppliers and customers. With a global reach, local service delivery and deep technical expertise, we are confident that Univar will continue to help develop the future of the radiation curing market and build on the legacy of Polymer Technologies.

AkzoNobel Launches Service Centre from Quebec

AkzoNobel is creating a Regional Service Center for Wood Coatings at its Warwick, QC site. The facility will become the commercial headquarters for its wood coatings business in Eastern Canada, and provide local support as the business's R&D and technical application center for Canada. It is due to be fully operational by mid-2016.

"This investment allows us to continue offer-

ing the broad range of services that our customers expect from AkzoNobel and the Warwick site, reinforcing our leading position in the North American market," said Doug Gilliam, regional director of AkzoNobel's wood coatings business in North America. "The facility will ensure outstanding support, with dedicated on-site teams focusing on meeting our customers' needs and expectations."

The facility will provide services that will include quick-response small batch manufacturing, product development for the local Canadian market, custom color matching, and commercial and customer support. As previously announced by the company, the large-scale batch manufacturing will be transferred to other AkzoNobel sites in North America, including Port Hope, ON.

AkzoNobel is a supplier of wood coatings for commercial and industrial customers in the furniture, flooring, building products and cabinetry markets. It has served Eastern Canada for over 50 years.

"We remain highly committed to the Canadian market and this investment demonstrates our continued drive to bring leading technologies and services across the region," Gilliam added.

Ashland Adds Coatings Laboratory

Ashland is transforming its technical and analytical services for the paint and coatings industry by adding a dedicated laboratory to its campus in Wilmington, DE. The new 2,000-sq-ft facility complements the company's existing 8,000-sq-ft Coatings Center of Excellence on the site. Combined, the facilities provide paint formulators with expansive resources for testing new or modified formulations, understanding consumer preferences, and optimizing products for success.

"Ashland has been solving customers' toughest coatings problems since we introduced Natrosol HEC, the industry's largest selling rheology modifier, more than 50 years ago," said Ed Connors, Ashland group vice-president, Industrial Specialties. "This new lab ensures customers continued access to world-class technical support for years to come. It, along with our new product innovations like Strodex low-VOC surfactants, confirms our commitment to our customers' success and to the industry."

At Katilac Coatings Inc. we strive to produce the highest quality coatings to enhance the look and give protection to your wood-working project. Katilac Coatings is a division of Halton Chemical Inc. who have been toll manufacturing and private labelling wood coatings for over 50 years.

Proudly engineered & manufactured in Canada

Our professional wood coatings are based on the most current Scandinavian style chemistry using the highest quality domestically sourced raw materials. Our team of chemists is led by Dr. Richard Johnston. With 35 years of experience in formulating, problem solving and troubleshooting, Dr. Johnston and his staff are capable of handling even the most specialized client request for solvent borne & waterborne products, polyurethanes, lacquers and related wood coatings. All our products are manufactured and thoroughly QC tested at our production facility in Burlington Ontario.

Industry Leading Products

At Katilac Coatings we offer a breadth of products to suit most wood coatings applications. We have traditional pre-cats and post-cats, conversion varnishes, waterborne coatings and colour systems including stains, dyes, glazes, and opaque finishes. We also pride ourselves on innovation.

Our newly released KD Series DIAMOND™ is a true extended pot-life two component product. This 42% weight solids product can be used up to 5 days after catalyzation with no change in application performance or final film durability characteristics.

Another new offering is the AX Series WOODGUARD™ Interior/Exterior Waterborne topcoat. This self crosslinking oil modified urethane is excellent for interior applications or to provide that cabinet type finish to exterior projects. When used in conjunction with our FIBERSET LC 2000™ primer/sealer it is an unbeatable system. Like all our GREEN STAR™ waterborne coatings, WOODGUARD™ meets Green Seal, Greenguard and LEEDs requirements.

Distribution Centres

Katilac Coatings operates two of our own distribution centres; one at our factory in Burlington, ON and one in Woodbridge, ON. We are also building a network of highly competent and technically proficient distribution partners across Canada and into the United States. At any of our locations or from any of our distributors, you can get high quality custom colour matches, the full assortment of Katilac products and technical or application help if you should need it.

Our locations:

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391 Hanlan Road, Unit #1
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Check out our website www.katilaccoatings.com to find your local Katilac distributor.

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than our finishes, is your
craftsmanship.*

PPG Increases Silica Production

PPG Industries is increasing precipitated silica production capacity at its Lake Charles, LA, manufacturing plant by more than 10,000 tons per year. This is in response to growing demand.

“PPG remains committed to the precipitated silica market, and this investment will enable us to meet growing demand for our products among key strategic customers and target segments in the Americas,” said Anup Jain, PPG vice-president, specialty coatings and materials. Jain said PPG would achieve the 10,000-tons-per-year capacity increase through debottlenecking projects that are already underway and expected to come online in the second half of 2016.

The debottlenecking projects at Lake Charles build on a 22,000-tons-per-year capacity increase that came online in mid-2014 and phased debottlenecking projects that came online in 2012. In February 2015, PPG announced expanded precipitated silica production at its Delfzijl, Netherlands, plant, designed in part to meet growing demand among global tire manufacturers for Agilon performance silica. Jain confirmed that the Delfzijl expansion remains on schedule to come online in mid-2016.

In addition to these expansions, PPG is also evaluating additional significant silica expansion projects in Europe and North America based on growing demand.



Lake Charles silica mine.



Jon Barrett

sales team. In his new role, he will manage the commercial organization, oversee growth development in several key markets and will report directly Oravitz.

Huber Acquires Martinswerk

J.M. Huber Corp., through its Huber Engineered Materials division, has acquired the Martinswerk business of Albemarle Corp. The Martinswerk portfolio is now officially part of the Fire Retardant Additives (FRA) business unit of HEM.

Huber's largest acquisition in over 10 years, the transaction includes Martinswerk's manufacturing facility in Bergheim, Germany, more than 470 employees.

“This strategic acquisition is well aligned with HEM's FRA business unit – both from a product and geographic standpoint,” said Jerry Bertram, vice-president and general manager of HEM's Fire Retardant Additive business. “It builds on our existing halogen-free fire retardant offerings and expands the range of products we can provide to customers around the world.”

To ensure a smooth integration, HEM is retaining the current management team at Martinswerk. The FRA business unit will be structured in a regional model with a general manager operating out of Europe.

The Martinswerk acquisition marks the latest in a series of investments in the FRA business by Huber, including the acquisition of the Kemgard product line from Sherwin-Williams in 2010 and the purchase of the assets of the specialty hydrates business from Almatris in 2012. In 2015, Huber purchased the Safire nitrogen and phosphorous flame retardant technology from Floridienne Group and Catena Additives.

People

Orion Carbons Names New Executives

Mark Peters has joined Orion Engineered Carbons as senior vice-president and general manager, Americas region. Based at Orion's Americas headquarters in Kingwood, TX, He is responsible for all aspects of company performance in the Americas.

David Deters has joined Orion as senior vice-president and chief innovation officer. In this role he directs Orion's global research and development, process technology and quality functions. He will serve as a member of the executive management team.

MetoKote Makes Senior Appointments

MetoKote Corp. has appointed Jon Barrett global vice-president and chief operating officer (COO) and John Shaffer as global vice-president of sales. Barrett has been with MetoKote since 1983, and Shaffer joined in 2014.

Barrett has held various roles of increasing responsibility at MetoKote, including his most recent role as vice-president, business development. In his new role, he will manage business support services and oversee global operational management.

Shaffer's most recent position was director, global sales. Since joining MetoKote he has taken on additional responsibilities within the global

Inortech Chemie Appoints Vice-President

Jean-Baptiste Moranta has been promoted to vice-president, sales, marketing and operations, with Inortech Chimie Inc., of Terrebonne, QC. He is now responsible for the day-to-day business but will continue his sales responsibilities.

Jean-Marc Pigeon, Inortech's president, said that Moranta was given progressively more responsibility within the company after a discussion a few years ago, when they compared their individual visions for Inortech. “I began giving him more responsibilities on the day-to-day operations,” Pigeon says. “He took those new responsibilities and improved on them, as he had with the sales department.”

Inortech supplies broad range of additives and chemicals. It is focused on the coatings, inks, adhesives and plastics markets.

Axalta Coating Systems Appointment

Axalta Coating Systems has appointed Mike Carr vice-president, and president, North America. He will report to Axalta chairman and CEO Charlie Shaver and be responsible for the company's business in the US and Canada.

He joins Axalta from Johnson Controls Power Solutions division where he was most recently vice-president and general manager for the US and Canada. During his tenure at Johnson Controls he also held numerous roles of increasing

Daemar manages the sourcing and delivery of millions of essential components including the complete line of Caplugs masking and protective products to Canadian manufacturing and finishing industries. Our Caplugs inventory includes over 12,000 lines of standard parts - featuring caps and plugs developed specifically for masking applications and available in materials including: silicone, EPDM, Flex 500 and vinyl. Our tapes and standard die-cut discs are available in polyester, polyimide, glasscloth, crepe, aluminum and more.

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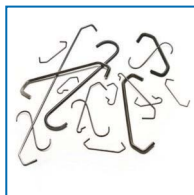
For over 40 years, Daemar has provided solutions for industry applications from high volume production lines requiring design assistance and supply chain management, down to a simple one-off application requiring a single cap. Daemar's regional warehouse network with stocking facilities in Toronto, Montreal and Edmonton provides fast and efficient delivery of parts to customers throughout the country.

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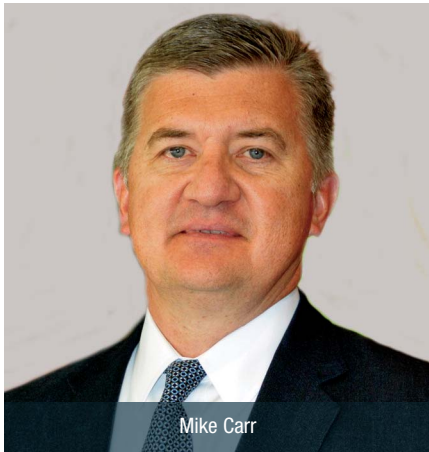
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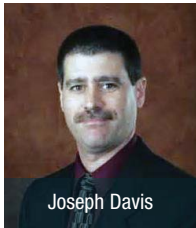
1.800.387.7115



Mike Carr

responsibility in general management and sales including roles in South America and Europe. Early in his career he worked for Exide Technologies, Armstrong World Industries and General Battery Corporation.

Tesla NanoCoatings Appoints Vice-President



Joseph Davis

Joseph Davis has joined Tesla NanoCoatings as vice-president – sales engineering. He most recently served as vice-president of the technical service group for TNEMEC Co. Inc.,

Kansas City, MO, where

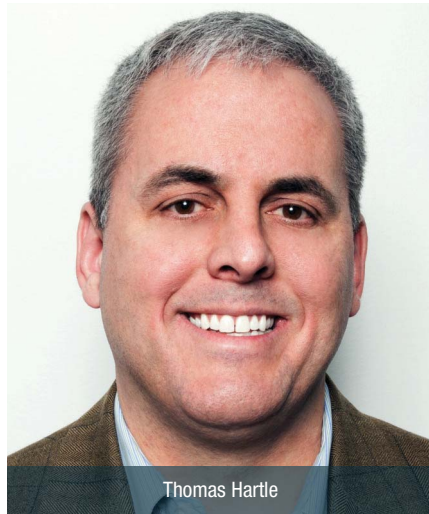
he helped establish the company's strategic vision and coordinated the efforts of the technical service department, analytical lab, and panel sample lab, with the marketing and research and development groups.

Davis is an authority on corrosion prevention and protection. He maintains certifications as a NACE Level III certified inspector as well as SSPC C1 and C2, and a protective coatings specialist. He serves as the Chairman of the AWWA D102 Coating of Steel Water Tank Committee and as Chairman of the NACE International Institute's NIICAP Oversight Board.

Tesla NanoCoatings Inc. is a technology company based in Massillon, OH. The company's product line is Teslan, a corrosion-control coating for structural steel, that uses carbon nanotechnology.

Omnova Names General Manager

Thomas Hartle has joined Omnova Solutions Inc. as general manager, specialty coatings & ingredi-



Thomas Hartle

ents (SC&I). SC&I serves Omnova's global specialty coatings, nonwovens, construction materials, elastomeric modifiers, and home & personal care markets. He joins Omnova from SABIC in Selkirk, NY, where he held several leadership roles since 2009. He most recently served as director, North American sales and distribution, where he was responsible for leading a commercial organization of nearly 40 sales professionals across many industries.

PPG Industries has Made a Group of Executive Appointments

Tim Knavish will become senior vice-president, automotive coatings, and will continue to oversee PPG's Latin America operations and its corporate environment, health and safety (EHS) function. Knavish is currently PPG vice-president, global protective and marine coatings (PMC).

Jean-Marie Greindl will become senior vice president, global architectural coatings, and president, PPG Europe, Middle East and Africa (EMEA), with responsibility for all architectural coatings activities in the EMEA and Asia Pacific regions as well as the US and Canada, and oversight of all PPG business in the EMEA region. Greindl is currently vice-president, automotive coatings, EMEA, and president, PPG EMEA. Ram Vadlamannati will become senior vice president, protective and marine coatings and corporate development, and will continue to oversee the corporate information technology (IT) function in addition to assuming oversight of PPG's strategic planning and corporate development function.

Calendar of Industry Events

March 17-19, 2016: Aluminum Extruders Council, Annual Leadership Meeting & Conference, La Cantera Resort, San Antonio, TX. www.aec.org

March 22-24, 2016: FABTECH Canada 2016, Toronto Congress Centre, Toronto, ON, www.fabtechcanada.com.

April 11-14, 2016: Powder Coating 2016, Georgia International Convention Center, College Park, GA. www.powdercoating.org

April 12-14, 2016: American Coatings Show 2016, Indiana Convention Center, Indianapolis, IN. www.american-coatings-show.com

April 19-22, 2016: PaintExpo, Karlsruhe Exhibition Centre, Karlsruhe, Germany. www.paintexpo.de

May 3-6, 2016: ET 16, the 11th International Aluminum Extrusion Technology Seminar & Exposition, Hyatt Regency Chicago Hotel, Chicago, IL. www.ET16.org

May 16-18, 2016: RadTech 2016, Hyatt Regency O'Hare - Rosemont, IL. www.RadTech2016.com

May 25-26 2016: CPCA Annual Conference and AGM, the Westin Nova, Halifax, NS. www.canpaint.com

June 6-8, 2016: SUR/FIN 2016, South Point Convention Center, Las Vegas, NV. www.nasfsurfin.com

June 19-23, 2016: Combined annual meetings of the Chemical Coaters Association and the Powder Coating Institute, at the Westin Riverfront Beaver Creek Hotel, Vail, CO. www.ccaiwweb.com or www.powdercoating.org.

October 4-6, 2016: Aluminum Anodizers Council Fall Conference and Exposition, Hotel Omni Mont-Royal Hotel, Montreal. www.anodizing.org

November 2-3, 2016: Canada Woodworking East, Olympic Stadium, Montreal. www.BOEC.ca

November 16-18, 2016: FABTECH 2016, Las Vegas Convention Center, Las Vegas, NV. www.fabtechexpo.com

American Plating Power (APP) offers the most extensive industrial power supply lineup available anywhere designed for metal finishing applications. Specializing in electroplating, anodizing, ecoat and water treatment applications, APP provides power solutions second to none. Regardless if your process needs 1 volt or 900 volts, we have a custom built power supply to match your application. DC current outputs from 1 amp to 100,000 amps are available.

Switch mode rectifiers offer state of the art power supply technology in a reduced footprint and with extremely tight ripple throughout the entire output range for superior process results. Or, if you prefer, SCR rectifiers provide a rugged alternative for the most demanding jobs. Another option, variable transformer rectifiers, offer low ripple regardless of the setting required. Whatever your manufacturing environment APP has the right model with air cooled, water cooled, or oil cooled power. Need something beyond standard DC power? APP comes through with Pulse, Reverse Pulse, AC/DC pulse options as well, all CSA/third party certified.

APP also offers a variety of packaging options to maximize floor space and make installation easier. From wall mount options to multi-circuit cabinets, APP will work with you to create the perfect solution for your DC power requirements.

There are a wide variety of control options too. Local and remote controls include 0-10 volt, 4-20 mA, Ethernet, Device Net, etc., as well as PLC control with customized software.


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Connecting**Chemistry**

BUILDING A BRIGHTER WORLD



Globalization and ever more stringent regulation confront the manufacturing industry each year, presenting greater and greater challenges. Brenntag Canada recognizes that the specialty chemicals market does not have to be so complicated, however – we aim to make all aspects of chemical distribution less complex for our customers and suppliers.

Through a dedicated and experienced team of technical experts and sales agents, Brenntag Canada offers tailor-made solutions to each customer's individual needs and business challenges with a degree of professionalism that few of our competitors can match. From providing advice on improving formulations, to devising innovative supply-chain solutions, to sourcing specialty ingredients, Brenntag Canada delivers products and services which put our customers and suppliers a step ahead of the competition.

We at Brenntag demonstrate that the distribution of chemicals and ingredients is not just a business for us. It is an attitude. And our passion is to be the best partner connecting you as our customers and suppliers in local markets worldwide.

Brenntag Canada Inc.
Corporate Office
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Toronto, ON M8Z 2G6
Phone: (416) 259-8231
(800) 387-7324
Fax: (416) 259-5333
email: sales@brenntag.ca

www.brenntag.ca

Brenntag, the global market leader in chemical distribution, covers all major markets with its extensive product and service portfolio. Headquartered in Mülheim an der Ruhr, Germany, the company operates a global network with more than 490 locations in 72 countries. In 2014, the company, which has a global workforce of more than 13,500, generated sales of EUR 10-billion (USD 13.3-billion). Brenntag connects chemical manufacturers and chemical users. The company supports its customers and suppliers with tailor made distribution solutions for industrial and specialty chemicals. With over 10,000 products and a world-class supplier base, Brenntag offers one-stop shop solutions to around 170,000 customers. This includes specific application technology, an extensive technical support and value-added services such as just-in-time delivery, product mixing, formulation, repackaging, inventory management and drum return handling. Long-standing experience and local excellence in the individual countries characterize the global market leader for chemical distribution.

Brenntag purchases and stores large-scale quantities of industrial and specialty chemicals from various suppliers, repackages them into smaller quantities and provides a full-line portfolio of chemicals in less-than-truckload quantities as well as value-added services. This includes specific application technology, an extensive technical support and value-added services such as just-in-time delivery, product mixing, formulation, repackaging, inventory management and drum return handling. Brenntag aims to be the partner of choice for our customers and suppliers with these products and services.

When we think of our business, we need to ask ourselves two questions: How can we help our business partners to succeed – today and in the future? What is



the benefit for our partners working with us? Our strap line “ConnectingChemistry” is the ultimate answer to both of these questions.

Brenntag strives to be the industry’s most effective and preferred channel partner. Our industry and customer-focused approach to chemical distribution builds on connecting customers and suppliers in a winning partnership. Always being committed to our partners’ success, we serve as their extension, sharing our intelligence on markets, industries and applications. We support them in reacting flexibly to ever-changing market conditions and help them focus on their core business by managing their complexity. We are the only chemical distributor, which complements a broad global network with outstanding local execution. Brenntag is there for its partners - anytime, anywhere.

Brenntag is truly a “people’s business”. Everything we achieve as a business is accomplished with and through our employees. They are the connection between our business partners. They connect people and build relationships. All in all, they connect chemistry on all levels.

We demonstrate that the distribution of chemicals and ingredients is not just a business for us. It is an attitude and our passion to be the best partner connecting you as our customers and suppliers in local markets worldwide.

Brenntag - ConnectingChemistry

Brenntag Symposium Draws Crowds in Toronto and Montreal

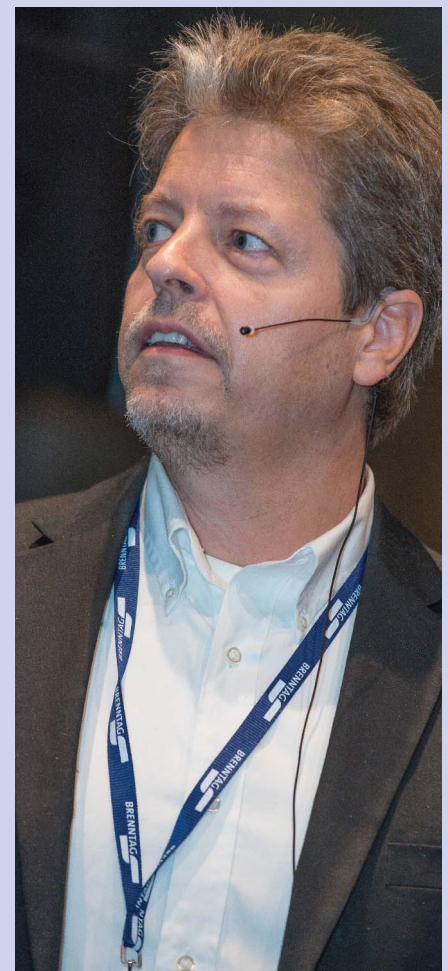
Brenntag Canada Specialties held a symposium on Waterborne Technologies in November. The event, held in both Toronto and Montreal on successive days, featured technical presentations from Grace, Ashland Specialty Ingredients, Clariant Polymer Additives, Wacker, and Aditya Birla. Around 100 people attended the Toronto event, pictured here.



Dr. Natalie Harris, Birla Carbon.



Kent Maghacut, Ashland.



Jim Greene, Wacker SCC.



Jesse Timmins, Grace.



Jeanine Snyder, Air Products.



Randy Lorenz, Wacker Polymers.

new PRODUCTS

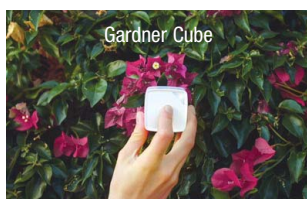
Color Matching System

Paul N. Gardner Co. Inc has a new portable color digitizer. The Cube removes the guesswork from color matching, and makes it easy to save, store, and work with colors.

A single tap of the unit produces a measurable result that can be used to match color and paint databases.

Color systems the Cube works with include RGB, CMYK, HEX, LAB and LRV. The unit has a built-in, rechargeable lithium-ion battery, and sensors for color, temperature and ambient light.

It will operate with clever iOS or Android phones. It will work wirelessly via Bluetooth 4.0 or via a connection with Micro-USB.



Modified Acrylic for Floors

Omnova Solutions has introduced an epoxy-modified acrylic copolymer for 1K (one part) garage floor and other concrete coatings. Pliotec GAR130, the company says, demonstrates resistance to hot-tire pick-up and chemicals, including solvents.

It has been designed for use in low-VOC waterborne coatings, both

colorant-based and clear. The product has a quick cure time following application and offers UV resistance on exterior concrete applications.

The company says the balance of UV resistance and low-VOCs makes the copolymer suitable for indoor or outdoor use. It balances garage floor performance with the limitations epoxy-modified acrylics can face in exterior applications due to the potential impact of UV rays. As a result, formulations with the new coating demonstrate ideal characteristics for interior and exterior environments.

"Improving on available technologies, Pliotec GAR130 overcomes traditional limitations associated with products in the garage floor coatings category," said Rich Stewart, Americas marketing manager for coating specialties. "For example, the reduced cure time allows the end user to regain use of his or her garage or concrete pad sooner after application."

UV-Curable Additives and Binders

New UV-curable cellulose ester additives and binders from Dymax researchers provide are claimed to offer improved surface hardness and solvent resistance in hard coating and ink applications. UV-curable cellulose ester additives do not disturb clarity; therefore, they are recommended for clear, very low haze coatings and glossy inks.

The introduction of an acrylic functional pendant substituent to a cellulose ester provides greater hardness and more scratch and solvent resistance when compared with unmodified cellulose ester in UV-



Peter Lucas, Air Products.



Dr. Mouhcine Kanouni, Clariant.



Christina Szewczyk Brenntag Canada.



Jim Sally Brenntag Canada.



cured coatings. By varying the functionality, type and amount of substituent, a wide range of properties can be obtained.

Commercially available acrylamidomethyl functional cellulose esters (AACEs) are typically used in formulations at two to 10 percent by weight. They are used in coatings and inks as reactive thickeners and adhesion promoters. When compared to coatings formulated with silica additives, coatings formulated with cellulose ester additives have less haze.

As plastics replace glass in many applications, the need for scratch- and chemical-resistant coatings increase. The new modified cellulose esters are designed to improve scratch resistance and create impact-resistant coatings.

Urethane acrylate modified cellulose esters provide improved surface hardness compared to acrylamidomethyl functional cellulose ester. They are capable of improving the pencil hardness of soft coatings without reducing impact resistance. In hard coating formulations they can be used to improve flexibility and impact resistance without changing pencil hardness. UV-curable cellulose esters do not disturb clarity and, therefore, they can be used as additives for inks and optically clear coatings.

Matting Agents for Low Gloss

W. R. Grace & Co. is launching Syloid A matting agents for the architectural market to meet consumer demand for high-performance, low-

gloss paints. This is the company's first product designed specifically for the architectural coatings industry.

Grace says it designed the Syloid A Series to provide paint formulators with more efficient matting agents that deliver improved performance in premium interior flat paints. These enhancements are said to include exceptional stain resistance, a noticeably smoother finish, improved hiding characteristics, and superior burnishing resistance. The performance attributes of Syloid A have been verified by Marschall Labs, an independent paint consulting and testing laboratory, according to the company.

"Grace continues to expand our expertise in silica technology to provide novel products which offer superior value to the coatings market," said Jim Bowler, coatings global marketing manager, at Grace. "The Syloid A Series will help customers differentiate their products with enhanced performance."

Replacement Sifter Screens

A new K-Series replacement screens program for all makes and models of centrifugal sifters has been released by Kason Corp. Two types of replacement screens are offered: K-Centri screen cylinders utilizing durable wire or synthetic screen mesh for general purpose applications, and K-Duracyl screen cylinders made with heavy duty

continued on page 98

CPCA Gets a Head Start on New Chemicals Management Approach

CPCA has been very active right out of the gate in the new year. It has already engaged in a number of meetings with industry and government regarding Phase 3 of the federal government's Chemicals Management Plan, soon to be formally announced.

CPCA's Paint and Coatings Sector Working Group met at the end of 2015 to get an inside update on the CMP chemicals that will be implicated for assessment in the coatings industry. Overall, 35 industry and government attendees participated in this day-long meeting. Industry gained important insight on the government's process for prioritizing the chemicals to be assessed and which ones may be suitable for grouping, in which groups and the associated timing for grouping assessments. The work of PCWG greatly helps CPCA, and its members obtain relevant feedback and input with respect to the data gathering—whether conducted voluntarily or via government-mandated surveys vis-a-vis related work plans. It was noted that the voluntary approach had worked well with respect to data gathering for the assessment of polymers. CPCA's goal is to make the process of data collection as painless as possible for member companies.

There were also detailed discussions with respect to potential risk management for phthalates substance grouping; and questions were also addressed with respect to the ecological risk characterization of phthalates. Participants discussed the possibility of aligning risk management activities with the US' proposed rules on phthalates. There will be further discussion on this aspect going forward.

Chemicals Management Plan Progress Report

The latest CMP Progress Report, a biannual co-production of Environment Canada and Health Canada, was published in December 2015. Approximately 2,740 substances were assessed, with 363 substances or groups of substances found to be toxic. Of the latter, 76 final risk management instruments covering 325 substances or groups of substances were devel-

oped. Additional risk management instruments are still under development.

A tremendous effort is required by industry to ensure substances are subject to the proper risk assessments based on evidenced-based data collection. CPCA members have done excellent work to help ensure key substances can still be used in product formulation, while at the same time ensuring the health and safety of the consumer is protected.

The federal government is now entering Phase 3 of the Chemicals Management Plan that will assess 1,550 chemicals in commerce in Canada. The official launch of CMP Phase 3 is expected to occur at the end of the first quarter of 2016. Preliminary documents detailing some of the groupings of 1,550 substances and related priorities over a five-year period (2016–21) were reviewed in detail at the last CPCA Paint and Coatings Working Group meeting in November. CPCA is now seeking further feedback on the recent CMP-3 action plan for the benefit of members and some of the technical issues that may be anticipated from the proposed schedule and timeline. All of this is archived for members' use, and CPCA is also seeking information for some of the priority groups identified for organics and inorganics. This information refers to substances or groups of substances that are used in the paint sector, which is one of the top sectors using CMP-3 substances.

Positive News for CPCA Members on VOC Regulations

Environment Canada confirmed it is moving forward to exclude additional VOC compounds from Schedule 1 of CEPA—13 in all, and expected to be concluded by this coming spring. These have been in the works for some time and once finalized will help companies in Canada



comply with VOC regulations. CPCA also received an update on the performance measurement and evaluation of the Volatile Organic Concentration Limits for Architectural Coatings Regulations conducted in 2015. Environment Canada's accredited laboratories tested the 10 main architectural coatings categories under the VOC regulations. They surveyed the top 46 architectural paint manufacturing companies for detailed VOC information. Ten of the responding companies were among the top 12 that represent 75 per cent of the market size in Canada.

Total VOC emissions from paint fell to 16 kilotonnes in 2014 from 57 kilotonnes in 2005, down 41 kilotonnes. This represents a reduction of 73.6 per cent in VOC emissions from the originally projected emissions for 2014.

Virtually all waterborne products met the VOC limits in their respective categories. However, there are some challenges for solvent-borne products still on the market, in terms of VOC reductions for that segment, especially with respect to waterproofing and medium- and



**Canadian Paint and Coatings Association
Helping Shape the Future of Your Business**

The Canadian Paint and Coatings Association (CPCA) was established in 1913 to represent the national paint and coatings industry, championing the interests of manufacturers and suppliers. CPCA helps support its members' efforts to deliver thousands of highly performing products in the various industry segments: automotive, automotive refinish, coil coatings, decorative, general industrial finishes, adhesives and sealants, marine, original equipment manufacturers (OEM), packaging finishes, powder coatings, transportation coatings and wood finishes.

CPCA does so by offering value-added services in key areas including health and safety, environmental affairs, government relations and regulatory development. It also strongly advocates for industry in important areas such as sustainability, product stewardship and technological innovation. This is done by working together with members, industry stakeholders and government.

In support of ongoing advocacy efforts on behalf of members, CPCA:

- Provides regular statistical and data analysis of sales and industry trends to help ensure members stay on top of their game;
- Provides ongoing professional development via online training in coatings technology;
- Delivers must-read communications that help members keep abreast of latest developments impacting them; and
- Hosts key networking events such as the annual conference and AGM.

CPCA communications are available in print and digital formats and include regular bulletins and alerts on business, regulatory developments and compliance requirements. Members have access to all publications archived for their reference.

Ultimately, CPCA enables its members to play a more instrumental role in shaping the impacts on their business.

Help shape the future of your business. Become a member of CPCA today. www.canpaint.com



STRONGER TOGETHER

Since 1913, CPCA has been dedicated to helping members meet their aims and objectives by providing value-added services in key areas:

- Health, safety and environment
- Sustainability and product stewardship
- Economic and statistical analysis
- Regulatory development and government relations

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high-gloss solvent-borne products. Once 100 per cent reductions are achieved in this group there will be an additional two-kilotonne reduction in VOC emissions. According to CPCA survey results, solvent-borne products represent less than 10 per cent of the total national coatings market of more than 10,000 architectural product lines sold in Canada.

CPCA Focuses on Potential Impact of Microbeads Regulation on Paint Sector

Rather than adequately defining substances in Schedule I of the Canadian Environmental Protection Act, which restricts the nature and number of qualifying terms that can be used to define targeted substances, Environment Canada has agreed to publish an explanatory note that will accompany the Schedule I listing for microbeads. It will not, however, include the noted limitations in the actual listing. Government has revised the definition as follows: Solid synthetic organic polymeric microbeads which have a size greater than 0.1 µm and less than or equal to 2 millimeters. It is an improvement and marked difference from the original proposal: Synthetic polymer particles that, at the time of their manufacture, are greater than 0.1 µm and less than or equal to 5 mm in size. CPCA is pleased that this has moved in a more positive direction so as not to capture polymers used in latex paint products that might lead to a future designation of 'toxic' for a widely accepted and sustainable product.

The paint industry welcomed the formal explanatory note, which will now provide greater clarification of the intent of the proposed listing.

CPCA's Final Recommendations on Use of Concentration Ranges and CBI Claims for WHMIS 2015

Ongoing work on the GHS implementation in Canada has long been a priority for CPCA and its members. Health Canada has provided valuable information or guidance on what is required for industry to be fully compliant with the new regulations. However, some questions remained, and CPCA worked closely with government officials in December to further clarify the outstanding requirements related to concentration ranges and CBI claims. A more specific clarification was provided to members to ensure that companies shipping products to Canada are in

“The Ontario government has introduced the Waste-Free Ontario Act legislation (Bill 151), which, if passed, would implement a new approach to managing resource recovery in Ontario.”

full compliance with the new regulations. There is little chance that the regulations will be amended during the transition period over the next two years, while the U.S. moves forward with its GHS implementation. The details related to this work were provided to members and archived for members' use as needed, given the fact that the paint industry takes great pains to ensure full compliance.

Waste-free Ontario Act and Draft Strategy on Building the Circular Economy

The Ontario government has introduced the Waste-Free Ontario Act legislation (Bill 151), which, if passed, would implement a new approach to managing resource recovery in Ontario. The proposed Draft Strategy for a Waste-Free Ontario: Building a Circular Economy document was also posted in the EBR on November 26, 2015 for a 95-day public review and comment period. Comments were due via the Environmental Registry by February 29, 2016. The Ontario's draft strategy recognizes that the current “produce-use-dispose” model is not sustainable. When implemented, the strategy would move Ontario towards a circular economy—a system where nothing is wasted and valuable materials destined for landfill are put back into the economy without negative effects on the environment.

CPCA is now working on a final submission on this proposed legislation. It seeks to ensure that the legislation focuses on outcomes over prescriptive processes that will further bog down waste reduction in the province.

TDG Regulations: Prospective Plan 2016–17

CPCA has reviewed the public list or description of anticipated regulatory changes or actions, which Transport Canada intends to bring forward or undertake in the 2016–17 timeframe.

This gives businesses and trading partners a greater opportunity to advise on the development of regulations and to plan for the future. Some of the critical areas, for example, include:

- The amendment to Part 8, Reporting in the Proposed Regulations Amending the Transportation of Dangerous Goods Regulations, that will include new security provisions, modify existing reporting requirements, and specify the data to be made available for risk analysis.
- Reporting criteria for the quality of dangerous goods released during transport will change except for the thresholds in certain classes of Packing Group III. The proposed amendment also provides for certain cases where the obligation to make a report does not apply.
- New requirements for the reporting of the loss or theft of dangerous goods. Incidents would need to be reported to the Canadian Transport Emergency Centre (CANUTEC) and, if applicable, to Natural Resources Canada (NRC) and the Canadian Nuclear Safety Commission (CNSC).
- New definition of “release”: The new definition of “release” will capture both accidental releases and voluntary releases. The Transportation of Dangerous Goods (TDG) Act now refers to “anticipated release” for potential releases including, but not restricted to, anticipated releases from means of containment that are stressed or damaged in handling, or in an accident and that will most likely have suffered from structural damage. This amendment proposes to require the reporting of all instances in which a means of containment is damaged such that its integrity is compromised in a way that may lead to a release.

Andicor Specialty Chemicals

Andicor was founded in 2002 on the strengths of its original supplier partners for the Coatings and Ink market in Canada, and has built on that strong foundation by adding complementary product lines that meet the needs of an increasingly demanding marketplace. Now in its 14th year of operation, Andicor continues to offer formulators cost-effective products from world-leading suppliers that improve performance, meet specific regulatory or environmental challenges, and which are available for immediate delivery from local warehouses across Canada.

Andicor's decision to create a separately managed division for packaging products is by all accounts a resounding success. This team of sales professionals is dedicated to promoting BWAY's complete range of steel pails, plastic pails, and tin containers - as well as specialty packaging products from other suppliers - to a variety of industrial markets across Canada.

In 2015, Andicor began distributing Monument Chemical's complete line of performance urethane intermediates. Monument's polyether polyols for non-foam applications are produced in Brandenburg, Kentucky and for 40 years have been proven winners in the CASE market.

Also in 2015, Andicor was pleased to announce a new partnership with Orion Engineered Carbons. Andicor is now the exclusive distribution partner in Canada for Orion's specialty carbon blacks, focusing on advanced and premium products for coatings and polymer systems. Orion Engineered Carbons is an innovative, global producer of high quality carbon blacks focused on collaborative partnerships with customers in rubber and specialty applications.

In 2016 Andicor extended its coverage of the Canadian market for Southeastern Performance Minerals to include Western Canada. SEPM (formerly Georgia Industrial Minerals) operates a state of the art muscovite mica facility in Deepstep, Georgia, based on patents that cover the separation and grinding of this muscovite mica into a variety of high purity, high aspect ratio, low bulk density mica products for paint and coatings, plastics, rubber, adhesives and sealants, and many other applications.

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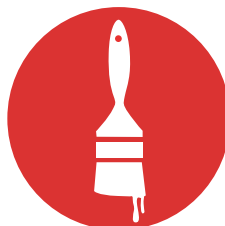
or contact your local Andicor sales representative to learn more about these products and to order samples, or email us at info@andicor.com.

Andicor complies with CACD Responsible Distribution: 2008 Code and is also a member of CPCA (Canadian Paint & Coatings Association), TRFA (Thermoset Resin Formulators Association), and PAC (Packaging Association of Canada).

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CPCA Christmas Lunch

Christmas is now a fading memory – but here are some images of the Canadian Association for Surface Finishing's annual Christmas Lunch. Several dozen members came together to celebrate the season and hear about their association's plans for 2016.



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- Rheology Modifiers
- TiO2 Replacers
- UV Resins and Light Stabilizers
- Waterborne and Solvent Resins

These products are used in industrial, architectural and automotive coatings applications, meeting specific technical and aesthetic needs. With the drive to low VOC and "green" products, Chemroy has resins and additives packages to meet most formulation, performance and cost goals.

The Company is a charter member of Responsible Distribution Canada (formerly the Canadian Association of Chemical Distributors), which is committed to compliance within policies of Responsible Distribution®. Chemroy ensures distributed chemicals are safely delivered in accordance with the highest standards established by the association and governmental laws. Chemroy is ISO 9001:2008 certified.

As a customer-focused distributor with a collaborative approach to the marketplace Chemroy has an engaged and passionate staff. They are always looking to help customers find the right product for their specific application needs, technical goals and cost requirements.

There are warehouses located in Toronto, Montreal and Vancouver in order to service the large customer base quickly and efficiently. Customer Service operations are established in Toronto and Montreal.

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Conn provides low shear blending blades or high shear dispersion blades or complete drive assemblies for processing fluid materials such as paints, adhesives, inks, cements, urethane foams, chemicals, slurries, grouts and more.

The Conn Blades®

Conn and Company recognized the need for blending blades and dispersion blades that provided true pumping action instead of plowing action. The company has brought four patented blades to the market under the trade name Conn Blade®.

The ITT style blade has a combination of louvers and teeth. It is a high pumping high shear dispersion blade and is the most efficient and aggressive dispersion blade available.

The IT style has the louvers providing superior pumping action, but without the teeth. It is a high pumping, low shear, blending blade and is excellent for mixing micro spheres or flakes or other fillers that need to be well mixed, but not destroyed.

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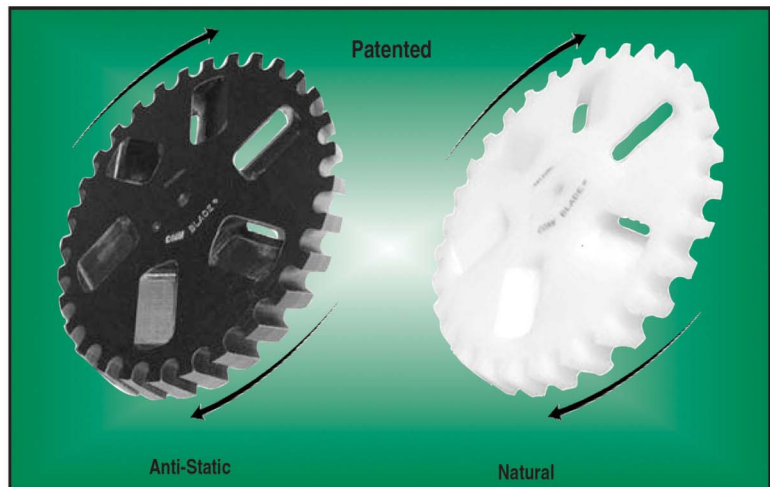
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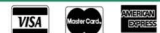
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3





Record-breaking FABTECH

FABTECH 2015 welcomed more than 1,700 exhibiting companies and a total of 43,836 attendees from over 90 countries to Chicago's McCormick Place in November. This, the largest FABTECH to date, had over 730,000 sq ft of exhibits, as well as special events and keynote presentations. The Finishing Pavilion and Conference organized by the Chemical Coaters Association International broke records set the previous year. Filling more than 48,000 net sq ft of space, it featured 199 exhibiting companies. Here's a selection of photos of some of the companies that were exhibiting. The next FABTECH, in Las Vegas, takes place from November 16 to 18, 2016, at the Las Vegas Convention center. And FABTECH Canada takes place at the Toronto Congress Centre from March 22 to 24 2016.



Fabrizio Bello, Manolo Bertuzzi, Grace Hodges, Steve Bosley and Tim Corley, Superfici.



Dale Pranga, Mark Lazarus, Grace Biondi, David Ades, Vanessa Ades, Jeffrey Jouett, and Jerry Schmidt, Protech Powder Coatings.



Brad Sparkman, Innovative Finishing Solutions.

Continued on Page 44

Buckman Canada was established in 1948 as a sales and distribution company providing industrial microbicides for many applications. Buckman has continued to grow with a market-driven strategy that emphasizes meeting the customer's needs both with innovative products and application technology. This also meets today's demanding regulatory and environmental requirements. We focus on solving customer's problems by listening to their issues and responding with measurable, cost effective products and services. Our business units include pulp and paper, water treatment, leather and performance chemicals which, among many other industries, also includes paint and coatings.

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The Flamebloc GS series of fire retardants are clear, water-based and contain little or no VOC designed to meet industry needs for greener, safer fire retardant technology. We also market halogen and non-halogen products for smoke reduction and flame prevention. Our increased focus on fire retardants and smoke suppression have resulted in more diverse offerings in our product portfolio.

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Buckman's coatings and plastics program started in 1951 with Busan 11M1, a fungicide used to control mould on painted surfaces. Since that time our comprehensive product portfolio has grown to include both standard and engineered additives for extra protection of formulated products such as corrosion inhibitors, mould inhibitors, wood preservatives, flash rust inhibitors, UV light stabilizers, dispersants, flocculants, heavy metal precipitants, defoamers and specialty products.

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For more information please visit the Performance Chemicals page of our website Buckman.com

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are formulated to provide outstanding protection for today's natural and synthetic products. Their innovative mix of unique chemistries, including amino functional ammonium polyphosphate, are clear, water-based, and contain little or no VOC. Best of all, they do not require a halogen donor to provide intumescent and char-forming substrate protection. There are many options, too, to help you meet the various standards and specifications required by your industry.

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Extending Color and Effects in Powder Coatings

Specialty powder coatings are entering areas that used to be the sole domain of liquid materials.



Bright and shiny – Sherwin-Williams' Powdura OneCure material used on a horse trailer.

Powder coatings began as substitutes for solvent-based paints. That still remains their primary market function.

However, for some time the technology has been spreading into specialized areas. Improvements in the uniformity of finish of powder coatings, as well as superior mixing techniques and improved application methods, mean a whole range of different effects can now be produced.

Ron McMahon, global market development director for powder coatings with Sherwin-Williams notes that the powder coatings market is expected to grow at a rate of approximately six percent annually through 2019, when it will reach US \$12-billion. Current powder consumption is estimated at 4-billion lb annually.

“Customers desire coatings that can help them differentiate their prod-

uct regarding appearance and performance adding value to their product, yet help them control costs,” he says. “Markets that were served by liquid in the past have adopted powder coatings to achieve this. There are many reasons for this – quality, sustainability, overall performance, faster throughput and cost savings.”

Having high first pass transfer efficiency and high product utilization, he adds, is an important sustainability consideration. Powders with these characteristics are easier to apply, generate less overspray and ultimately produce less waste.

Erie Powder Coatings

Erie Powder Coatings (EPC) has been offering custom and stock powder coatings and manufacturing powder coatings in Niagara since 1994. Erie has built up a strong customer base on both sides of the border and across North America. The company is very flexible, able to manufacture products from 10,000kg or more down to a single box. The addition of the US facility near Erie PA has added a great advantage for Erie's customers, many of which also have operations on both sides of the border, to purchase from both facilities.

The addition 5 years ago of the US facility has allowed the company great flexibility in dealing with customers. While the Canadian facility acts as a manufacturing base and corporate headquarters, the US facility allows local production of coatings to the US market, as well as warehousing and sales functions.

Erie manufactures a wide variety of standard thermoset coatings, including polyester TGIC, TGIC-Free and polyester urethanes, epoxy, hybrid and acrylic hybrid coatings. But custom manufactured powders are our specialty.

Erie offers a strong line of custom manufactured products, built to customers' specifications. The company offers a unique ability to offer small volume custom built orders, while still being competitive on larger volumes, and also offering advanced chemistry's and coatings.

EPC has had a strong offering in some very specialized markets, such as anti-graffiti coatings, SEFA grade coatings and fast cure coatings.

The company offers a very strong and varied line of anti-graffiti products. As with any anti-graffiti product, the key to their use is not that graffiti can't be put onto them. Of course, unwanted graffiti from spray cans or permanent markers can be put just about anywhere on any surface. The key to these AG coatings is whether the graffiti can be cleaned from them without doing damage to the product surface.

Four separate chemistries are available for AG applications from Erie, but the newest and most popular product is the hybrid anti-graffiti product. This product is substantially different from others on the market. Other AG products are expensive, difficult and often contain a number of hazardous ingredients. Erie's hybrid AG products have the distinct advantage of being fast cure but oven stable, and free of TGIC and isocyanate,

which are often used in these products.

Erie Powder offers two lines of SEFA grade products. SEFA (Scientific Equipment and Furniture Association) sets standards for laboratory furniture and cabinets. Erie / EPC has been active in this market and has qualified both epoxy and urethane products that meet or exceed these specifications. While this is a select and niche market, Erie has found this market to be a strong one.

Fast cure product lines are also a specialty that Erie excels in. One of the primary reasons for this is the type of equipment that Erie uses - specialty Swiss made plastics extruders that are better at producing low-cure temperature coatings than other types of extruders.

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“Powder with a broad particle size distribution often lowers transfer efficiency and requires higher average film coverage on complex parts. And that means you’ll actually need more pounds of powder to coat parts..”

“That may mean we sell less powder – but if it means our customer succeeds and we’ve helped them reduce coatings issues, it’s a win-win situation.”

Customers also want a wider range of colors, reduced lead times and greater access to stock colors. To meet these demands, he says, Sherwin-Williams offers 76 standard high-gloss colors with a policy that promises delivery within two business days from the initial order – or the powder coating is free. It also maintains an inventory of a range of black and white powder in various textures and glosses available for immediate delivery.

“In terms of special effects, we have seen demand from customers who seek differentiation,” he observes. “We offer powders with a rough-textured sand effect; a river texture that provides a wrinkly swirl; or a spice effect, which may be described as a salt-and-pepper look. This is achieved in how the powder is mixed, with two or more colors to provide the appearance.

“Numerous metallic and flamboyant powder coatings are available for that ultimate ‘stand out’ look.”

Since all powder coatings are not the same, basing a purchase decision only on price per pound and specific gravity ignores key performance and process standards such as the coating’s durability, UV resistance, uniformity of particle size, or whether the powder coating contains fillers or off-specification resins. It also removes the batch-to-batch consistency out of the purchase decision.

“That’s a mistake,” McMahon says, “because it’s an important consideration in maintaining overall finished goods quality. Powder with a broad particle size distribution often lowers transfer efficiency and requires higher average film coverage on complex parts. And that means you’ll

actually need more pounds of powder to coat parts.”

Determining transfer efficiency can be tricky, as it really depends on the part that’s being coated. One way of understanding it, he notes, is to determine current transfer efficiency and the applied cost basis – not just the powder cost. The applied product cost and overall performance at the prescribed film thickness gives a finisher the real cost, and helps them make product choices in an informed manner.

“Lower temperature curing powder coatings for engineered wood, composites and fabricated components are new avenues for powder coating,” he says. “A number of resin suppliers are active in developing lower temperature and faster curing resins.

At the 2015 Powder Coating show, Sherwin-Williams introduced PowderOneCure, a two-layer, single cure dry-on-dry coating that can help general finishers and heavy equipment finishers eliminate steps in the coating process, saving them both time and money. This is a mono-bake system that improves upon the conventional single coat, two-bake system of powder primer and topcoat. It helps customer improve quality, workflow and increases production – and it reduces energy use, labor and maintenance costs.

“It also reduces equipment needs and can result in a smaller footprint for a finishing line,” McMahon says “And it offers improved edge coverage and better corrosion resistance than traditional two-bake powder coating processes.”

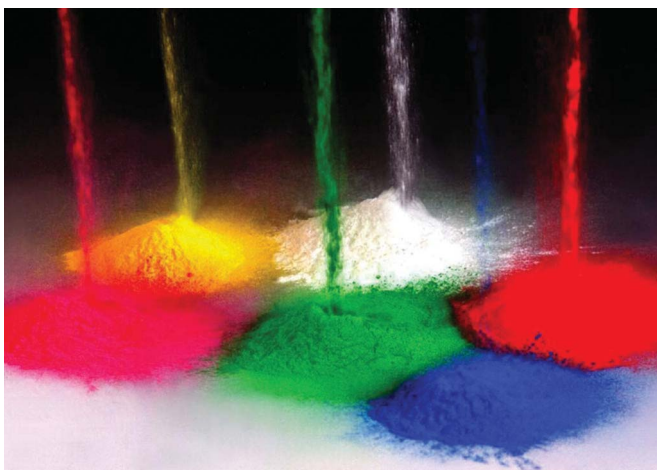
Last year, PPG Industries introduced Envirocron HTE (high-transfer efficiency) powder coatings, which feature a proprietary bisphenol A-free polyester formulation.

Shelley Verdun, PPG powder product manager, industrial coatings, says this has a faster application build rate than traditional polyester coatings, while providing more uniform coverage on complex parts and surfaces and reducing material waste.

“This product is unique among powder coatings because it enables applicators to achieve higher transfer-efficiency rates based on product chemistry rather than the application method, equipment or skill of the operator,” she explained. “Not only does that have the potential to improve the quality of the coating, it also can offer applicators a greater degree of control over cost and quality in their production processes.”

This coating is engineered with an exclusive cross-link polymer that enables it to penetrate and apply evenly to metal parts and product assemblies with recessed cavities; odd shapes; and open, uneven or geometrically-complex surfaces such as refrigerator racks, patio tables, architectural components and other finished goods.

Verdun adds that it can achieve first-pass transfer rates of 85 percent and better. This makes it ideal for spray-to-waste coatings applicators that want to reduce product loss.



The range of color and effects available in today’s powder coatings is broad.

“We offer powders with a rough-textured sand effect; a river texture that provides a wrinkly swirl; or a spice effect, which may be described as a salt-and-pepper look. This is achieved in how the powder is mixed, with two or more colors to provide the appearance.”

It cures in 10 minutes at 350 deg. F, and it is available in a standard formulation to meet American Architectural Manufacturers Association (AAMA) 2603 specifications, as well as in an ultra-durable version to achieve the AAMA 2604 standard. PPG also manufactures the coating in a wide range of colors and gloss ranges.

BASF recently launched two specialty shades in its Firemist range

“Firemist Velvet Gold is a gold that is elegant and unobtrusive at the same time,” says Arno Tuchbreiter, head of pigment marketing for industrial and decorative coatings at BASF. “Firemist Velvet Russet is a bold reddish brown with the shine of metal.”

Both color shades complete the Firemist Velvet series, which also includes pearl (white), bronze and copper pigments. This product family offers manufacturers of decorative interior paints unique and warm design options, with an aged effect and an attractive textured surface. Further fields of application are printing inks for high-quality wallpaper and classy designer packaging.

“The appeal of the effect pigments of the Firemist Velvet range lies in

their unique, novel effect,” Tuchbreiter says. “When exposed to indirect lighting they appear elegant and matte, whilst direct lighting produces a gently sparkling effect. In addition, their velvety haptics create a comfortable, warm atmosphere.

“Warm colors with a metallic shine are full on trend especially when it comes to interiors. This means that the Firemist Velvet products are the ideal solution for high-quality applications, and when combined with other effect pigments they offer a wide range of elegant, antique looks.

“Special design accents lighten up prestigious rooms as well as our own four walls.”

Painters who use interior paint that is based on these effect pigments, can, he adds, apply it directly onto concrete, wallpaper, and wooden surfaces. The effect pigments of the Firemist Velvet range can also be used for the production of printing ink for striking, sophisticated designer packaging – for example for cosmetics or wrapping paper and boxes. Further fields of application are high-end wallpaper as well as surface coatings for metal and plastic. ■



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Powder Spray Systems

Powder coating spray units continue to evolve. Partly this is from improvements in the powder coatings themselves, and partly from ingenious ways of taking advantage of this with more efficient pumping and control systems.

Nordson Corp. launched its newest manual powder coating system – the Encore HD mobile spray system – at Fabtech 2015, in Chicago. This system features Nordson's fourth generation dense phase spray technology.

High-density, low-velocity products are designed for superior process control. This allows the Encore HD mobile system to achieve a highly dense phase spray, a more diluted mixture, or anything in between.

"Nordson customers are realizing the real benefits behind HD technology," said Kelly Gregart, product line manager, Nordson powder coating systems. "Compared to traditional venturi systems, the Encore HD mobile system gives you the best process control and lowest operating costs. It's a truly innovative system."

There are over 20 patents on Nordson HDLV equipment, and more than 800 global HD installations. The technology has been in use for about a decade.

The Encore HD Mobile Spray System achieves the benefits of dense phase powder spray technology in a mobile unit. The company is claiming it can cut color change time by 50 percent, and is capable of saving 45 percent in powder material.

In addition, line speeds can reportedly increase up to 65 percent, and the Encore HD units can apply more powder where needed, lowering the system's total gun requirements. The units provide relief to the operator because there need be fewer painted strokes, and quality improvements can reach 20 percent.

The system's high density, low velocity technology delivers a high concentration of powder, using less air. The results provide greater transfer efficiency, less overspray and superior cured finish quality for all types of parts.

A VBF hopper is used instead of the more typical venturi system. A wall or rail mount is available, which can marry well with a robot system.

Another new unit on the market is the latest OptiSpray system from



The HD dolly for powder coating from Nordson.

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Gema's OptiSpray.

der coating hand-held guns. These use Pulse Power II, the company's advanced corona charging technology, which enables coaters to more readily apply powder in difficult Faraday cage areas across a variety of applications.

Developed from the original Pulse Power technology, Pulse Power II provides constant gun current even if the distance between the gun and part varies. The result is improved corner penetration, ease in re-coating or base and top-coat combinations, smoother coating films, and uniform film thickness.

Parker Ionics' new digital control system allows for gun voltage, current output, and air flow to be changed independently. The GX385 control system can memorize up to 250 coating recipes for quick transitions between different part styles.

GX8500 series unit configurations include fluidizing hoppers, (of 2L, 30L and 60L capacity), box feeding and cup stands. Adjustable fan and diffuser nozzles are standard. Options include low velocity 'K' style fan nozzles, flexible conductive hoses and extensions up to one meter in length.

KCI America's most recent introduction for spray powder coating is the KCI 300. This features four pre-programmed control options. The company said it offers ease of coating with a variety of parts.

In complex mode, it adjusts the voltage while holding current, when coating complicated shapes and corners. Recoat mode also adjusts the voltage and current automatically, for recoating of parts.

Pulse mode rapidly recharges the powder to coat complex shapes. And flat mode maximizes voltage for superior transfer efficiency in coating of flat parts.

The gun weighs just 470 gm, which is claimed to be less than competitors' units. Input voltage is 110 VAC, and output voltage is 24 VDC.

Air pressure is six to eight bar. Powder output is 550 gm per minute.

And from EXEL North America Inc. comes the Sames e-jet 2 system, which features the GNM 60680 control system. The hand-held eJet2-VT system is the unit recommended for where there are frequent color changes, and the hopper-fed eJet2 R is suited to medium and large production situations.

The hand-held gun weighs 23 oz., and is 12 in long. It can handle powder flow up to 53 lb/hr. The system comes with a wide selection of round and fan spray nozzles.

The gun has a number of features to enhance its economics compared to previous designs. There is a soft grip that adapts to the painter's hand, and the powder hose permits rotation and has a quick release coupling, permitting reduced precise gestures and reducing fatigue.



From EXEL North America Inc., Sames e-jet 2 system.

Gema. The aim behind this, according to marketing director Jeff Hale, is to manage the powder materials to get more efficiency in how they are applied.

"We have integrated the pump and the hopper into a system that automatically cleans the powder path," he said. "And we now have a smaller version for people who want to upgrade incrementally."

Powder in the OptiSpray is stored in the main fluidizing hopper. The system features automated purging, and cleaning, Hale said, is very easy and quiet. A bigger version of OptiSpray has a sealed hopper, allowing automatic purging.

"The pump is an innovation in the dense phase powder delivery process," Hale added. "It uses the airflow to pull and push the powder through. You have air to pull, and air to push."

"You just have to cycle the pinch-valves, and flow-through occurs in one third of a second. If needed, the pump can be right next to the hopper."

Locating the pump here offers an unusual degree of flexibility for production line layout. The system does automated purging, and cleaning is very easy and quiet.

Parker Ionics has had success recently with its GX8500 series of pow-

EXEL North America, Inc.

EXEL North America, Inc. manufactures Kremlin Rexson, & SAMES brand products: Automatic and Manual Paint Spray Guns, Rotary Electrostatic Bell Atomizers, Fluid Dispense & Mixing Systems, Turnkey Automotive Robotic Systems, and Turnkey General Industrial Systems.

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Sames Ejet.



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The same company's E series features a total energy control system (TEC), which automatically limits the current in function of the target distance. It therefore continuously provides optimal electrostatic efficiency, regardless of external circumstances.

The E series has two pre-arranged settings, called TEC 1 and TEC 2. TEC 1 adjusts voltage to 85 kV, and current to 50 microAmps.

It has broad application, and works with most commercially available powders. The company said it provides excellent electrostatic efficiency, and high-quality re-coating.

The TEC 2 adjust the maximum current to 100 microAmps, and is recommended for spraying of difficult powders, metallics in particular. It is used for penetration into hollow recesses, and generates, the company said, exceptional wrap.

Lastly, the Sames Mach-Jet uses the recently introduced Mach-Jet gun, which is driven by the CRN 457 control module, and mounts on the EJet hopper.

It features a high-voltage cascade, and a hail-effect trigger. A fast cleaning, purging modification helps purge the pump, hose and gun quickly.

In sum, there's always room for improvement with this technology. And, there are always improvements coming to the market to watch out for. ■



GX8500-Manual Powder Coating Hand Gun.



The Sames Nanogun from Exel.

ECE Canada Ltd., a Canadian pioneer in finishing equipment distribution, was founded in 1982 to distribute electrostatic coating equipment and associated products. Recently acquired by its own management, ECE continues to expand its product offering and capabilities to all aspects of finishing. It prides itself on top quality sales and service to the automotive industry, tier one suppliers and general industrial sectors. Its technical application specialists, located across Canada, have years of experience in many different facets of finishing, including metal, wood, plastic, rubber and fibreglass. Working closely with coating manufacturers ensures good synergy between application equipment and coatings.

ECE designs and installs numerous coating application systems including electrostatic guns and bells, conventional spray technologies, robotic applicator cleaners, 1K and 2K fluid metering and control, 1K and 2K gear pump delivery systems, reciprocators and gun movers, liquid and powder spray booths, air make-up units, paint kitchens, ground checking systems, batch and infra-red ovens. Companies we represent are world leaders in innovation and technology, from hand-held conventional and electrostatic hand guns to automatic and robotic applicators for both liquid and powder.

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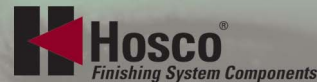
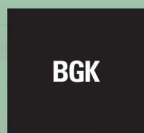
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ECE is headquartered in Mississauga, ON, with branches in Montreal, Vancouver and Saskatoon. We are committed to providing customers with outstanding sales and service.

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Pacific Spray Booths offers a wide range of products, from simple open-face booths to powder coating booths to sophisticated double-wall insulated booths with multiple cycles for large production shops, as well as blast booths that can even recycle your media.

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Pacific Spray Booths started in the spring of 2000 knowing that good business is about offering great products, technical expertise and more importantly, strong relationships based on listening and learning what their customers want, and delivering both value and what was promised.

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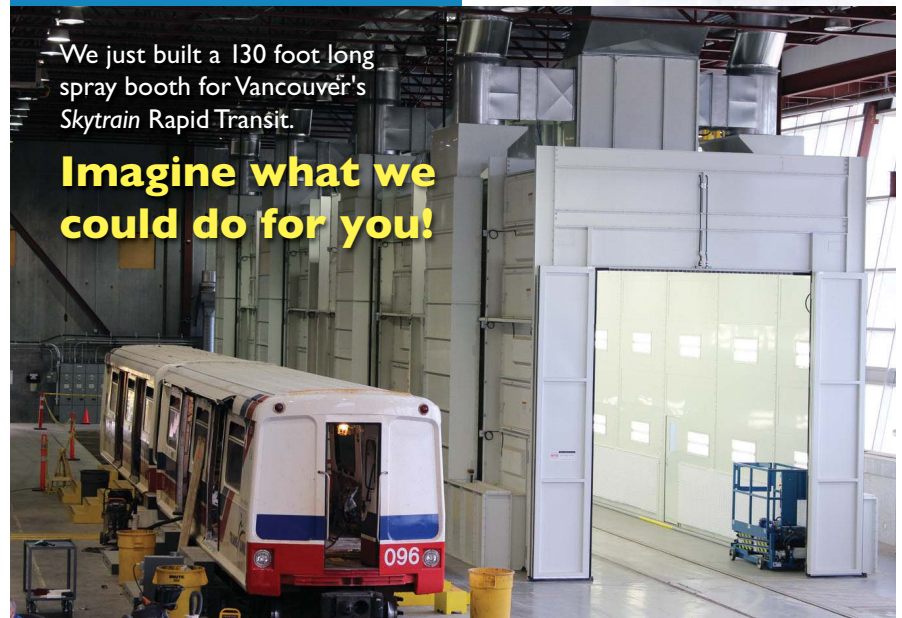
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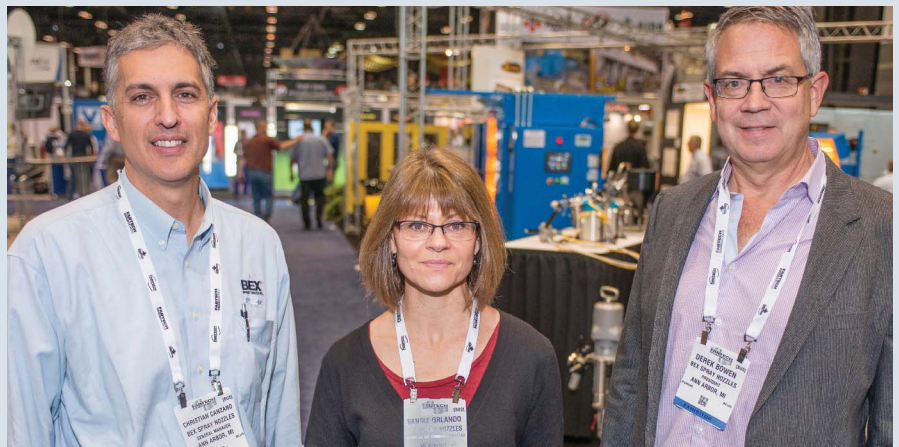
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Since 1966, Echo has been providing world class companies with both standard and custom masking, hanging, OEM components and assemblies, as well as protection products. We have an extensive selection of materials available that meet various performance requirements. Our operations include multiple stocking locations, in-house converting, and extensive molding capabilities. These specialized operations – coupled with our team's design expertise, engineering ingenuity, and product development experience – guarantees that you receive fast, innovative, cost effective solutions that make sense for your business.

At Echo, we take the time to get to know our customers – to understand their processes and integrate ourselves into their business practices. We build true relationships and are able to provide value-added solutions to our customers time and time again. We are passionate about providing peace of mind to our partners, and in return they have rewarded us with a 97% retention rate.

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allowed us to provide OEM solutions that improve product reliability, shorten time-to-market cycles, reduce warranty costs, and provide better all-around products.

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We want to change your expectations – we are problem solvers, team players and outside-of-the-box thinkers. That's why we take the time to understand your business and make recommendations to provide the best solutions. We care about your business as much as you do. You can expect that...because that's The Echo Way.

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Christian Aorte, David Lessard and Guillaume Rimbault, Sunkiss Matherm Radiation.



Jeff Myhal and Greg Martin, Aecon, Cambridge ON.



Greg Taylor and Mike Thies, Gema.



William Diaz, Amiberica Inc. and Dave Freeman, ProQuip Consultants.



Tom Dicillo and Ryan Schlinke, Custom Fabricating & Supplies.



Ryan Watt, Duroair Technologies.



Lucy Lu and Jason Jiang, Prona Tools.

ElektroPhysik is a leading manufacturer of coating thickness measuring instruments used for advancing surface technology, research and quality control.

ElektroPhysik maintains a branch office in the U.S.A. and is represented by a global network of distributors and agents. It is this network and partnerships that enable ElektroPhysik to provide the service and support required in today's competitive global marketplace.

In addition, the company is the exclusive North American Agent for Sheen Instruments of England, an Elektron Technology Ltd. company. Sheen Instruments is a well respected manufacturer of viscosity testing products and devices, film application products, gloss and opacity testing devices and physical testing devices according to ASTM and International Standards.

To better serve the North American markets, ElektroPhysik maintains a North American website:

www.ElektroPhysikUSA.com.

ElektroPhysik is well known for the MikroTest coating thickness gauges utilizing the magnetic attraction principle. This gauge has been called the 'banana gauge' because of its shape and is strictly for non-magnetic coatings applied over steel. Other brands include the MiniTest, QuintSonic, and GalvanoTest which are electronic platforms for measuring coatings over both ferrous and non-ferrous substrates.

ElektroPhysik prides itself on sensor technology. The latest development in that area is the development of SIDSP®, an ElektroPhysik exclusive which took years of research and development to master. SIDSP® stands for Sensor Integrated Digital Signal Processing.

The way that works is that the entire coating thickness measurement is processed in the sensor itself at the point of measurement. SIDSP® is unlike

conventional techniques where an analog signal is generated by the probe and then sent to a host gauge for processing. That analog signal is susceptible to environmental influences such as strong electro-magnetic fields and other disturbances that could affect the signal and therefore the reading. ElektroPhysik's SIDSP® Sensor platform eliminates that.

ElektroPhysik just introduced the new SmarTest platform of sensors and SmarTest App (available at Google Play Store). This platform combines ElektroPhysik's new wireless SmarTest digital SIDSP® sensors and takes coating thickness testing to a whole new level.

Using Bluetooth connectivity, ElektroPhysik's SIDSP® Digital Sensors send readings as you take them directly to your Smartphone or Tablet. Those readings are stored on the SmarTest App along with statistical data and can be easily emailed as an attachment from your smart device.

The future for ElektroPhysik holds many challenges driven by globalization and increasing demands in the marketplace, but there is no doubt ElektroPhysik will be able to stand up to these challenges as it always has. Driven by the passion for the pursuit of new technologies and commitment to implementing them where ever possible, the new SmarTest is another clear example of that passion and commitment!

ElektroPhysik ... advancing with technology.

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The SmarTest does not consume data from data plans !
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User selectable units of measure, mils or microns



ElektroPhysik SmarTest		
Reading list		
	Ferrous	Non-Ferrous All
12	2.660	mils Ferr
11	2.675	mils Ferr
10	2.645	mils Ferr
9	2.655	mils Ferr
8	2.655	mils Ferr
7	2.620	mils Ferr
6	2.640	mils Ferr
5	2.645	mils Ferr
4	2.640	mils Ferr
3	2.645	mils Ferr
2	2.660	mils Ferr
1	2.620	mils Ferr
X	2.6477	mils
σ	0.0149	mils
n	20	

Conforms to ASTM D7091

FABTECH 2015



Fred Steltman, Pacific Spray Booths Vancouver BC.



Al Moon, Guspro.



Stuart Marlee and Colin Berry, Caldán Conveyor.



Ashley Louth, Dick Dooley and Bruce Bryan, Mighty Hook.



Samantha Wilkins and Drew Jones, Dinamec Systems.



John Sorbera and Peter Vanin, R&G Tool, Scarborough ON.



Scott Boshart and Warren Borg, Valley Powdercoat Abbotsford BC.



Aivars Freidenfelds and Dennis Houswart, ElektroPhysik.

Therma-Tron-X, Inc. designs, fabricates, and installs innovative, custom paint finishing systems for hundreds of contract shop coaters and OEM's. TTX offers turn-key services including multi-stage pretreatment equipment using spray, immersion or a combination; industrial ovens fitting desired spatial needs and utility requirements; environmental rooms offering ideal powder paint application conditions; liquid spray booths balancing air-flow and minimizing overspray; and material handling solutions designed to fit individual needs. TTX Environmental develops water and wastewater treatment systems that minimize operational costs and environmental impact from industrial processes. From start to finish, TTX will automate every step and integrate the finishing system with the facility.

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Cleaning Up Your **ACT**

Paint stripping is an increasingly varied and innovative field.



A long-serving Guspro pyrolysis oven.

Everyone in the business has their own philosophy for paint stripping. Sometimes, the choice of methods comes down simply to continuing with what a plant installed years ago, versus the cost of changing to all-new technology. But as new engineering and chemistries come into the picture, so the field is evolving.

The three primary methods today are: chemical stripping; burn-off ovens, electrical or gas-fired; and fluidized beds. The second two are always the subject of efforts to increase efficiency and reduce energy usage, while the first is an area where different cleaning agents, either acid or alkaline, are coming into play.

DuBois Chemicals has recently commercialized a new acidic stripper, STRYPP 8641, for removing modern finishes from parts, hooks and masking plugs. According to marketing manager Bruce Dunham, "Early feedback from customers is validating the results proven in laboratory conditions. This new technology compliments DuBois range of conven-

tional alkaline paint stripping products."

The new product was developed by DuBois chemist Dr. David Chalk. DuBois' chemical paint stripping line complements that of American Finishing Resources' (AFR), which provides coating removal services, hooks, racks, and carts. AFR is a recent purchase by DuBois Chemicals.

Chemetall offers a substantial range of stripping chemistries, and backs up its products with laboratory facilities in five locations around the world. Its Gardostrip product line, for example, offers a variety of processes such as non-methylene chloride, N-Methyl-2-Pyrrolidone-free, alkaline, thickened, and solvent-based paint stripper technologies.

"The three primary methods today are: chemical stripping; burn-off ovens, electrical or gas-fired; and fluidized beds. The second two are always the subject of efforts to increase efficiency and reduce energy usage, while the first is an area where different cleaning agents, either acid or alkaline, are coming into play."

Production Paint Stripping

PPS opened for business in September of 1991 at 11 A McLachlan Drive in Etobicoke to provide paint stripping services to custom coaters with quality rejects from their paint lines. A smaller part of PPS' plan was to provide Plastic Media Blasting services to the aircraft industry to strip incorrectly painted parts, but also to remove paint from landing gear for crack inspection. The concept was that the custom coater wouldn't want to be bothered with stripping parts and the aircraft parts manufacturers wouldn't want the mess and high-dollar staff involved in paint stripping.

Although the game plan didn't really pan out, as the variation in reject occurrences from custom coaters was too variable to consistently cover overhead and allow for the planning of appropriate staffing levels, there was some luck in PPS' timing. Automotive assembly plants were starting to distance themselves from the environmental issues associated with tool cleaning that are required by paint shops, and also, the concept of 'outsourcing non-core processes' started to become important in the automotive industry.

PPS, now in its 25th year, occupies all of 11 McLachlan Drive, totaling over 26 thousand square feet and exceeds \$4million in sales to those custom coaters, aircraft parts manufacturers, automobile assembly plants, tier 1 and 2 parts manufacturers and other manufacturers who operate paint lines. Ven-

turing into a variety of additional paint department products and services, maintaining tractor trailers for dependable transportation service and cost, is all part of PPS' evolving presence in the paint stripping and metal cleaning sector of Southern Ontario.

Going forward, along with partnering with paint booth products companies to

provide booth coatings/cleaners, rack change-out services, robot covers, and paint rack/jig repair services, we simply want to expand. The most enjoyable part of the business for the principals in the past year has been the forging and fostering of partnerships with like-minded suppliers, customers and even competitors.



Providing Paint Stripping Services for 25 Years

- Stripping paint from multi-metal substrates, with a specialty in aluminum
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- Using all commercially viable processes including:
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 - caustic stripping
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 - steel grit blasting
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“Normally, stripping agents are highly caustic. But if you have too much caustic, you could damage the part you are stripping, so you always have use sound judgement in choosing the product or the formulation you use.”

The company stresses that application-specific formulations, rather than simple single-chemistry products, are a key part of its market strategy. Gardostrip formulations remove residues from a variety of metal substrates including steel, galvanized steel and aluminum, while the Ardrex range is specifically designed for the aerospace industry

ChemQuest is another supplier of chemical stripping products. Company president Dave Scharphorn says a major advantage of chemical methods is that in general, the equipment needed is much less expensive than that for other approaches.

“With chemicals, you can just buy the amount of chemical you need, when you need it,” he points out. “Now, the other systems have virtually no waste to dispose of, so you have to figure out the best approach for your plant.

“Normally, stripping agents are highly caustic. But if you have too much caustic, you could damage the part you are stripping, so you always have use sound judgement in choosing the product or the formulation you use.”

One of the newer chemical processes is from Powderstrip, a division of Express Chem, of St. Louis, MO. The company was offering its system, which is available in liquid or paste form, at November’s Fabtech show in Chicago. Formulated with methylene chloride, and developed for the powder coating market, it has been available for three years.

“It doesn’t use hydrofluoric acid,” explained brand manager Matt Oppermann. “It can be rinsed off, without bring your skin, which hydrofluoric can’t. Mixing it with water neutralises it, and it can be re-used.”

Some companies, he added, are using it as a secondary process, following a prior cleaning stage. The paste version is for horizontal surfaces or big parts, while the liquid is used in tanks.

“The only size limit with it is the size of your tank,” he said. “The paste can be brushed on or sprayed, without any need to dilute it.”

Various styles of burn-off ovens offer a widely accepted alternative to chemical methods. Pollution Control Products Co. was a significant pioneer in use of pyrolysis for cleaning metal parts of paint and other organics.

The company, launched by Peyton Simpson in the early 1970s, was addressing the then-new need to eliminate toxic emissions from more traditional methods. His first customer was burning kerosene to remove accumulations from metal parts.

Simpson’s design included an afterburner where complex substances could be broken down into simple and virtually innocuous compounds. before being discharged from the exhaust stacks. Pollution Control says it now has more than 8,000 installations in 43 countries, though of course not all these are used by painting shops or coating operations.

The ovens have a patented system that anticipates and prevents overheating, plus a highly

The history of “pyrolysis cleaning” is the history of Pollution Control Products Co. The company’s founder, Peyton Simpson, designed his first “pyrolysis” cleaning oven to help a neighboring business comply with the Clean Air Act of 1970. The neighboring business was a rebuilder of electric motors. Their manufacturing process required that old motors must first be cleaned thoroughly: its copper wire coil and all varnish, epoxy, paint and insulation removed. Prior to today’s stringent environmental laws, this was often done by soaking the motor parts in kerosene and “burning off” the organic material in a pit or metal container resulting in a thick black smoke which polluted our skies with unhealthy toxins. In 1970 this was now illegal. Other remedies weren’t much better: removing material by hand was slow, expensive, often damaging to parts and physically unsafe for workers because of acids and other dangerous cleaning agents required.

Young Peyton Simpson helped his neighbor with the development of his patented Controlled Pyrolysis® Cleaning Oven. His process cleans parts by using heat to decompose organic material into vapors and pyrolysis gases. These gases (smoke) were then drawn through an afterburner where harmful emissions and contaminants were burned and completely eliminated before being discharged out the exhaust stack. His new cleaning was safe, effective and pollution-free, and, a hit with his neighbor. And it wasn’t long before other rebuilders were knocking on his door and Pollution Control Products Co. was born.



Fluidized bed from Kolene.



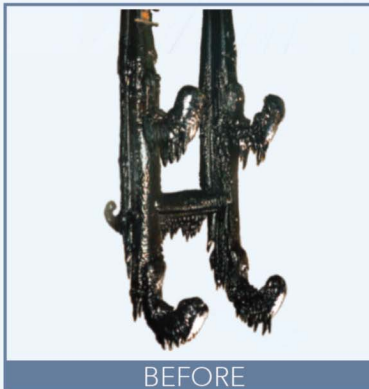


Peyton and his new company quickly adapted their “burn off” ovens for other industries: paint and powder coating operations needed a safe, fast and efficient way to keep their painting hooks and racks pristine in order to maintain product quality and profitability. Most powder coating today is done through an electrostatic coating process. The powder is charged negatively when it comes out of the application sprayer, and the part being coated is charged positively, thus ensuring a good bond and reducing the amount of powder required to coat the part. Ultimately paint and powder coating buildup on hooks and racks reduces the electrical contact resulting in improper coating and wasted powder coating. Not only must the hooks be cleaned regularly, the painted parts may need to be stripped of old paint or powder coating so they can be recoated properly. Pollution Control Cleaning Ovens are now an industry standard with paint and powder coaters.

45 years after that first cleaning oven, Pollution Control “burn-off” ovens cover the entire field of thermal cleaning and parts reclamation with more than 8,000 installations in 43 countries around the world. Recognized as the industry leader, they are in use in over 800 industrial classifications, including paint and powder operations in scores of industries, automotive engine and parts rebuilders, precious metal extraction, oil and gas producers, plastics, fiber and chemical manufacturers and branches of the U.S. Military.



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Recognized as the industry leader in thermal stripping and parts reclamation, PCPC Cleaning Ovens safely remove paints, epoxies, powder coating, and other combustibles from paint hangers, racks, hooks and other metal parts.

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POLLUTION CONTROL PRODUCTS CO.
Controlled Pyrolysis® Burn Off Ovens

“Normally, stripping agents are highly caustic. But if you have too much caustic, you could damage the part you are stripping, so you always have to use sound judgement in choosing the product or the formulation you use.”

sensitive control system for added protection and operational flexibility. These furnaces can remove the same combustible materials as dry cleaner models, but in greater quantities ranging from two percent to 15 percent by weight.

There are primary and back backup water spray features with multiple built-in safety features. Located in the afterburner stack, this spray system monitors the rate of smoke emission from the parts by measuring the stack temperature. When the stack temperature reaches a preset point, the stack controller turns on a water spray mist to cool the parts, lowering the smoke emission rate before it reaches an ignition state.

The water spray also activates if the oven temperature exceeds its set-point temperature by 30 deg F. A backup water spray activates should the water spray nozzles become clogged or malfunction in anyway. Additionally, a manual-reset high-limit temperature controller turns off the primary burner if the oven temperature controller should fail.

Guspro is a well-known name in the Canadian marketplace, whose Bayco division provides controlled pyrolysis ovens. The company's Alan Moon says the process ensures heat flows evenly throughout the load in the oven to bring it to the correct burn-off temperature.

“Temperatures are accurately controlled to prevent over-heating using microprocessor-based digital controllers and redundant over-temperature safeties,” he says. “Heat rises naturally, and our bottom firebox design ensures even heat distribution throughout the load and an efficient cleaning process.”

Steelman Industries' burn-off ovens include a patented venture diffuser technology, used to distribute heat in the oven and reduce the temperature of hot gas entering the oven, ensuring valuable parts will not be overheated. Also, smoke produced in the oven burns in the diffuser to produce free heat for higher efficiency.

The company's Automatic Process Control (APC) system provides fast cycle time while protecting the product, operator and the workplace. It automatically adjusts the cycle to the weight of the load and the amount of combustible material on the parts.

Digital temperature controllers are programmed to respond to the rate of temperature change in both the oven and the afterburner. Rapid temperature changes are caused by exotherms and excessive combustible vapor levels, so the controllers activate primary water sprays to control the process at a safe rate. Large backup sprays are activated within seconds if the primary sprays are not adequate.

Pollution Control products pyrolysis oven.



In the event that primary and backup water sprays are unable to control a rapid temperature rise, the oven burner will shut down, the afterburner will stay on, and the water sprays continue to operate. If there is an afterburner failure, or if there is a momentary power failure, then water sprays are also activated to cool the oven down. This will prevent smoke emissions from the stack.

Kolene Corp. has added fluidized beds for hooks and racks to its product lineup.

Speaking at Fabtech in November, Dennis McCardle, vice-president, sales and technical service, said that previously, the company was more focused on chemical processes.

“Not everyone could afford our equipment, and waste treatment system,” he noted, “but operating costs for a fluidized bed are much less than chemical. We think this will allow us into some smaller companies we couldn't get to before, because of the operational costs.”

Called Scirocco, from the dry desert wind of the same name, the process uses the stripped-off coatings materials as a fuel source to help heat the sand bed. Cleaning cycles run from 30 to 60 minutes, depending on coating type and thickness, and the components' weight.

As further alternatives, Kolene also offers a molten salt bath and controlled pyrolysis ovens. The company cites its cost/energy savings improvements as its most important technical refinements in recent years, especially through its recuperative burners.

Dimamec Systems, which distributes Schwing technology in North America, now offers three different designs of its Fluid Clean system. This fluidized bed method is customized to a company's specific needs, and is offered in a range of standard sizes.

The fluidized bed heats quickly and uniformly, and a pilot burner above the surface of the bubbling sand ignites the gas-air mixture so that the flame spreads across the whole surface of the bed. The parts to be cleaned have already been placed in the bed in a metal basket.

The bonded organic substances become gasified, and these process gases rise through the fluidized bed and are directly burned by a flame-shield. Inorganic particles are also removed from the metal parts by the slight movement of the sand, and are carried along with the stream of flue gas, then separated via a cyclone battery or ceramic filter.

The range available for stripping, then, is broad and getting broader. While there is no perfect process, with ultra-low energy consumption and no noxious waste to dispose of, the ingenuity of the suppliers continues to improve the options available for the industry. ■



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PPS Builds Its Niche



A burn-off oven at PPS.

Chris Hughes in the PPS plant, next to a piece of aircraft landing gear waiting to be stripped, so it can be inspected for cracks.

While every paint shop needs stripping work done at times, not all of them enjoy the business of performing it. There are clean-up and airborne emissions problems to manage (both inside and outside of the plant), and there's a degree of simple messiness to the process that makes it an unwelcome factor in a paint shop.

PPS Ltd. (Etobicoke, ON) is one of a relatively small number of specialty firms in Canada that handles stripping of paint and coatings as its core business. Begun by three partners in 1991 – Stuart Jackson and his son Clay, and the current president, Chris Hughes – it has made itself into one of the go-to firms for cleaning of racks, hangers and certain metal parts in the quarter-century it's been in business.

"We do several processes," Hughes says. "We offer chemical methods for paint stripping of steel and aluminum, thermal burn-off, and we use plastic media and grit blasting as well. So, we can tackle pretty much anything in the paint stripping field."

The company's original game-plan, like that of many start-ups, adapted over time. Initially, it employed plastic media for aircraft parts stripping and mould cleaning. PPS purchased its plastic media from Composition Materials Co. Inc. (Milford, CT), but then became a distributor of the media, as it still is today. Back in the day, this also helped the start-up with cash flow.

Its intention, though, was to offer chemical and blast cleaning as its sole cleaning processes, offering its service to custom coaters with quality rejects from their paint lines.

A secondary part of the business plan was to provide a plastic media blasting service to the aircraft industry. It would strip incorrectly painted parts, and also remove paint from landing gear for crack inspection. The notion was that custom coaters wouldn't want to bother stripping parts, nor would aircraft parts manufacturers want the mess and cost involved in paint stripping.

The flaw in this was that occurrences of rejects turned out to be highly variable. What helped the company over this issue was a growing trend in automotive assembly plants wanting to step away from the environmental issues associated with tool cleaning. Combined with a general trend to out-source non-core processes, this

ensured PPS had a niche it could exploit.

"In 2005 the business changed a little when one of our customers went bankrupt," Hughes says. "As part of the final settlement, we took a burn-off oven he had, and added that process to our business offering."

Having a thermal process available proved a boon, opening up new opportunities. PPS now has four ovens on site, with a fifth coming soon. Three of the ovens are by Jackson Oven Supply Inc. (Jackson, MI), with the new one coming from Guspro Inc. (Chatham, ON).

Thermal processes today come close to being a third of the company's business. Its other processes include different chemical stripping methods for aluminum and steel, grit blasting and plastic media blasting.

"Today, about 80 percent of our \$4-million in sales is from automotive," Hughes says. "That includes both assembly plants and Tier One and Tier Two parts makers. About five percent is from the aircraft industry, with the rest of it from across the board."

The firm started in one unit of the building it now occupies on a street in Etobicoke, near Toronto's Pearson International Airport, but today uses all of the 26,000 sq ft of the structure. It operates its own small fleet of tractor trailers, which gives it control over the drivers and maintenance of the vehicles providing precise and dependable deliveries.

The company has 35 employees, working three shifts. Round-the-clock operation is necessary, because the thermal processes can run for six to eight hours at a time before the ovens can be emptied.

For the future, Hughes says the company is considering expansion, but is still deciding how to go about this. He is confident, however, that PPS has an evolving role in the paint stripping and metal cleaning sector in southern Ontario.

"We're partnering now with paint booth products companies, customers and even competitors," he says, "to provide booth coatings and cleaners, rack change-out services, robot covers, and paint rack and jig repair services. Although we're coming up on our quarter-century anniversary, expansion is definitely in our future."

Who we are

Essentra is a global manufacturer and distributor of small but essential components, servicing a variety of industries. In January 2014, Essentra Components America was formed when three companies, Alliance, Reid Supply and Richco Inc., joined together. Now, our international network extends to 33 countries and includes 69 principal manufacturing facilities, 64 sales and distribution operations, and 5 research & development centers. Our distribution centers have over one billion parts in stock and offer fast delivery via same-day shipping. We also suggest customers “try before they buy” with free samples on most of our standard products.

Formerly Alliance, Essentra Components America has been manufacturing and distributing high-temperature masking products for over 40 years. We stock more than 1,300 masking parts at locations in Toronto and Edmonton, AB, as well as regional distribution sites in the United States, Mexico and Brazil.

Essentra High Temperature Masking

Our complete high temperature product range includes masking caps and plugs, tubing, tapes, discs and metal hooks.

Masking tapes and discs are available in several materials to withstand temperatures from 325° F to 500° F. Essentra green polyester tapes and discs are the industry standard for excellent heat and solvent resistance with no shrinkage, and are available in width/diameter up to 6”.

Essentra silicone tubing (600° F) is an excellent solution when parts are too long to be fully covered by standard caps. This versatile tubing is flexible to fit several size ranges; conforms to irregularities, masks through holes, and can be cut to length and cut long for an easy pull-tab.

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hooks holds up to 220 lb, with designs to accommodate parts with varying thicknesses, maximum load bearing and repeated usage.

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The graphic features a central white area with a red maple leaf in the bottom left corner. It is surrounded by a grid of circular images showing various industrial masking products: a black hook, a white cap, a yellow cap, a red and blue tube, a roll of green tape, a roll of white tape, and a roll of yellow tape. The text is arranged in a clean, professional layout with a mix of bold and regular fonts.

OPCA

Members' Christmas Luncheon

The Ontario Painting Contractors Association held its annual Christmas Lunch in Toronto in December. Pictured here are some of the attendees at the event.



Prona Tools Inc. was established in Taiwan in 1985, and has had a North American office in Toronto since 2013. It is also active in Italy, Germany and various Asian countries.

The company specializes in high-end pneumatic tools. It offers a full line of air-operated products, including spray guns, pressure tank, double diaphragm pumps, sanders, staplers, and other general pneumatic tools. The Toronto facility keeps a wide selection of specialized tools and parts available.

The company has built its reputation on having a sophisticated research and development team and rigorous quality management. Its factory is in Foshan, Guangdong province, on the south-east coast of mainland China. This plant occupies 67,980 square meters of manufacturing, research and office space, and is equipped with advanced machinery and equipment. The company aims always to employ the most precise processing and manufacturing methods.

The corporate policy is one of continuous improvement in order to satisfy customers' demands. Prona has focused on becoming an internally rec-



ognized brand, and only enters foreign markets where it intends to maintain a permanent presence.

The company's signature products are its spray guns, air brushes, pressure tanks, and double-diaphragm pumps. It also supplies pressure tanks with automatic agitators. It holds the rights to a range of technical patents it has developed, a range that has increased in numbers in recent years. These resulted from the company's focus on developing and constantly improving its own technology.

Prona aims to be a leader in the industry, and a serious partner for the customers than purchase our products. We are committed to offer all of our clients reliable, high quality products and superior services. We value your business and hope to serve you in the future.

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Looking for North American Distributors

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Finishing Brands - A Carlisle Company

Customers involved in challenging finishing applications in particular, and the industrial marketplace overall, know and rely on the equipment and solutions from DeVilbiss, Binks, Ransburg and BGK. These globally recognized brands have been inventing, introducing and improving finishing technology and processes for over 125 years.

Today, these respected finishing equipment names are part of Finishing Brands — a Carlisle Companies Incorporated Fluid Technologies business unit. Finishing Brands is the global manufacturing company focused on integrated total system solutions through the spraying, pumping, mixing, metering, and curing of a variety of coatings used in the transportation, general industrial, protective coating, wood, specialty and auto-refinish markets.

By joining the precision fine atomization of DeVilbiss with the diversity of Binks atomization and fluid handling, along with Ransburg electrostatics, BGK curing and controls, distributors of Finishing Brands equipment are able to provide exceptional solutions through a coordination among research, development, and technical support.

For over 125 years, the DeVilbiss philosophy has been finding innovative solutions to problems. DeVilbiss is the leading supplier of spray finishing equipment to the industrial and automotive markets with a focus on fine atomization.

Binks is at work in virtually every industry around the world with its wide range of finishing resources. Since 1890, Binks has been setting global standards for industrial finishing from spray guns, tanks, pumps and complete fluid handling systems, to 2K solutions in a diverse range of applications.

Invented as a way to minimize waste, Ransburg remains the global electrostatic process leader. Ransburg electrostatic application system results in up to 98 per cent transfer efficiency. Ransburg also manufactures manual and robotic applicators, electronic metering, process controls and complete systems working in many industries throughout the world.

BGK is the leader in coating curing solutions utilizing high intensity electric infrared and gas catalytic. BGK combines high intensity electric infrared ovens and material handling equipment into custom systems, providing customers with technology that reduces heating times from minutes to seconds, saving floor space and energy.

The DeVilbiss, Binks, Ransburg and BGK brands were brought together into one group by Finishing Brands to provide more advanced finishing technology, expert support and better solutions as the one source with world-wide resources and experience for industrial customers' finishing needs.

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WALTHER PILOT North America is the North American agent for WALTHER Spritz-und Lackiersysteme GMBH. WALTHER PILOT is well respected for its top quality, precision equipment in the spray finishing, adhesive application, and dot marking industries. We offer the following product lines:

Automatic Spray Gun Systems

Versatility, durability, and precision are the cornerstones of our automatic guns. We feature standard automatic guns as well as manifold mount guns and guns that are extremely compact in size (some that are under 2 inches in width). We can supply everything from a single gun to an entire spray system with hosing, tanks, pumps, mounts and controls.

Non-Contact Spray Marking Systems

Featuring some of the most precise and accurate spray guns on the market, our spray marking systems really stand out. They can be used in many different industries, in applications such as:

- Marking weld seams and sheet metal
- Marking blow holes during glass production
- Line marking for manufacturing
- Paint marking to aid in assembly
- Automated defect marking
- Manual Spray Gun Systems

A large selection of manual guns ranging from Conventional to HVLP to Medium Pressure to "HVLP Plus" (conventional atomization characteristics & up to 88% transfer efficiency). Complete your manual spray gun system by using one of our material pressure tanks (sizes ranging from 1 liter to 500+ liters) and hose kits.

Single & Dual Component Adhesive Spray Guns

We carry spray guns for solvent-based, water-based, and two-component adhesives. They feature special rotary nozzles that are excellent for solvent based and high viscosity adhesives. We recommend spray guns matched to your particular adhesive in order to provide optimum atomization and performance.

Abrasive Resistant Spray Guns

Our toughest spray guns for your most abrasive materials. Available in manual or automatic, they feature a special hardened needle/nozzle and a removable grease packing for extended longevity and optimum performance with aggressive materials. They are perfect for ceramics, enamels, and military coatings.

Mold Release Spray Systems

Our mold release spray guns are optimized for maximum performance when spraying low-viscosity mold release materials. Manual and automatic mold release spray systems are available.

Low Pressure Nozzle Extensions

We offer low pressure nozzle extensions for 45o, 90o, and even 360o spraying patterns. Extensions are available for most of our spray guns and range in size from 200 mm to 1000 mm. We can make extensions that are as small as 8mm in diameter. Custom sizes and lengths are also available.

Material Supply

We feature a full range of pressure tanks, mixing tanks, hoses, and pumps. Our modular pressure tanks are fully ported

and ready for just about any accessory you may need. They feature bolt-on agitators, casters, level sensors, regulators, top feed kits, bottom feed kits, and more.

If you are in the spray finishing business, whether it is paint, adhesive or marking, let the experts at WALTHER PILOT North America help you select the right equipment to meet your needs.

Give us a call at 1-586-598-0347 or e-mail us at sales@waltherpilotna.com for equipment and technical support.
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The PILOT Premium HVLP Plus provides an ultrafine finish with up to 88% transfer efficiency. All in a robust German-engineered and manufactured package.



NORTH AMERICA



Spray Guns | Material Supply | Extensions | Accessories

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<i>Automatic</i>	<i>Pressure Tanks</i>	45°	<i>Fittings</i>
<i>Marking</i>	<i>Mixing Tanks</i>	90°	<i>Repair Kits</i>
<i>Adhesive</i>		360°	<i>Cleaning Kits</i>
<i>Mold Release</i>			<i>Spare Parts</i>
<i>Abrasive Resistant</i>			<i>Cup Systems</i>

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Toronto Woodworking Show Attracted Solid Crowds

The Woodworking Machinery and Supply Expo, held in Toronto in November, was a chance for the industry to show its capabilities and new technologies. Combined with an on-site conference at The International Centre, the event brought in professionals of all types who work with wood. The photos here show some of the exhibitors at the three-day event..



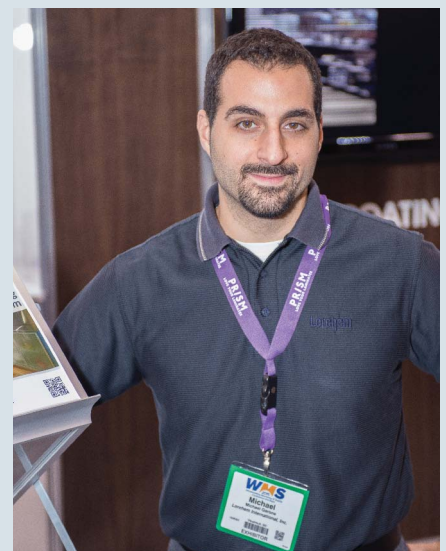
Eric Brand, Robert Thornton, Andy McLaughlin and Chris Thornton, Bloomsbury.



Mike Arnott and Bill Fiorillo, Gemini Industries.



Denis Baerthiaume, Hugo Antonio, Michael Chrisomalis, Lenny Nuno, Rick Tallman, Robert Simmen, Jeff Snyder, and Frederic Coutu, AkzoNobel/Chemcraft.



Michael Garone. Lorchem international.

Welcome to Venjakob

Competence in surface finishing machines, handling equipment and exhaust air purification.

The Venjakob group of companies is now in its 51st year. We design, produce, install and commission complete system solutions – from conveying handling pre-treatment to the application of paint or surface treatment required for your particular process, as well as the conveying and handling equipment through the drying and curing of the parts through to exhaust air purification. Experience accumulated over decades, is complemented by qualified and motivated staff paving the way for the company to evolve into an internationally operating and recognized technological leader in finishing equipment. Members of the group of manufacturing companies include: Venjakob Maschinenbau GmbH & Co. KG in Rheda-Wiedenbrück/ Germany, Venjakob Umwelttechnik GmbH & Co. KG in Sarstedt /Germany and Nutro Inc. in Strongsville, Ohio/USA. With numerous locations worldwide to service you, South America, Europe, Asia, Africa, North America including Venjakob North America, Bolton, Ontario.

Reference List

Plastics and Automobile: Venjakob painting machines are in use many areas of plastic processing such as exterior and interior automotive parts electronic goods and construction industries, for the application of paints lacquers polyesters and adhesive coatings corrosion inhibitors.

Wood and Furniture: Venjakob paint and coating machines, dryer lines are in operation in the woodworking industry, for solid wood, veneer, MDF, furniture components, doors and much more.

Steel pipe: This system technology developed specifically for coating round steel pipes with temporary corrosion protection. Solvent-free coating with 100 per cent UV paint. The machine uses the spray method, pipe marking, pipe cleaning and UV drying.

Exhaust gas purification: We have installed over 600 systems in diverse industry sectors worldwide.

Venjakob quality, a factor for your success!

To achieve our goal of highest possible quality and maximum customer satisfaction, we draw on the profound expert knowledge of our employees and purchase exclusively first-class quality components. Competent and highly specialized personnel develop and realize individual problem solutions for our customers found in the most diverse fields of industry. The Venjakob quality work is reflected in comprehensive consultation meetings, is substantiated in its own laboratory and complemented by installation and start-up within the deadlines set.

Quality and competence, is also provided by our extensive after sales service and spare parts department. Our experi-

enced service staff offers qualified instruction of your personnel on new and existing equipment.

Environment

For decades Venjakob has been living the motto: environmentally friendly – economical – reliable. Venjakob lives this environmental aspect not only in the design of machines ... our DIN EN ISO 9001 and 14001 certificates document our high-quality and reliable performance.

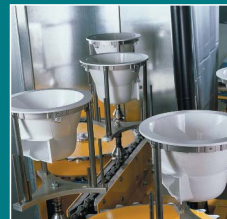
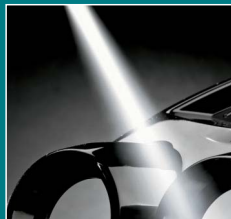
A large number of in part patented product developments allow customers to produce in an energy efficient, environmentally sound and economical manner.



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ascott@venjakob.de



Venjakob Headquarter
Rheda-Wiedenbrück
Germany
www.venjakob.de

Toronto Woodworking Show



Diego Bertolo, Michael Bresolin, Jean Murray, ST Rajan, and Mike Baglioni, Exel North America.



Renwick Herry, Goudey, Brad Wilson, Servair and Chris Currie, Goudey.



Rob Penfold and Jamie Dickens, Katilac Coatings by Halton Chemicals.



Brent Fischer and Alicia VanDuyse, Sherwin Williams.



Darren Christiaens and Mark Livesley, ICA North America.



Since the beginning, Canlak has understood that its success is directly driven by that of its customers. In the early days, Canlak's mission was to produce the highest quality coatings, enabling the wood product manufacturers to meet even the most discriminating demands.

35 years later, Canlak remains faithful to its initial commitment, while diligently pursuing its own evolution. From a humble coating manufacturer, Canlak has evolved to become a specialist, offering a wide range of coating solutions to enhance the value of your products.

Research & development is the foundation of the company. With one of the largest North American application labs, our team of chemists and lab technicians are able to simulate the conditions of your production line, making it possible for us to create efficient product development programs.

NEW BRANDING!

CANLAK IS VERY PROUD TO REVEAL ITS NEW CORPORATE IMAGE. THE SUCCESS ACHIEVED OVER THE LAST COUPLE OF YEARS HAS ALLOWED US TO TAKE A NEXT STEP.

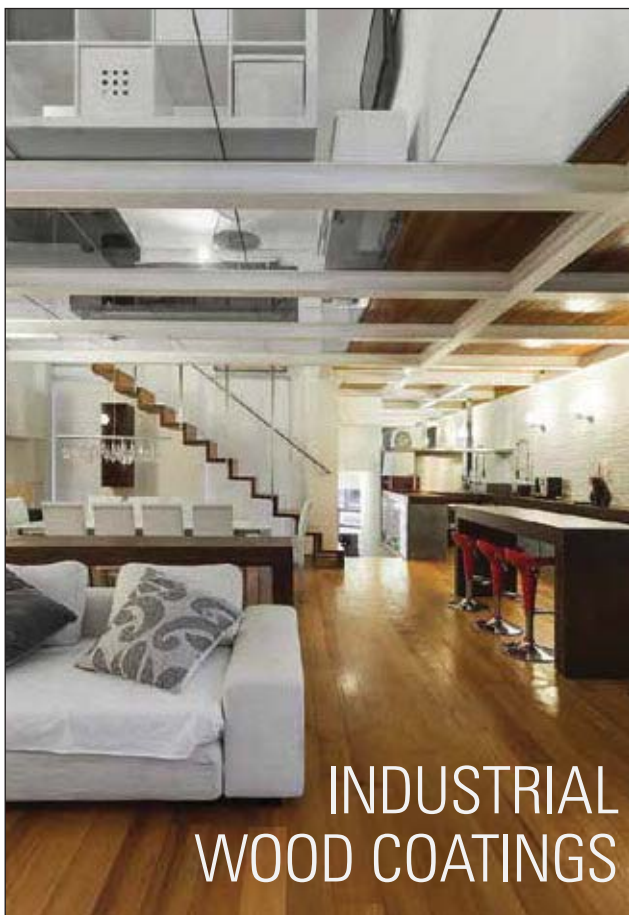
WE THANK YOU FOR YOUR TRUST!

EXPLORE AND FIND OUT WHY CANLAK IS YOUR PARTNER OF CHOICE FOR INDUSTRIAL WOOD COATINGS. LET US INTRODUCE YOU TO OUR UNIQUE RANGE OF SERVICES.

Dès ses débuts, Canlak a compris que son succès était étroitement lié au succès de ses clients. La mission de canlak était de fabriquer des revêtements de haute qualité pour aider ses clients de l'industrie du bois à répondre aux exigences les plus élevées du marché.

35 ans plus tard, canlak reste fidèle à son engagement initial tout en poursuivant son évolution.

La recherche et le développement sont le fondement de la compagnie. avec un des plus gros laboratoire d'application en Amérique du Nord, l'équipe de techniciens de laboratoire et de chimistes est capable de simuler les conditions de votre ligne de production et de concevoir des programmes adaptés et efficaces de développement de produits.



CANLAK is very proud to reveal its new corporate image. The success we have achieved over the last couple of years has allowed us to take a new step. We invite you to consult our newly designed website at www.canlak.com

We thank you for your trust !

www.canlak.com



Toronto Woodworking Show



Dan Martens, Eric Bertelsen, Eric Vaillancourt and Laurent Gua, CanLak, Sante Zando, Verinlegno, Normand Guindon and Paul Sanderson, Adam Liboiron, Rob Heckard, Verylak USA,



Phil Aruda, George Tanev, Dave Patterson and Chuck VanNest, Valspar.



Jeff Pinkerton, Manny Carpignano and Sam Cesario, Yorke Towne.



Rodney McFallis, Wayne Koshmider, Jason Hanlon, CCI Finishworks, Robert Deltin, Frenel Kitchens and Mike McDonald, CCI Finishworks Canada.



Cheryl Davison, Andrew Scott, Neil Thompson and Len Meyer, Venjakob North America.



Martin Guarda, Sherwin Williams, Murat Sezen, Superfici, Robert Deltin, Frenel Kitchens and Brent Fischer, Sherwin Williams.



Glenn Widdifield, Servair.

General Automatic Transfer

General Automatic Transfer is a turnkey manufacturer and supplier of Industrial Finishing Systems. This includes Washers, Convection Dry Off and Curing Ovens, Infrared Gel or Curing Ovens, Batch Ovens, Conveyor Systems, and Powder Coating Rooms.

Standard Washer Features:

- Stainless steel interior housing supports, conveyor shroud, screens, access doors, sump lids, and pump mounting plate
- Lifetime Warranty on washer housing against rust and corrosion
- Tanks, heat exchangers, drain boards and conveyor rails also available in stainless steel
- SCH 80 PVC & CPVC
- Quick disconnect risers and spray nozzles
- Vertically mounted pumps
- Highest heat transfer on the market
- Centrifugal vent fans for extended bearing life
- Manifold utility connections

Applications:

- Overhead-single or multi-line
- Belt washers
- Dip or spray/dip applications
- Drum washers

Standard Oven Features:

- 6" thick 4# mineral wool insulation
- Multi-zone heater control
- Proprietary Air Seal Design
- VFD controlled exhaust fan
- Bottom up Air flow design
- Roof, end or side mounted burner location

Applications:

- Combination Dry Off/Cure
- Elevated, bottom entry
- Convection or Infra-red
- Batch Ovens with 18 standard sizes
- Standard Powder Coating Room Features;
- Three inch thick polystyrene encased panels on both sides by impact-resistant .090" fiberglass reinforced sheet with an insulating value of R17
- Temperature controlled
- Powder storage areas
- Two inch thick insulated 2' X 4' grid suspended ceiling using construction similar to 3" panel
- Polycarbonate observation windows
- Single & double width personnel doors and automated roll-up doors

Standard Conveyor Systems Features:

- Custom designed layout
- Engineered support style for floor or ceiling support
- Application specific

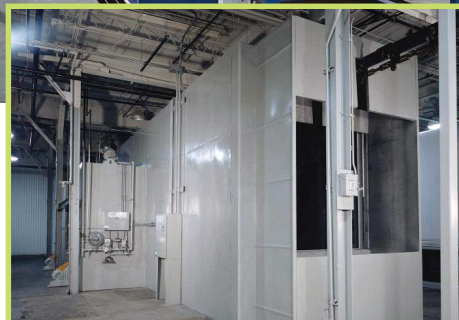
Applications:

- Overhead monorail & Power and free
- Lean Power and Free
- Mesh belt

- Chain/crossbar
- Wicket type
- Drum type

General Automatic Transfer
100 Larkin Williams Industrial Ct.
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SATA GmbH & Co. and Eurotech Spray Products Ltd.

SATA

With more than a hundred years of experience behind it, SATA has developed from a small precision equipment firm to the world-class manufacturer of high end spray equipment you know today. The company, originally called Sanitaria, was founded in 1907 with an emphasis on the medical industry. However, as political and economic changes took place in Germany, the organization adapted to enter new markets, such as electric hand dryers and high quality razors. Focused on growth, it was willing to look beyond medical technology to anything that promised business volume. From the beginnings of Sanitaria, quality and precision were the main driving factors behind company philosophy.

In the early 1920s, a Sanitaria board member met Christian Lechler, the owner of a prominent paint manufacturer, who indicated he was looking for suitable tools for newly developed sprayable paints. Sanitaria committed to developing and producing a solution for the paint company, and by 1925 the Lechler spray gun went into production and became SATA's first paint spray gun. By 1926 Sanitaria registered its first patent, and by 1931 an initial range of spray guns was commercially available. The shortage of raw materials during World War II gave rise to new synthetic paints, and Sanitaria again developed new equipment for applying them. As these paint types developed during the next decade Sanitaria focused on perfecting its equipment to attain consistency for the industry.

1954 marked the next important milestone with the introduction of the SATA GR. This spray gun provided a wider fan pattern which allowed larger objects to be coated more quickly and effectively. The economic growth of post-war years and the upturn in production of consumer goods, housing, and motor vehicles brought about an increased demand for paint spray equipment, along with an unprecedented upturn in quality requirements. This again led to new paint technologies that needed to be perfectly applied, with newly developed paint spray guns.

The 1980s marked one of SATA's revolutionary decades, with the introduction of several technological advances, and a re-branding that launched SATA into the 21st century. In 1981 Sanitaria officially changed its name to SATA, and promptly introduced the now-legendary SATAjet B, making the company an industry leader in spray equipment. By the mid 80's, the first SATAminijet, designed to excel in small or difficult to reach areas, was introduced to the product line-up, gaining SATA further reach and a broader market. By 1990, SATA introduced its High Volume Low Pressure (HVLP) and the Reduced Pressure (RP) technologies, which gave painters more options on atomization, while correlating with growing environmental concern.

Today, SATA builds some of the finest paint spray equipment available. For 90 years it has been developing paint spray guns that lead the industry with constantly changing and developing paint technologies. SATA works closely with major paint companies around the globe to produce equipment to meet the present and future needs of painters. Its products have been carefully researched and developed in close co-operation with paint companies, so that its solutions meet today's problems and tomorrow's challenges.

Today, SATA produces over 3000 parts and products, and employs over 250 staff. With a continued emphasis on research and development, it is a world leader in the manufacturing of spray paint equipment. SATA maintains top-class quality standards, state of the art production facilities, continuous innovation, and close cooperation with the paint industry. Currently, SATA products are sold in over 100 countries, including Canada.

Eurotech Spray Products Ltd.

Hans Lengsfeld, President of Eurotech Spray Products Ltd., came to Alberta from Germany in 1958. He applied his formal training as a blacksmith to the automotive industry, and starting small, but with a focus on expansion, he kept a keen eye out for opportunities to expand his business. And he did paint sales on the side. In 1983 he returned to Germany and visited the SATA factory. Impressed with the production process and quality controls, he quickly decided to become a Canadian importer of the spray systems. At this time the SATA tradename was relatively unknown in Canada, so Lengsfeld began contacting sales agencies in different provinces to start distributing SATA equipment. At the same time, he contacted many paint companies to market the spray equipment in their training facilities, and train all instructors on SATA products.

Distribution progressed at a rapid pace, so that in 1991 Eurotech Spray Products Ltd. was incorporated, and after 1994 it became the exclusive importer and distributor for SATA spray equipment in Canada.

In 2002 Eurotech moved away from a regionalized sales force in favour of a national unified team. To accomplish this, it employed the services of Caruk & Associates Ltd., an agency well known across Canada for sales representation in the PBE aftermarket. This company was appointed as the exclusive sales agency, with a mandate to provide uniform, high quality service and sales support to all existing and potential customers throughout the country. Today, Eurotech and Caruk work together using a multitude of warehouses and distribution centres across Canada, to ensure end-users receive the very best equipment, and the best support available.

SATAjet® 100 B



German Engineering

Prep-Work Perfected, Unmatched for primer applications

Apply primer materials with a clean, concise finish every time. Ideal for wet on wet application, this gun reduces sanding efforts, allowing for a quicker more efficient process.

SATAjet 100 BF RP

Inlet Pressure 7-29 psi | Air Consumption 10.2 cfm @ 29 psi

SATAjet 100 BF HVLP

Inlet Pressure 29 psi | Air Consumption 12.4 cfm @ 29 psi

SATAjet 100 B P

Inlet Pressure 29 psi | Air Consumption 8.7 cfm @ 29 psi



Eurotech Spray Products Ltd.
3636 Burnsland Rd SE
Calgary, AB T2G 3Z2
800.884.7282
sales@satacanada.com

Distributor of SATA Products



Putting A Shine On



Plated plastic handles.

Plastics have never been the easiest materials to coat or paint. They have difficulty maintaining dimensional stability in the face of heat, there can be problems with more aggressive chemicals use to prime or coat them, and almost every plastic has a unique chemistry that requires its own solution.

The advantage of plating plastics is that the almost infinite design freedom of forming them can then take advantage of the esthetic appeal of a reflective, metallic surface. Typical end-uses include consumer electronics, shoes, luggage and some household furnishings. Two of the most popular methods for this are vacuum metallizing, where the plastic substrate is exposed to a metallic gas, and arc and flame spraying.

Flame spraying involves use of a hand-held device that sprays flame-heated metallic powder. Esthetically, this produces poor results and thick, porous layers of metal, so it has little utility in areas where quality finishes are needed.

Arc spraying is similar, but uses an electric arc from two DC wires made of the coating material. The heat from the wires melts them and a stream of gas deposits the molten metal onto the plastic substrate, creating the metal coat. As with flame spraying, the resultant coating is usually highly porous.

Most of the more recent developments, therefore, have been about improving more conventional plating methods, which deliver higher

esthetics and more durable coatings.

Atotech has a long history in plating on plastics. The company offers a range of processes for different industries, under the brand-names Adhemax, NeoLink, Noviganth PA and Covertron. A few years ago, it launched non-etching adhesion promoters (NEAPs).

“Unlike some of the other commercially available non-roughening adhesion promoters, NEAP does not require an interposer layer such as a thin layer of tin,” explained Dr. Rami Haidar, global product manager for surface treatment technology with Atotech Deutschland GmbH. “By avoiding the use of a metal interposer layer, the NEAP process is more cost competitive and environmentally friendly.”

There is particular application for NEAPs with microprocessor units, which employ dielectric materials with low signal loss, also referred to as low-loss tangent. The higher frequency specs for these require specialty engineering resins such as cyanide ester and polyphenyl ether (PPE).

Most commercially available NEAP processes are based on chemical bonding that provides adhesion between the smooth conductor surface and dielectric materials. The potential weakness of such chemical bonding is its adhesion performance, which depends highly on the type of material that the adhesive layer is bonded to.

“The new NEAP provides mechanical bonding,” Haidar said. “It prop-

Since 1978 Process Technology has been dedicated to providing a complete range of high quality product solutions for wet process heating and cooling applications. Process Technology will continue to strive for best-in-class benchmarks for durability, low profile installation, versatility, range of selection, performance, and safety while providing the best value for our customers. We promote a culture of continuous improvement and an environment of quality first in all things that we do; innovation, acquisition, talent and other opportunities while respecting our team members morale and safety.

Process Technology is a worldwide leader in UPDI water heating and one of the largest manufacturers of industrial electric immersion heaters. Our next generation of inline heaters is designed to better serve the needs of customers in a world of quickly changing technology and ever-increasing purity and precision. Our product line is among the most comprehensive and diverse available, and most have the added security of cULus listings and CE compliance. Process Technology is certified to ISO 9001:2008, including design.

Our innovation and growth would not be possible without our superb team members and a strong engineering force. All team members take part in ongoing training at every level and continuously improve our processes and technology to enable us to provide the best products possible.

Process Technology proudly introduces the latest in innovative immersion heating - the SmartOne® PTC heater. These heaters are designed with an internal limit-temperature which is far below the ignition temperatures of plastic tanks or pipes. With this technology, thermal over-temperature protectors are no longer required to ensure safe operation. SmartOne heaters are more dependable and will not burn out in air or when covered by scale or sludge like traditional resistance heaters. Different configurations are available in titanium, 304 and 316 stainless steel. For more information on the SmartOne® PTC heater, go to: <http://www.processtechnology.com/electric-immersion-heaters-water-chemical.html>.

Searching for the most reliable inline water heater on the market? Look no further than the Tytan™ heater by Process Technology. The Tytan™ electric inline water heater is a complete system which features a compact configuration, improved process results, ultra-fast heat-up, superior temperature stability regardless of application and reliable, rugged construction. Installation is fast and easy, and the Tytan™ heater requires virtually no maintenance.

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agates a nano-scale structure of copper oxide that forms a thin anchoring layer with increased surface area.” One of its most significant advantages over chemically bonded NEAPs is its independence of adhesion performance from various types of dielectric material. The new NEAP process also adds surface area to the conductors.

Further, research findings show that copper oxide on the surface hardly contributes to surface roughness, which the Rq (root mean square) measured to be less than 250 nm.

The more usual run of applications for plated plastics is fashion items such as shoes and belt loops, or consumer electronics. For this, Atotech's product offering includes launching Adhemax, a process the company says offers multiple advantages over conventional plastic pretreatment. Beside being able to handle most platable ABS, PP and ABS/PC blends on the market, Adhemax boasts remarkable selective plating properties and a good tolerance for variations in rack coatings.

Its virtues are reported as excellent stability in concentrates and working baths, a need for virtually no rack metallization, a wide working window with stable and consistent processing, flexibility in material selection, and safe, simple operation with extended bath life. The process is suited for automatic lines, and selective plating is also possible.

Atotech also offers NeoLink for fast, environmentally compatible direct plating on plastics. Compared to previous generations of direct metallization, the company says, offers a significantly lower amount of palladium in the activator solution.

NeoLink presents important advantages versus conventional plating on plastics processes. It eliminates any electroless nickel or electroless copper plating steps, increases the reliability of production and gives the possibility to increase productivity because of a shorter pretreatment sequence. NeoLink is allows the applicator to plate ABS/PC blends with PC-contents up to 65 percent.

And the Atotech Covertron process, which is for producing a conductive, Faraday-cage style coating, is widely used in electronic devices such as cellphones. This electroless copper and nickel process provides its own corrosion protection as well as shielding against electromagnetic and electrostatic fields.

MacDermid also offers a range of processes for plating on plastics. Its MacuPlex 1500 is a trivalent chrome process that promotes a uniform etched surface on plastics that, the company says, provides good adhesion

and appearance in the finished product. A key selling point is in its maintaining the correct surface tension in the etch solution.

The company's Macuplex Infinity solution is necessary to react and chemically prepare the plastic part. This reaction creates the catalytic site needed to seed the electroless plating bath in the short cycle plating-on-plastics process.

MacDermid's Infinity Accelerator is used to provide excellent life and a wide operating window for the accelerator stage in the short cycle plating-on-plastics sequence. And MacuPlex J-64 is used in a room-temperature, electroless nickel strike bath. In addition to plating on plastics, it can be used to plate thin deposits on various metals such as aluminum, steel, copper and its alloys

The company also has two other nickel-using products. MacuPlex M550 is a nickel material free of ammonia, lead and cadmium. This electroless nickel deposits the initial metal layer in the metallization of plating on plastics, or on stainless steel equipment.

The Uduque DP Plus process from Enthone is an extension of its Uduque Classic system for plating on plastics. It was developed for decorative plating of acrylonitrile-butadiene-styrene (ABS) or ABS-polycarbonate blends (ABS/PC). It can also be used for some polypropylene (PP) materials.

The company says this process features reduced palladium in the activator working solution, while imparting a highly stable and uniform conductive layer on the plastic surface for subsequent acid copper plating. The process eliminates the electroless nickel, immersion copper and copper strike process steps required in conventional plating on plastics pretreatment processes.

It can be used for selective plating (2K and 3K components) or as a stop-off lacquer. It is engineered to provide excellent adhesion on advanced designs, and for plating complex part geometries (e.g. sharp borderlines and edges) commonly encountered in the automotive, building hardware and decorative finishes industries.

The selection process is always application-specific. While any of these technologies is proven in its field, platers must learn to make careful choices, and to study where the exceptions come up.

But with the ever-increasing penetration of plastic parts into automotive and household fixtures, the learning curve is worth going through. ■

MOCAP is a leading manufacturer of standard and custom, plastic and rubber injection-molded, dip-molded and extruded products. We offer a full line of caps, plugs, grips and tapes for product protection, masking and finishing purposes, sold to virtually every industry for countless applications.

In business since 1982, MOCAP's philosophy has always focused on finding the right solution for our customers whether that be through our standard or custom products. We serve our customers' requirements globally, with locations in North America, Europe and China.

We currently offer a full line of masking products in various materials designed to meet the requirements of nearly any coating/finishing application. Materials range from one-time use high temperature vinyl to ultra high-temp reusable silicone rubber, while our extensive product line includes standard cap and plug configurations, as well as pull plugs, washer plugs, tapes, discs and tubing. The products can be used for your high temperature painting, plating, anodizing and coating operations, and in some cases, like EPDM and silicone products, can be used repeatedly for optimum savings.

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- **EPDM Caps and Plugs** - Designed for repeated use, our line of EPDM caps and plugs are perfect for temperatures up to 475° F and are a more economical solution than silicone. They also offer better chemical resistance.
- **Silicone Rubber Caps and Plugs** - The ultimate in masking materials, silicone rubber offers ultra-high temperature resistance, up to 600° F, and reusability, all in one.
- **Polyester/Polyimide Tapes and Discs** - We offer both materials in both styles for masking of flat surfaces. Polyester material will resist up to 425° for up to one hour, while the Polyimide material will resist over 500° F for up to one

hour. These tapes and discs can be removed easily and will not leave behind any residue.


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Moving to the Dark Side

An architectural application for blackening: exterior building panels.

Photo credit: Orion Engineered Carbons.

Blackening and antiquing are looked on as esthetic processes, but they simultaneously offer protection against corrosion. While the chemistries used are mostly order ones, there are still ways the chemical suppliers have of tweaking their formulas to improve their product offerings.

Birchwood Technologies offers three primary processes for this field: Tru Temp black oxide, a magnetite compound that gives a satin black finish; Presto Black, a copper selenide cold blackener that also provides a satin black; and MicroLok AO, an aluminum oxide that provides a satin silver or gray finish. Jesse Vouk, the company's sales and marketing manager, says that in independent testing, Tru Temp has withstood from 100 to 150 hours of neutral salt spray, or several hundred hours of humidity.

"The satin black Tru Temp finish is just 0.5 microns thick," he says, "with no effect on material hardness or load-bearing properties. This high level of corrosion protection is important for both part storage and shipment in corrosive atmospheres including ocean shipment."

Startup lubricity of components finished with Tru Temp also is superior to the other two choices, he adds, so where high value components are subject to handling, storage and field setup – with significant time elapsing between these operations – this process provides the most robust protection for components. This is especially important for valves, couplings, pumps and similar components that have receive added value operations to them.

"The additional benefits of Tru Temp, besides corrosion protection and break-in lubricity, include the fact that it can be installed in any plant setting, without endangering personnel or surrounding equipment," he explains. "Tru Temp solutions contain no EPA-regulated chemicals, so there is usually no need for waste treatment equipment. In most installations, its rinse waters are sewerable as non-hazardous discharge."

The process requires a seven tank line (Presto Black also requires

seven tanks, while MicroLok AO is a simpler five tank line). It also has a longer processing time of 30 minutes compared to 20 minutes for each of the other two processes.

Metalline Corp. manufactures several products that provide a decorative black finish over brass and copper alloys. These deposits are relatively soft and can be highlighted, relieved or antiqued.

The company's CB-1 is an alkaline powder that is added to water to produce a black oxide finish on copper alloys. Its consistent black finish can form a base for highlighting or antiquing, and is more stable and often more adherent than those produced by sulfides or black nickel plated deposits.

BB-2 is an alkaline powder that is added to water to produce a black oxide coating on brass. And Eclipse BN-99 is a single component, powdered blend of metallic salts that will provide a black nickel plated deposit over brass, copper and nickel plated deposits. A range of colors from light grey to jet black can be consistently achieved by adjusting current and immersion time, and the Eclipse deposit can be highlighted and antiqued, with a final protective clearcoat being applied to enhance durability.

Caswell Plating has a technique developed by commercial gun blue manufacturers as a more environmentally friendly system than the commonly used hot application. Parts requiring blackening are simply placed in the liquid at room temperature, with no electrical power required.

This is easy to do in house, and there is no waiting for heat-up of blackening solution. There is a long bath life, and the blackening solution may be replenished indefinitely with periodic additions of fresh concentrate. ■

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CASF Conference Hears the Prospects for 2016

The Canadian Association for Surface Finishing held its 2015 Conference in November, just outside Toronto. The event, which grows every year, attracted over 100 participants to hear presentations on new or expected environmental regulations, both domestically and on the international scene; on the prospects for the economy in 2016; and on the Association's own plans for the coming year. The photos here show some of the attendees, as well as the companies that took promotional booths at the one-day event.



Christian Richter, The Policy Group/NASF.



Earl Sweet, BMO.



Richard Thibodeau, Peerless Custom Rack/RFT.



Matt Sisti Coventya Inc.



Canadian Association for Surface Finishing

Blending Technology, Service and Value

Dynamix is the largest Canadian owned manufacturer and supplier of metal finishing chemistry. Supplying automotive, aerospace, RoHS, ELV, WEEE and REACH compliant metal finishing products across North America.

History and Experience

Partners Dennis Rogers, Charles Morris and Stewart Tymchuk established Dynamix in 2007 and over the years the business has adapted to the needs of the industry. Together they share over 75 years of metal finishing experience in real world plating facilities, which provides customers with a tremendous operational advantage. Their combined knowledge of technical service, research and development, manufacturing, ISO 9001:2008, marketing and sales, enables Dynamix to provide high quality products and cost effective opportunities to all customers.

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"The philosophy at Dynamix is simple - enhance our customers' performance and profitability, while dealing with all of our partners in an open and honest forum."

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Dynamix understands that from a research and development perspective you can never be the best at absolutely everything. For those areas, Dynamix has partnered with some of the industry's best supply houses. Distributing products for their partners allows the supply of a wider variety of chemistries, including automotive and aerospace approved products.

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Dynamix's strength is in zinc plating, as the company has well over 200 zinc lines presently in service across North America. What sets the company apart from the competition is their ability to do their own research and development and manufacturing here in Canada.

Dynamix offers a service that encompasses all of their values with a highly skilled and motivated team. The laboratory at Dynamix is well equipped and

able to provide analytical solutions specific to a particular sector of industry and/or customer.

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Products are designed at Dynamix to provide unsurpassed performance and solution economy. Superior chemistry is only the beginning, as the company realizes that technical and application knowledge are just as vital to the metal finishers' success.

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Dynamix is one of North America's fastest growing manufacturer and supplier of metal finishing chemistry. "The philosophy at Dynamix is simple - enhance our customers' performance and profitability, while dealing with all of our partners in an open and honest forum."

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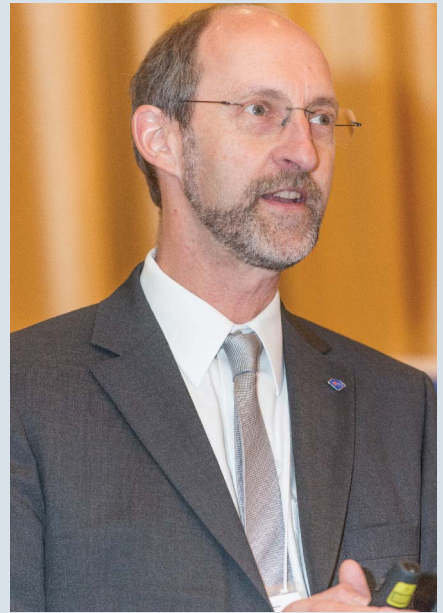
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Stewart Tymchuk, Dynamix Inc.



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Versatile **Silicones**



Photo: www.selectculinary.com

Silicones aren't always the cheapest of synthetic materials, but they're among the most versatile. In the coatings industry, they show up in plugs for masking, as well as having a role in actual coatings themselves.

Their siloxane-based polymer chemistry does not produce significant amounts of organic toxins. Additionally, their ability to take high heat means they're extremely versatile.

Dow Corning recently launched a high-efficiency fluorosilicone additive that delivers improved foam control in high-solids solventborne coatings. The product, 102F Additive, produces effective defoaming and antifoaming performance, especially in high-solids solventless systems, without negatively impacting the surface appearance or recoatability of the applied film.

"Due to its low surface tension, Dow Corning 102F Additive outperforms other fluorosilicone-based foam control agents on the market today," said Dow Corning Coatings global segment leader Chris Wall. "Balancing effective foam control with formulation compatibility, Dow Corning 102F Additive improves both coating quality and application efficiency."

Another, similar Dow Corning product is 700P Additive. This improves pigment dispersion, prevents flooding and floating, improves gloss, reduces haze, and resists yellowing at high temperatures in solventborne systems.

It is recommended for formulators of white, pastel and gray solventborne paints and inks. In particular, it works as a pigment dispersant that enables formulators to achieve stable titanium dioxide (TiO₂) pigment dispersions with a reduced tendency toward flooding and floating, improving color consistency.

"Highly effective at low use levels, it can reduce the millbase viscosity and improve the gloss and haze of solventborne paints and coatings based on TiO₂ pigments, even after storage," Wall said. "And it makes it easier

to achieve an exact color match when tinting these paints and coatings."

A different series of silicone products, from Master Bond, has a range of coatings applications. MasterSil 972TC-LO passes the rigorous requirements for low outgassing of ASTM E595 specifications. It is particularly suited for use in vacuum environments as well as applications in the aerospace, electronics, opto-electronic and specialty OEM industries. This 2-K system offers convenient handling for bonding, sealing, coating and potting.

It is an electrical insulator with a thermal conductivity of 7 to 9 BTU-in/ft²-hr-deg F [1.01-1.30 W/(m-K)]. It bonds well to a wide variety of substrates, including metals, composites, glass, ceramics, rubbers as well as many plastics. Highly flexible, it has an elongation of 40 to 80 percent, withstands aggressive thermal cycling and resists mechanical shock. This heat dissipative silicone system has a wide service temperature range is -120 deg. F to +400 deg.F.

This addition cured system does not require air for cross-linking. It features low shrinkage upon curing even in thick or wide cross sections. It has a moderate viscosity of 30,000 to 40,000 cps with good flow properties and has a one-to-one mix ratio by weight.

It has a long working life of 6 to 10 hours at room temperature. This compound is 100 percent solids and has a white color.

Wacker Silicones has a variety of materials it is promoting as waxes. Its E 32 silicone wax emulsion is a nonionic, aqueous emulsion of a silicone wax which is solid at room temperature. can be readily incorporated into cold-stirred formulations.

The company's VP50550/8 product is a waxy polymethylsiloxane that is resistant to hydrolysis and exhibits a very high affinity to a range of substrates. And product W 23 is a white, waxy polymethylsiloxane resistant to hydrolysis, that exhibits a very high affinity to various substrates. ■

Filter Pump Industries Capability: Custom Pumps, Vessels, and Systems

Filter Pump Industries is a globally known manufacturer of corrosion resistant pumps, vessels, filtration systems and filters with two plants in Southern California. It has supplied a vast spectrum of fluid management systems to the chemical processing and metal finishing industries for over 45 years.

Superior quality and craftsmanship separate FPI from all others. Custom designs and engineering service, along with complete in-house manufacturing capabilities and attention to detail, ensure customers receive the highest quality work, all performed under the same roof. Whether on a contract as needed or on a just-in-time (JIT) basis, FPI is the right choice.

There is a broad array of custom pumps offered, including vertical seal-less immersible, horizontal centrifugal direct drive or magnetic driven centrifugal, and self-priming. Experienced application engineers are available to assist in design and implementation of all products. All pumps are of exceedingly high quality and are used in a wide scope of industries and applications, with special emphasis on vertical seal-less pumps. A diverse variety of pump features are available to fulfill any customer design requirements.

Filter vessels are manufactured in many sizes with a wide variety of filter media and types available, including string wound, melt blown, pleated, bag, and carbon. The company facility accommodates a wide variety of materials for the con-

struction of custom-built filtration systems. It regularly manufactures using CPVC, PVDF, polypropylene, stainless steel, titanium, Viton, Kynar, EPDM, PTFE, PVC, and many other materials. These filtration systems are resistant to a broad range of chemicals, including bases, acids, salt water, sulfuric acid, plating baths, and numerous others.

There is also a wide variety of standard and custom filters, including bag and carbon treatment, as well as string wound, melt blown, and pleated cartridge filters.

The company takes great pride in the quality of its work. A team of experts continually researches the latest technologies to create the most advanced systems available. Pumps and filtration systems feature the highest levels of durability and performance. Special attention is paid to detail, and with the complete in-house capabilities, the highest levels of quality control are fulfilled from beginning to end.

The company can be reached at 818-504-2391, at the website or email address, or through area distributors.

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What's Good for Adhesives and Sealants in 2016?

HIGH-PERFORMANCE INNOVATION

BY GARY LEROUX

More often than not, it is the things we cannot see that matter. Adhesives and sealants are such things, dating as far back as the Neolithic Period, when cavemen first used a gluey substance made of tree sap and red ochre to protect cave paintings. These crucial components of the coatings industry are expected to withstand pressures and emerge with very few scrapes and bruises in 2016, despite us facing another downturn in the oil market as well as an ever-increasing push to ensure a sustainable environment around the world.

So what exactly is going to drive this growth of the global adhesives and sealants industry?

One answer is more construction activity, along with skewed trends in the US transportation sector and a growing application of adhesives in various fields including woodworking and medical. Add the growing global GDP, the rising demand for miniaturization of electronic products and devices, and an increased need for environmentally friendly products into the mix, and you get the picture.

Innovate, and Then Innovate Some More

Production of adhesives and sealants is simple, but it is nigh impossible when R&D is missing. Latch the various, escalating pressures onto industry, such as keeping overhead down, and it is challenged to devise better, more efficient ways of delivering state-of-the-art, high-performance products. Buyers want these goods to work faster, be lighter and more resistant with longer shelf lives than is currently available. Manufacturers and fabricators continue to rise to this challenge, delivering sophisticated results.

The upshot of innovating is the increased use of structural adhesives—high molecular weight molecules that help the manufacturers and fabricators accelerate production, cut costs and boost product quality. Ultimately, structural adhesives are supposed to help companies ensure their products can withstand high loads under various stresses for extended periods of time.

R&D also fuels demand for polyurethane adhesives, which provide versatility, optimal bond strength and long life and dependability, as well as methacrylate adhesives that offer the transportation and construction industries impact-resistant, structural bonds on metal, wood, composites and plastic.

Bigger Volume

The automotive industry is a huge beneficiary of adhesives and sealants, and things are looking positive in this area as their use has intensified and is expected to continue this year. According to a report by Frost & Sullivan, improved sales in Asia-Pacific and Latin America and tougher fuel efficiency rules have led to a higher volume of adhesives being used in North

America and Europe, as well as a push to meet a growing demand worldwide. The market is expected to see revenue nearly double by 2021.

However, the sector will likely deal with two obstacles: 1) despite the fact that these adhesives and sealants are cheaper and easier to handle, original equipment manufacturers are hesitant of veering away from using traditional products like nuts and bolts; and 2) Europeans are wary of introducing the newer, state-of-the-art adhesives and sealants because they are concerned their economy will slow down due to the economic quagmire affecting the continent. Analysts say enterprises could convince OEMs to use their adhesives and sealants by indicating they would help sustain profits in a highly competitive market, one that is heavily impacted by standards and regulations.

Also significant is how industry has gained a stronger foothold in the Asia-Pacific market, with China and India fuelling demand for these products. Europe, meanwhile, is not far behind thanks to its already established market. However, the European structural adhesives market is expected to be more sluggish in 2016 than its North American counterpart.

Hot-melt adhesives (HMA) are also projected to grow. Despite a small hiccup in 2014, triggered by shrinking exports and a slow-moving market, analysts say movement will pick up again, fuelled in particular by the packaging and hygiene products sector. However, HMAs affect the end-products' quality but not their overall cost, compelling buyers to increasingly choose higher-end products. This in turn is forcing companies to invest more in R&D—a serious factor for any enterprise, particularly if it wants to succeed in the global arena, as noted above.

Thermoplastic elastomers (TPEs), meanwhile, are anticipated to also gain ground between now and 2022, with revenues swelling by more than five percent each year. These highly dynamic materials are for the most part used in the automotive industry for bumpers and fabric coatings, and they are replacing standard plastics and conventional elastomers.

But interest is growing, especially in the transport and construction industries. This area saw its highest demand in the U.S., Chinese, Japanese and German markets, representing nearly two-thirds of the global demand in 2014. Analysts say South America and Asia-Pacific, especially China, India, and Brazil, are expected to post the highest growth rates.

Adhesive films are making their mark in the automotive industry as well, with pressure-sensitive and acrylic adhesive films leading the pack. This market is projected to expand six percent (compound annual growth rate) in 2016 and for the following three years, as various industries like automotive, packaging and electronics increasingly apply these films in their products.

This market will feel pressure, however, as crude oil prices and new VOC regulations are expected to play havoc during this period. This includes new regulations now being considered in Canada under Phase 3

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Stone Tucker Instruments recognizes the importance of timely delivery in the fast-paced coatings industry. As DeFelsko's authorized Canadian distributor, all standard product lines and a wide variety of other items, are in stock in both locations at all times. DeFelsko's full range of products, including the newly redesigned PosiTector Automatic Adhesion Tester™, the PosiTector SmartLink™, the FXS Xtreme™ probe, and the new RTR-P, can be found online at www.stone-tucker.com.

We have introduced a number of new products in the past year, such as the eChlorTest Kit for electronic measurement of soluble salts on surfaces, and we now stock ChlorRid liquids at both our Fonthill and Edmonton locations. Several exciting

new products are expected to premiere in the coming year. We are pleased to distribute and service the world's finest inspection and testing equipment from industry-leading manufacturers including DeFelsko, Dakota Ultrasonics, Testex, Chlor-Rid, Western Instruments, Kestrel, Spectronics, Tinker & Rasor, Time Instruments, PCWI, Montipower, TQC, MTP, Las-car, and Gal Gage.

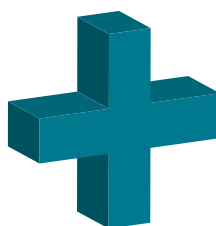
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of the federal government's Chemicals Management Plan (CMP-3). There are 405 substances of the 1,550 under review in CMP-3 in the adhesives and sealant sector, representing 26 percent of the total. This is a substantial number of substances for adhesives and sealants that will be formally assessed by the federal government for a possible ban or a risk management measure such as a regulation.

The 10 consumer and commercial applications most frequently reported for substances that were manufactured or imported in concentrations greater than or equal to 0.1 per cent w/w (alone or in mixture/product) ranked adhesives and sealants as number three, representing 149 substances for toxicity assessment. Industry must be fully engaged over the next several years as governments escalate their risk assessments of adhesives and sealants, to ensure any decisions made to tighten regulations are based on sound science.

The Raw Glitch

It should be noted, however, that the fluctuating prices of raw materials, as well as a shortage in their supply, could negatively impact adhesives and sealants over the course of this year. And when it comes to sophisticated technologies, some companies depend on raw material suppliers to deliver the much-needed innovation. But it is the adhesives and sealants companies that handle the formulation and incorporation of new raw materials into products, which can help optimize performance.

Industry stands to win when all is said and done. The global market for adhesives and adhesive applying equipment is projected to reach almost

\$49-billion in 2016, eventually increasing to \$62-billion by 2021. But how is the Canadian adhesives and sealants industry expected to fare this year? According to analysts, it is a mature industry that will continue to grow in relation to how the national economy grows. The use of adhesives and sealants in other applications is also anticipated to expand.

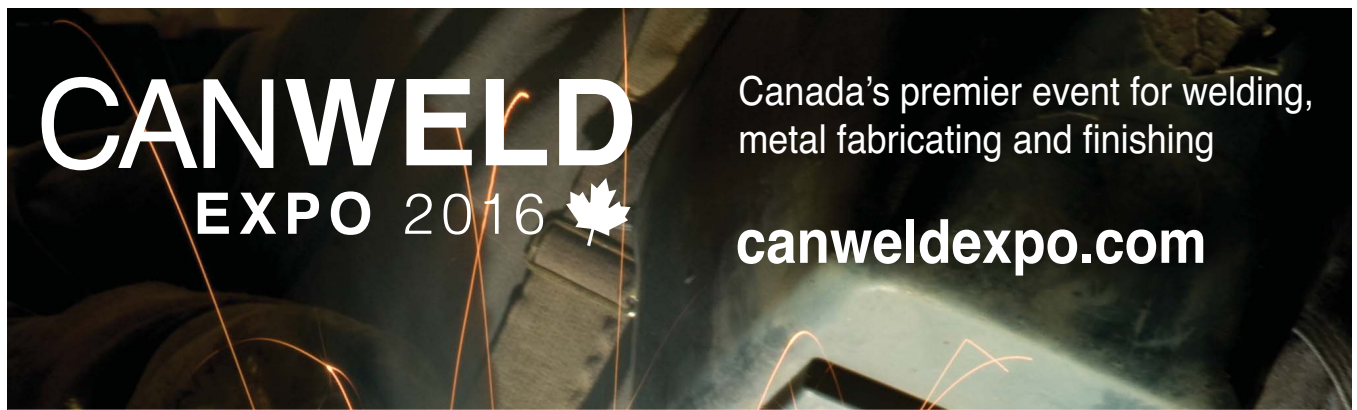
Portfolio Revamping


This growth will be possible if Canada maintains its solid international trade ties with the United States, Canada's top trading partner, particularly because the majority of the sector competes in the North American market, not globally. Meanwhile, robust growth is expected in the area of high-performance adhesives and sealants because of the important role R&D plays.

Worldwide competition in this area is already strong. But industry has hinted that it will intensify even further as enterprises seek to move across borders and turn their business niche into a mass market. Ultimately, Canadian manufacturers and fabricators will succeed if they choose to diversify their business portfolio: focus more on innovating high-performance adhesives and sealants and less on their low-performance goods.

Building sophisticated technology for their goods, producing a limited range of products on a grander scale and entering bigger export markets will give Canadian companies the edge they need on the global front. ■

Gary LeRoux is president & CEO of the Canadian Paint and Coatings Association.



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Epoxies Continue to Surprise

Epoxies are one of the oldest families of coatings resins, but they continue to produce new technical possibilities and to apply these to fresh end-uses. In many cases, the epoxy chemistries are tried-and-true types, but their formulations offer new coatings possibilities.

Epoxies, most of which are two-component materials, offer low volatility and water clean-up. This makes them suitable for coating cast iron, steel, and aluminum applications. and reduces exposure and flammability issues associated with most solvent-borne coatings. They are more heat resistant than latex-based or alkyd-based paints, and they lack the flammability issues that occur with solvent-based coatings, as well as usually requiring less energy than heat-cured powder coatings.

That said, they have their downsides, including a vulnerability to excessive UV light exposure, and a tendency to granulate when this happens.

Solvents are an area where increasing regulatory concern is tightening the rules. TBF Environmental Technology has developed several formulations that meet these, including its solvent alternative ZemaSol.

Dave Pasin, TBF's president, says this is benzene-free, and can be very effective in rapidly reducing solids content and viscosity of epoxy resins.

"It is a very efficient solvent," he says, "and can reduce solids from 100 percent to 60-50 percent rapidly, using minimal solvent. "It works in a similar manner for urethane polyols, and alkyd top primers and top coats. It is also an effective cleaner for epoxy, urethane, alkyds paints, coatings, application equipment as well as inks and adhesives."

Cardolite Corp. is another company working intensively on formulations with reduced environmental impact, and derives some of its resin feedstocks from cashew nuts. Its LITE 3025 is a solvent free phenalkamide for cost-effective, medium and high solids heavy duty epoxy coatings.

This new curing agent was specially designed to protect surfaces from highly corrosive environments and harsh atmospheric conditions. When used in protective coating formulations, the company says, it offers similar properties to medium molecular weight polyamides (nylons).

Compared to the commonly used solvent-free polyamides, it reportedly provides faster cure and hardness development, especially at lower temperatures. This widens the coating application window and allows for early recoat in temperatures as low as 5 deg. C.

Maintenance and OEM coating applications in particular can benefit from these potential productivity gains. LITE 3025's anticorrosive and mechanical properties combined with good adhesion to various substrates result in long lasting primers suitable for many industrial applications.

In addition, the claimed good color and gloss stability extend the use



Epoxies offer a reliable, waterproof inner lining for swimming pools.

of LITE 3025 to epoxy topcoats and direct-to-metal coatings. It can be easily dropped in to existing epoxy formulations to avoid the time and costs associated with reformulation.

Cardolite also offers a range of high performance phenalkamine and phenalkamide epoxy curing agents. Phenalkamines are an option for epoxy systems that need very fast cure even at low temperatures, excellent water and salt water resistance, outstanding corrosion protection, surface tolerance, good chemical and mechanical properties, and excellent adhesion to even poorly prepared surfaces.

Phenalkamides are designed to provide coating formulators with the benefits of both polyamides and phenalkamines in one product. They offer the fast curing and corrosion protection properties of phenalkamines, but with improved flexibility, overcoat window, and color stability that are typical of polyamides. These balanced properties enable the use of one workhorse curing agent for multiple applications in marine, offshore, protective, and industrial coatings.

A recent introduction from Axalta Coating Systems is Nap-Gard fusion bonded epoxy (FBE) powder coatings. The new 7-2500 series of Nap-Gard expands the benefits of thermosetting epoxy powder for onshore and offshore oil and gas pipelines. Combining Nap-Gard FBE powder coating

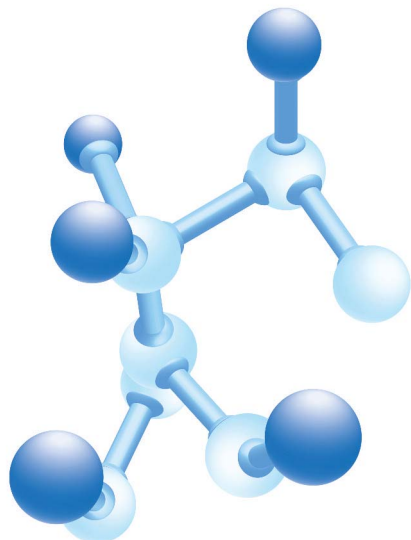
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Eternal Materials Co.	Acrylic Monomers/Oligomers for UV/EB, Resins
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Hexion	Redispersible Powders, Additives
Huntsman	TiO ₂ , BaSO ₄ , Lithopone specialties
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product numbers 7-2500, 7-2501, 7-2508FG, 7-2508, and 7-2508LG into one family allows customers to choose the product needed for their application in the color desired.

“Axalta’s Nap-Gard FBE powder coatings have been used for more than 50 years to provide corrosion protection on underground and subsea pipelines,” said Meghan Hodge, Axalta functional global product marketing manager. “During the past year, Axalta has streamlined the manufacturing processes at our Houston manufacturing center. Our facility conversions have enabled Axalta to efficiently and effectively support our customers’ needs and provide enhancements to the Nap-Gard line.”

The coatings, she adds, are suitable for even the most demanding performance requirements set by industry standards and can be used as a single anti-corrosive layer or as the primer in a dual layer or multilayer system. This family of powders is fast curing, damage resistant, thermosetting and hazardous air pollutant (HAP)-free, and has excellent adhesion to steel, with good chemical resistance.

Sherwin Williams Protective & Marine Coatings last year launched Dura-Plate 6100, a 100 percent solids high build, high physical performance, amine-cured epoxy, designed for corrosion protection of concrete and steel in municipal and industrial wastewater treatment facilities. The product helps to extend the design life of a coated structure.

The new product is designed for time and cost savings as it offers quick dry-to-touch times that reduce the potential for outgassing on buried concrete structures and rapid return-to-service times of 12 hours to prevent downtime and increase productivity. At 77 deg. F, the coating is dry to touch in only 30 minutes and it cures for immersion in 12 hours. It can be applied in temperatures as low as 50 deg F.

“This product offers the greatest physical strengths of any epoxy in our line today,” said Kevin Morris, water and wastewater market director, Sherwin-Williams Protective & Marine Coatings. “It is the premium product in the Dura-Plate family of linings.”

Dura-Plate 6100 is an ultra-low VOC, spray-applied, resinous coating capable of film builds of 125+ mils in a single coat. With multiple passes of the gun, the product will provide the end user with structural enhancement of the host substrate through semi-structural properties and lower permeability. It reduces the potential for pinhole formation due to the rapid dry-to-touch times.

“Dura-Plate 6100 shall be the product of choice for the proven solu-

tion-seeking customer because of its competitive performance results, fast dry and return-to-service times, as well as Sherwin-Williams’ application support for severe wastewater service,” added Morris. Available in off-white, the coating increases visibility and offers improved light reflectance value, allowing for inspection without entry. Its excellent chemical resistance supports life cycle improvement, and because it contains no solvent, spark hazards in confined spaces are eliminated.

The material provides a high-strength lining for severe wastewater and sewer collection structures and is designed for manholes, basins, wet wells, clarifiers, lift stations, influent channels, trenches, pipes, sumps, and digesters. It is suitable for power generation facilities, mining, food and beverage facilities, the pulp and paper industry, secondary containment, and industrial wastewater treatment.

While solvent-borne epoxies are still the norm for many protective coatings, Air Products is promoting a line of water-borne epoxy curing agents and a waterborne epoxy resin dispersion that can achieve similar or better results as solvent-borne products.

At a special Toronto-area event hosted by Brenntag Canada Inc. in November, technical product specialist with Epoxy Americas, Peter Lucas compared the two approaches to reducing VOC’s of traditional solvent-borne epoxy formulations; waterborne and high solids.

“Compared to waterborne systems, epoxy and amine react faster in high solids formulations,” he pointed out. “There are lower VOC’s to contend with, high performance, improved worker safety and less environmental impact overall.”

The downsides of the high solids approach to control VOC’s include short pot life, slow dry times, and more brittle films than usually occurs with older, more conventional solvent-borne formulations.

With the right formulation combinations of epoxy resin dispersion and curing agent, waterborne formulations recapture the long pot life and fast set times of the older formulations. The waterborne products, however, are formulation sensitive, meaning you have to check things in the lab carefully before you start manufacturing.

“The majority of waterborne epoxy today is used on concrete, in primers and topcoats,” Lucas continued. “The market has been slow to adopt waterborne metal primers because of performance issues with early generation waterborne technology and cost factors.”

Among the newest generation waterborne products he discussed was Anquamine 419 curing agent, which is used with Ancarez AR 555 epoxy resin dispersion. This is a long pot life, fast set-time combination.

“Using liquid epoxy resin in place of the epoxy resin dispersions, waterborne advantages include a visible end of the pot-life,” Lucas said, “excellent pigment acceptance, high gloss and highly aesthetic coatings, as well as the capability to adhere to difficult substrates. There are also excellent barrier properties, excellent scratch resistance, and low VOCs.”

“The newly optimized products can decrease the cost of waterborne systems while not reducing performance,” he continued. It is now possible, for example, to produce a zinc-rich waterborne formulation, which offers better cathodic protection of steel than comparable solvent-borne zinc-rich formulations do.

Epoxies, then, are one of the best established and best understood ranges of materials out there. But they continue to surprise users who think all the possible formulations have already been developed. ■

DeFelsko Corporation, a leading U.S. manufacturer of inspection instruments, offers a variety of instruments to meet the coating industry's needs. Founded in 1965, DeFelsko celebrated their 50th anniversary in 2015 with a building expansion and some exciting and revolutionary product launches. Below is a summary of the important additions to the PosiTector and PosiTest line of inspection instruments.

Profile

DeFelsko offers two solutions for measuring peak-to-valley surface profile height: the PosiTector SPG Surface Profile Gage, a depth micrometer fitted with a fine pointed probe and the PosiTector RTR Replica Tape Reader, a digital spring micrometer.

The PosiTector SPG surface profile probe has been redesigned and features a more durable Alumina wear face and two new separate probes - a cabled version of the built-in SPG probe and one with an extended range and rounder tip for measuring the profile of textured coatings.

The NEW PosiTector RTR-P probe uses thickness and imaging sensors to



characterize replica tape and generate images and statistics of the original surface. Features include the ability to measure peak density (Pd) and generate 2D/3D images and SDF files (Advanced models only).

Adhesion

The next generation PosiTest AT-A Automatic Adhesion Tester measures the adhesion of coatings to metal, wood, concrete and other rigid substrates. New features include a larger, impact and scratch resistant color Touch Screen display with keypad, user adjustable pull rate, pull limit and hold time, and the ability to record the results as pass/fail and

the nature of fracture — cohesive, adhesive and glue failures. Wirelessly connect the adhesion tester to your smart device using our free app to effortlessly create and share customized reports. Add images and notes using your cell phones camera or keyboard — ideal for capturing a picture of the dolly face.

The PosiTector body accepts all PosiTector SPG, RTR, 6000, 200, DPM and UTG probes easily converting from a surface profile gage to a coating thickness gage, dew point meter or wall thickness gage.

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Looking for the **Cure**

There are some fresh ideas to look at in ovens technology.

Oven technology seems so familiar to many people in the coatings business that the finer points get overlooked. However, there are always design differences and subtle advantages to consider when buying a curing system.

And there are also new technologies on the market that, in certain industry segments, can offer significant savings in energy usage. Considering that energy consumption is the largest ongoing cost of curing, with labor costs for cleaning as perhaps second largest, it's important to check out what's available.

One company showing breakthrough technology at Fabtech in Chicago last November was the Swedish-based IRT division of Hedson Technologies. The company, which has its Canadian HQ in Oakville, ON, specializes in infra-red technology, which it combines with gold-plated reflectors.

Linus Ekfeldt, business unit manager for curing, said the advantage of gold-plated reflection is that it can reflect 98 percent of the IR energy. This leaves only two percent to be cooled down.

"That's what gives our lamps a 20,000-hour warranty," he explained. "Also, all our systems are fan-cooled, which helps extend lamp lifespan."

Chrome could be alternative to gold, but it actually has a certain degree of blackness to it. As a result, it only gives 90 percent reflection. Aluminum could be used also, but its tendency to oxidize over time would be a liability. Gold, on the other hand, won't oxidize to any noticeable degree.

"The short-wave IR means we can put in a lot of power using a very small surface," Ekfeldt added. "It's all electric, and we can put 800 kw into one square meter with our IR."

Some customers, he noted, like the IR because it doesn't take up the space needed for long-wave IR or a gas oven. Also, an IRT system



A recent unit from Wisconsin Oven.

EXHIBITING COMPANIES

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Heating units as used in Hedson's IR technology.

“Chrome could be alternative to gold, but it actually has a certain degree of blackness to it. As a result, it only gives 90 percent reflection. Aluminum could be used also, but its tendency to oxidize over time would be a liability. Gold, on the other hand, won't oxidize to any noticeable degree.”

can easily retrofit onto existing machines, using modular units.

"Process speed is the key," he pointed out. "And we can offer systems from 200 kw up to 56 megawatts, which would be an 80-meter long cabinet."

Built to provide maximum economy while assuring heat uniformity, Park Thermal's re-circulating batch ovens are engineered and built for a number of processes including drawing, tempering, curing, drying, stress-relieving and aging, where temperatures up to 1400°F are required. Uniform temperature is achieved by use of custom engineered fans and baffles.

Each oven, the company said, is custom-built to suit requirements. Mild steel is used for heat up to 600 deg. F, aluminized steel for heat to 850 deg. F, and stainless steel for temperatures up to 1400°F. The units are custom-manufactured to the dimensions required.

Solid state indicating temperature controller is standard equipment on all models. Special or electronic programmer, recorder/controller may be incorporated in the temperature control package, if required.

Park Thermal is a manufacturer of recirculating batch ovens. These are engineered to handle a range of processes: drawing, tempering, cur-

ing, drying, stress-relieving and aging.

The units, the company said, can handle temperatures up to 1400 deg. F. Uniform temperature is achieved by utilizing custom engineered fans and baffles.

Therma-Tron X Inc. has ovens featuring aluminized steel interiors and exteriors, with blowers, fans and ductwork sized for optimal air circulation. The company said key features include elevated platforms, special material handling systems, clean features for Class A finishes, even air distribution, recirculation, air filtration, fast ramp-up, quick purge, low energy requirements and heat recovery and reuse.

It has a full range of batch ovens, conveyerized ovens, infrared zones, convection curing ovens, dry-off ovens and various custom heat processing solutions. The company is experienced at designing units that fit spatial needs and utility requirements., and its ovens can be incorporated into finishing systems or configured as stand-alone units.

The range of available features includes automatic exhaust ratios based on production rate, minimized heat loss with proprietary slot-rail panel design, air velocity control, VFD recirculation blower controls, low horsepower propeller fans for increased air flow, and purge fans.

Wisconsin Oven Corp. has seven standard sizes in its SWN walk-in batch oven line. These units are designed and manufactured to be shipped as kits, the customer assembling the oven body and installing the main components at the final job site, which reduces the initial investment. A two to three-person crew, the company said, can typically assemble the oven and have it operational in four to six days.

The control panel and gas train, as well as the doors, are factory assembled prior to shipment. Each KWN batch oven features top-down air flow, with supply ducts located along each side of the chamber for air distribution along the entire length of the chamber.

Features available include heavy-duty doors with ball bearing hinges, four-in. thick, no.6 density, semi-rigid batt insulation, an aluminized interior and exterior of sheet metal. There are airflow pressure switches on all blowers, a door limit switch to shut the burner to low fire when the doors begin to open, and a motorized, modulating gas control valve. Options include programmable controllers and chart recorders, and process timers.

The advantage ovens have over some types of technology is that they can be configured in numerous ways, depending on what customers need. The range isn't infinite, but if your company does need an oven for curing, there's always a supplier out there who can produce exactly what's needed. ■

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March/April 2016

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new PRODUCTS

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wedgewire screen or perforated plate 'screen' for severe-duty jobs involving high material loadings, abrasive materials, high- and low-temperature conditions and corrosive environments.

Replacement screen cylinders can be fabricated using new screen frames, or damaged screen cylinders can be stripped and

rescreened, reducing cost and environmental impact. Replacement screen ordering programs offered to cut cost and delivery times include: Blanket Order, Quantity Discount Just-In-Time, and other programs customized to individual needs.

In addition to supplying exact replacements, the company can recommend alter-



Gardner Cube

nate screen specifications to improve the balance between screen life, capacity and resistance to blinding (plugging). Screen mesh options include #304 or #316 or magnetic #430 stainless steel; synthetics, including Nylon, polyester or polypropylene; and exotic alloys such as Duplex, Hastelloy, Monel or Alloy20. A new on-line check-box quoting system provides users with rapid pricing and quick shipment information.

The company also offers K-Series replacement screens for round vibratory screeners of any make or model, and manufactures a broad range of circular vibratory screeners, centrifugal screeners, and circular fluid bed dryers, coolers and moisturizers.

Solvent Alternative



Cutline: ZemaSol

TBF Environmental Technology has introduced ZemaSol as a solvent alternative for xylene, parachlorobenzotrifluoride (PCBTF), tertiary butyl acetate (TBAC) or toluene. A multi-purpose solvent, it can be widely used in industrial cleaning and formulations for epoxies, urethanes, alkyds, inks, and adhesives.

TBF says it is also very effective as a multi-purpose cleaner. Its properties are claimed to be effective at reducing viscosity of products, and allow formulators to improve sprayability, flow and dry of coatings.

The product has a very low maximum incremental reactivity (MIR) value, no ozone

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J.M. Huber Corp., through its Huber Engineered Materials division, has acquired the Martinswerk business of AkzoNobel Corp.
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Smart coatings, the multi-functional materials, are set to take over various markets and market niches currently dominated by more conventional coatings materials, says a new report.
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Tesla NanoCoatings has announced development of a breakthrough wet-on-wet application process for Tesla's primer and topcoats, a step it says strengthens the company's position in carbon nanotube corrosion-protection technology.
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PPG NAMES SLATE OF VICE-PRESIDENTS
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creators or depletors, and no HAPs. It is VOC-compliant in the US and Canada, and is considered an ultra-low VOC in the South Coast Air Quality Management District (SCAQMD). It is also a low odor solvent, non-carcinogenic, non-mutagenic and a preferred solvent in improving occupational health and safety.

ZemaSol is claimed to be very effective in rapidly reducing solids content and viscosity of epoxy resins from 100 percent to 60-50 percent rapidly, using minimal solvent. It works in a similar manner for urethane polyols, and alkyd top primers and top coats. It is also an effective cleaner for epoxy, urethane, alkyds paints, coatings, application equipment as well as inks and adhesives.

Polyester-Polyurethane Enamels

PPG Industries' industrial coatings business has introduced Spectracron 380 poly-iothane HS (High-Solids) series coatings. These are two-component polyester polyurethane enamel coatings that provide excellent corrosion resistance when applied directly to metal or over primer-coated metal surfaces.

Designed for enhanced surface protection and durability in industrial and architectural environments, Spectracron 380 Poly-iothane HS coatings can be used for hydraulic pumps, trucks and trailer frames, water and gas meters, agricultural and construction equipment, and metal framing assemblies for commercial rooftop heating, ventilation and air-conditioning (HVAC) units.

Scott Laney, PPG product manager, liquid coatings, said versatility is a major benefit of the coatings. "These products can be applied over cleaned and blasted steel or top-coated over surfaces that have not been sanded or abraded. They also can be used as clear coats to protect steel from oxidation prior to fabrication, which can preclude the need for phosphates and other chemical cleaners as metal goes through milling, stamping and coating."

Spectracron 380 poly-iothane HS coatings are available in a broad range of glosses and standard and custom colors, including metallic and clear-coat finishes, and they withstand exposure to chemicals, abrasion and impact. The coatings can be applied using most conventional spray equipment, including air, airless, air-assisted and electrostatic tools.

Alkaline Zinc-Nickel

Enthone has introduced Zincrolyte Sprint, an alkaline zinc-nickel process. It has been engineered to consistently deliver high throughput plating in bulk operations, on complex parts commonly used in automotive and other high value applications.

It features a high current efficiency that is maintained over the entire bath life, with an enhanced current load capacity to deliver significantly faster plating speeds than conventional zinc-nickel processes. The zinc-nickel process, says Dr. Bjoern Dingwerth, global product line manager – Enthone Corrosion Resistant Coatings, requires less maintenance than conventional processes as it does not require any freezing such as carbonate crystallization and does not create any scales on anodes or other equipment. Its higher conductivity results in reduced cooling.

"Zincrolyte Sprint," he adds, "meets the most demanding automotive industry corrosion protection requirements. The new process consistently provides exceptionally high current efficiency paired with increased burning resistance. This results in high plating rates with smooth and uniform deposits in both high and low current density areas."

Wet-on-Wet Process



Teslan Primer

Tesla NanoCoatings has announced development of a breakthrough wet-on-wet application process for Teslan primer and topcoats, strengthening the company's position in carbon nanotube corrosion-protection technology.

Named 2x1 Wet Edge, the process is claimed to deliver major time and cost savings along with technologically advanced cor-

rosion protection advantages. Now, applicators can proceed to Teslan 3000 and 3100 topcoats immediately after applying Teslan 1101 primer, thus saving up to 50 percent of the time and money required for conventional three-coat painting.

The company developed 2x1 Wet Edge for the oil and gas industry and other industries in harsh, corrosive environments. It says the process is particularly valuable in offshore oil and gas surface and subsea operations as well as refineries and petrochemical plants.

"Our 2x1 Wet Edge process offers double the corrosion protection at approximately half of the cost compared to all other products on the market today," said Tesla NanoCoatings president Todd Hawkins. "As we work with our customers, we continue to gain more and more understanding about their corrosion challenges. The advantages of a same-day, two-coat system, compared to the old three-coat products, are tremendous pluses for those facing the demands of minimal downtime and reduced maintenance budgets."

He added that it allows for fast wet-on-wet application of topcoat over uncured primer.

"Our development team has NACE III, SSPC C1 and C2 and other certifications along with vast experience in the challenges of growing maintenance backlogs amid reduced resources for the fight against corrosion. Our knowledge and experience blend with our carbon nanotechnology formulations to make Teslan 2x1 Wet Edge the best process for today's harshest, maintenance-critical corrosive environments."

VOC-Compliant Solvent

TBF Environmental Technology Inc. is commercially launching BerdeSol, the company's latest volatile organic content (VOC)-compliant alternative. This follows its launching of ShiraSol and KradaSol.

BerdeSol can replace slow-evaporating conventional solvents like heptane, aromatic 100, cyclohexane, methyl amyl ketone (MAK), perchloroethylene, and butyl acetate. Not only does BerdeSol perform similarly to these solvents, it also eliminates the emission of VOCs and other toxic pollutants.

In its efforts to improve Southern Californian air quality, the South Coast Air Quality Management District (SCAQMD) has created a new class of clean air solvents (CAS) for solvents

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which, among other criteria, contain no more than 25 grams of VOC per liter of material. SCAQMD has certified BerdeSol as one. Independent ASTM 313-91 testing, the company adds, has confirmed BerdeSol is VOC-compliant throughout the US and Canada.

"The chemical industry has been waiting a long time for industrial solvents that perform effectively yet meet the VOC content limits of SCAQMD, the EPA and other air quality regulators," said David W. Rowat, CEO of TBF Environmental. "Our new products provide alternatives, which are effective and compliant."

Powder Characterization Tester

Freeman Technology has launched the Uniaxial Powder Tester (UPT) a standalone uniaxial tester for simple, sensitive and cost-efficient powder characterization. Developed in collaboration with the University of Edinburgh and a major industrial powder processor, the new tester delivers automated, highly repeatable measurement and provides a cost effective alternative to traditional powder testing techniques. It offers, the company claims, significant value to engineers and QC analysts working across a number of industries, from bulk solids handling to pharmaceuticals.

"Uniaxial powder testing is a simple and intuitive method that measures an intrinsic property of a bulk solid," said Tim Freeman, managing director of Freeman Technology. "The UPT draws on our in-depth understanding of powders and the precision engineering that underpins the worldwide success of the FT4 Powder Rheometer. The result is a completely new, repeatable, versatile, low cost and robust powder tester for process development, trouble shooting and QC."

The instrument measures unconfined yield strength (UYS), a parameter typically derived indirectly via biaxial shear cell analysis, which is widely used to assess and rank the flowability of powders. Uniaxial testing involves the construction of a consolidated powder column, which is then fractured through the application of a vertical stress to directly measure UYS. Fundamental to the successful implementation of the technique is the construction of a uniformly consolidated powder column, and subsequent removal of the containing sleeve with minimal disturbance of the compacted column.

Uniaxial Powder Tester.



"This new tester has a number of innovative features that are crucial to ensure reproducible measurement for a wide range of powders, including a unique and novel system for the application of double-ended compression" said Freeman. "Extensive in-house research has shown that the UPT can successfully measure and rank UYS compressibility and density of many industrially relevant powders, even those that are relatively free-flowing."

The new instrument is available in either a manual or an advanced version. Both deliver the same data with the same high repeatability, while the advanced version also offers the advantage of increased automation and reduced operator input.

Finishing Flap Discs

Walter Surface Technologies has introduced the Enduro-Flex 2-in-1 TURBO, the latest addition to the company's Enduro-Flex portfolio of finishing flap discs. This incorporates Walter's proprietary Cyclone technology that contains a blend of self-sharpening grains and cooling agents and provides ultra-high removal and blending rates without causing surface discoloration. It is designed for steel, stainless steel and aluminum fabricators.

The Enduro-Flex 2-in-1 TURBO also uses Blendex technology that allows for smoother surface conditioning. With these added features, operators can eliminate the need to switch between multiple abrasives to achieve the desired finish.

Jonathan Douville, product manager for Walter Surface Technologies, explains, "There is a growing demand for one-step solutions in the prep-to-paint steel market, and Walter is the first company to incorporate both speed and surface conditioning technology into a single flap disc."

Compared to a multiple-step application process for weld removal and paint-to-prep finishing, the company says the Enduro-Flex 2-in-1 TURBO helps metal fabricators cut operational costs, reduces abrasives change over and boosts removal rate times, resulting in substantial long-term cost savings. It is available in 4-1/2-in and 5-in. flap discs.

Truck Oven Handles Baking



911 Grieve.

Grieve Corp.'s No. 911 is an electrically-heated, 500-deg. F truck oven, used for paint baking. Workspace dimensions measure 39 x 36 x 48 in., while 30KW installed in Nichrome wire tubular heating elements and a 2,000 CFM, 2-HP recirculating blower provide heated horizontal airflow to the workload.

This truck oven features an aluminized steel exterior, four-in. thick insulated walls and a Type 304, 2B finish stainless steel interior with continuously back-welded seam construction. A 650 cfm powered forced exhauster, plus motorized dampers on the fresh air intake and exhaust for accelerated cooling, are also included.

Two pairs of oven truck wheel guide tracks are built on top of the two-in. insulated oven floor. A digital indicating temperature controller, strip chart recorder, SCR power con-

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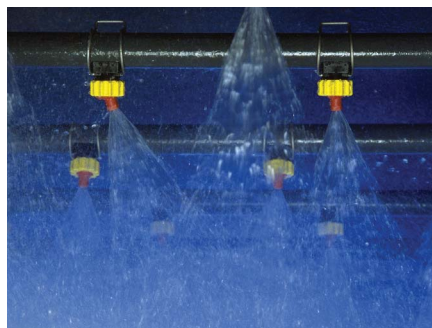
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troller and a four-color tower light to indicate process status and over-temperature alarm are on board.

Vinyl Acrylic Binder



Dow ROVACE.

Dow Coating Materials has introduced ROVACE 10, a new vinyl acrylic binder. Developed with both the formulator and contractor in mind, this low-volatile organic compound (VOC) technology for flat to semi-gloss interior paints is said to offer excellent manufacturing capabilities.

For formulators, the flexibility of ROVACE 10 emulsion helps reduce the number of considerations factored into a paint formulation to help meet different quality points across paint lines. For example, the emulsion may be added during the grind stage without any adverse effects on property performance.

"While some binders' rigidity are suited best for one type of paint, the manufacturing flexibility of ROVACE 10 emulsion allows formulators the option to combine this technology into a broad range of paints with varied pigment volume concentrations (PVC), including: premium and mid-tone flat paints for new construction, quality satin finish formulations and semi-gloss blends," said Linda Adamson, technical service manager, Dow Coating Materials.

The flexibility of the material also offers excellent processing capabilities for easy pumping and handling. For paint contractors, it offers good spray application and touch-up in starting point formulations.

At 55 percent solids, this new technology is APEO-free and solvent-free, and can meet the growing demands of consumers and retailers. In formulated paints, ROVACE 10

Emulsion has also undergone testing to show it can be formulated to meet MPI specifications #44, #53, and #143.

For enhanced performance while maintaining low-VOC, it may be used with ACRY SOL RM-725 rheology modifier, an easy-pouring associative thickener that provides better applied hiding, enhanced surface appearance and better touch-up. This APEO-free, solvent-free HEUR offers excellent sag-flow balance when combined with ROVACE 10 emulsion.

Photocurable Elastomer



Kuraray Photocurable.

Employing one of its proprietary technologies, Kuraray Co., Ltd. (Tokyo, Japan) has developed a photocurable elastomer. This technology, the company says, enables good control of the molecular weight as well as distribution of the elastomer and the photocurable portions within the molecular structure of a polymer. Kuraray says this process yields superior curability and elasticity compared with other photopolymers on the market.

Rapid UV curable photopolymers have been developed for a wide variety of fields, including adhesives and coatings, due primarily to their excellent workability. Using proprietary living anionic polymerization technology, which permits precise design of polymers, Kuraray has created such thermoplastic elastomer products as Kurarity, an acrylic elastomer with superior elasticity, transparency and weather resistance. Using the know-how cultivated through these endeavors, it has successfully developed this photocurable elastomer.

The length of the elastomer portion of the molecule can be adjusted as designed, providing desired elasticity and strength. A wide range of properties can be achieved

by combining with various monomers that are compatible.

The curing time is short compared with that of common photopolymers, and the cured elastomer has elasticity. Depending on the design, adhesive properties can also be achieved.

It reportedly has excellent dimensional stability, and shows minimal shrinkage upon curing. It possesses the characteristics of typical acrylics, including transparency, weather resistance and adhesiveness.

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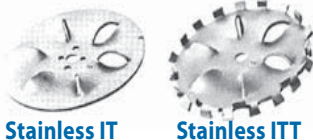
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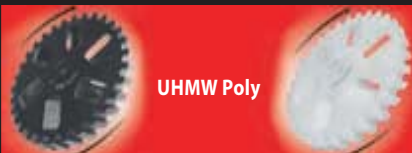
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“ au delà de la chimie”

Plus que des mots, notre devise représente la volonté d'offrir à nos clients et fournisseurs un service unique et inégalé.

Notre personnel de grande expérience tant dans le service à la clientèle, la vente, la réglementation, et le service technique, saura vous appuyer dans vos projets de développement. Notre laboratoire de R&D à la fine pointe de la technologie et constamment tenu à jour par l'ajout de nouveaux équipements qui sont un appui de taille pour l'intégration de nouvelles technologies dans vos lignes de produits.

La mission d'Inortech a toujours été de repousser les limites des possibilités actuellement offertes, pour offrir à nos clients et fournisseurs les solutions les plus innovantes et avant-gardistes du moment.

L'ensemble de notre personnel assiste à de nombreuses conférences, formations, et congrès, afin de se perfectionner et de confirmer leur dominance technique et leurs qualités humaines, tant reconnues par le marché.

Depuis maintenant 25 ans, Inortech n'a de cesse de donner à ses clients des occasions uniques de développement par l'appui technique incomparable qu'elle seule est capable de leur offrir. Pour nos fournisseurs, il s'agit d'une assurance de visibilité et de mise en marché hors pair de leur gamme de produit.

Pro-actifs dans l'industrie des encres, adhésifs, plastiques, et revêtements, attentifs et attentionnés aux problématiques modernes, la sélection de nos fournisseurs représente l'élite technologique disponible, et renforce la solidité ainsi que la longévité des liens qui unit Inortech à ses partenaires.

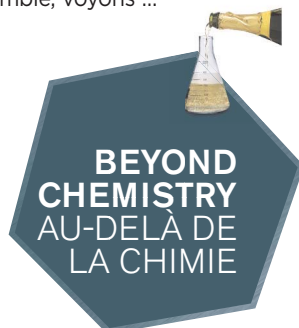
Ce lien nous rend extrêmement fier et nous pousse tous les jours à donner le meilleur de nous-même.

Afin d'être au plus près de notre clientèle, nous avons établi un réseau de stockage par l'utilisation d'entrepôts publics à travers le Canada, là où les besoins sont établis. De ce fait, nous offrons à notre clientèle la flexibilité et la proximité nécessaires à une époque où les délais sont un facteur clé de réussite tant pour nos clients que fournisseurs.

Maillon indispensable de réussite Inortech s'est toujours démarqué par une connaissance parfaite des besoins de ses marchés, de l'évolution technologique et commerciale actuelle, et s'adapte en permanence aux modifications incessantes de notre industrie.

Prête à relever tous les défis auxquels elle a été, est et sera confrontée, Inortech est l'atout incontournable de votre réussite, grâce à son modèle unique et avant-gardiste d'entreprise .

Ensemble, voyons ...



“beyond chemistry”

More than words, this motto represents Inortech's "raison d'être", always striving to give a unique and unparalleled service to our customers and suppliers.

The great experience of Inortech's personnel at the customer service, sales, regulatory and technical level will, without a doubt, enable you to successfully establish new technologies. Our laboratory is always maintained at the cutting edge of technology and we constantly make sure that the latest equipment is available. In doing so, we ensure outstanding support to our customers and suppliers.

Inortech's mission is always to push to the limit of the technologies offered by our suppliers and others for innovative and "avant garde" solutions.

In order to maintain our technology expertise and the excellent interpersonal skills so well recognized by the market we serve, all Inortech's personnel, without exception, are invited to go to conferences, congresses and to follow continuous formations.

For the last 25 years, Inortech has strived to help customers successfully secure new opportunities supported by the unparalleled technical team. Also, for our suppliers, we assure an outstanding visibility and an excellent market penetration.

Being proactive in the market we serve - coating, inks, plastic and adhesives - and being especially attentive to our customers' demands and problems, we always make sure that the selected supplier is at the cutting edge of their technology. This approach strengthens and guarantees a long and fruitful partnership with our customers and suppliers.

In this day and age, delivery on short notice and on time is a paramount asset for our customers and suppliers. Our Canadian public warehousing network helps us to make sure that our customers have the material when needed and on time.

Inortech's success has always been its outstanding capacity to understand new technologies and to be able to explain them to our customers. This forces Inortech's staff to always adapt and be on top of the ever-changing market conditions.

Because of its unique and "avant garde" business model, Inortech can be part of your team and pivotal to your success.

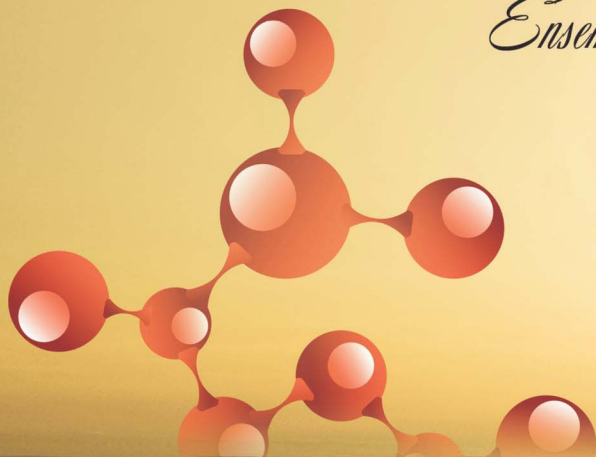
Together, let's go ...



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