



CFCM

CANADIAN FINISHING & COATINGS MANUFACTURING MAGAZINE

Corporate Profile Issue

PLUS

- Industrial Finishing
- Plating and Anodizing
- Paint and Coatings Manufacturing



www.cfcmm.ca

JANUARY/FEBRUARY 2018



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Develop and produce high quality coatings designed to help our clients meet evolving market needs. CANLAK wants to be the leader in the manufacturing of industrial wood coatings by concentrating its efforts on quality, customer service and innovation.

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CANLAK offers much more than a complete product line. Our team of 130 employees is dedicated to your satisfaction.

HEAD OFFICE:

674 Principale, P.O. Box 1840
Daveluyville, Qc, G0Z 1C0
T 1.819.367.2201

ONTARIO DIVISION:

400 Bentley Street
Markham, ON L3R 8H6
T: 1.905.475.4282
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For more information: www.sata.ca

SATA Canada Inc.
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Office +1 905 660 1101
Toll free: +1 844 554 SATA (7282)
Fax: +1 905 760 1250
E-Mail: contact@sata.ca

SATA Canada opened for business on January 1, 2017, the first full subsidiary of SATA GmbH & Co. KG.

SATA paint spray equipment has been available in Canada since the 1980s. The opening of SATA Canada marks a new era in how the company will service and market its products for Canadian customers.

The new headquarters of SATA Canada is in Vaughan, Ontario. The facility, close to Toronto, occupies a total of 15,000 sq. ft., including offices, warehouse and training centre. The headquarters also includes a service facility right in the building, with the goal of turning any product around within a 24-hour period.



Whether high-end vehicles, exclusive yachts and boats or designer furniture, when glossy surfaces are of utmost importance, painters swear by SATA. SATA products are designed and manufactured in Germany allowing demanding customers worldwide to obtain the perfect tools, to create perfect finishes.

SATA sets the standard for paint spray guns, cup systems, breathing protection, filter technology and accessories. Our close cooperation with painters from various trades and industries as well as our research and development departments with application technicians from the leading paint manufacturers allow us to produce superior products of the highest quality.

“SATA Quality” is a firm conviction for any painter: reliability, durability and ergonomics of their SATA products are not something to be questioned.

The SATA brand is headquartered in Kornwestheim, a town in the district of Ludwigsburg, Baden-Württemberg, about 10 kilometers north of Stuttgart. SATA is a leading spray gun manufacturer with 276 employees, turnover of \$130 million CDN (2017) and active in over 100 markets worldwide with 2,436 customers.

SATA has a long history of producing superior products of the highest quality dating back to 1907. The company's original focus was on medical instruments but began production of spray guns in 1925. The following year saw the first spray gun patent and by 1931 the company had its own line of commercially available SATA branded guns.

Throughout its history SATA has focused on meeting the demands of new paint technologies and perfecting its equipment to attain consistency for the industry.

In 1990 SATA introduced its High Volume Low Pressure (HVLP) and Reduced Pressure (RP) technologies, which give painters more options for atomization, while addressing growing environmental concerns.

In 2005 SATA pioneered a disposable cup system, SATA RPS (Rapid Preparation System) for the efficient mixing, painting, refilling and storing of paint. SATA RPS enhances the productivity and critically reduces the use of cleaning agents and solvents.

SATA continues a tradition of quality and technological leadership with the introduction of the SATA air vision 5000 system for painter health protection and the SATA truesun LED colour check lamp.

New this year is SATA's first loyalty program, coins & more. Every RPS box has a QR code with a coin value. Collect the coins for rewards, e.g. Callaway golf balls, De'Longhi coffee makers, DeWalt Jobsite Bluetooth Speaker and even SATA spray guns. Download the SATA Loyalty App from the Appstore or Google Play Store. www.sata.com/en/loyalty

At SATA our success is an obligation to us. Our employees and distribution network will always do our best to ensure painting will remain plain fun.

For further information, please contact:



SATA Canada Inc.

125 Buttermilk Ave., Vaughan, ON, L4K 3X5

Office: +1 905 660 1101

Toll free: +1 844 554 SATA (7282)

Fax: +1 905 760 1250

E-Mail: contact@sata.ca

Internet: www.sata.ca

STONE TUCKER INSTRUMENTS

Stone Tucker Instruments continues to be the supplier of choice for coating inspection and quality control equipment to Canada's coatings industry. Facilities in Niagara, Ontario and Edmonton, Alberta, provide service excellence and quality products to customers across the country.

In addition to supplying industry-best coatings and non-destructive inspection equipment, STI provides expert recertification, calibration, and repair services at both locations on our full range of coatings inspection, NDE, and QA equipment, in accordance with manufacturers' specifications, and national and international standards. Western Canada, call (587) 758-8367, or Eastern Canada, call (905) 688-5800.

As DeFelsko's authorized Canadian distributor, we keep extensive inventory of the full product line in both locations for fast delivery, including DeFelsko's newest gear: PosiTector SST Soluble Salt Tester, and the new PosiTector RTR-3D Replica Tape Reader, Roughness Meter & Surface Imager. Let our Sales Manager familiarize you with the new PosiSoft Desktop software for custom, professional PDF inspection reports.

Stone Tucker Instruments is also Canadian distributor for MBX Bristle Blaster, TQC field testing and lab equipment, Testex Replica Tape, salt test kits and salt removal solutions from Chlor*Rid International, PCWI and Tinker & Rasor high and low-voltage holiday detectors, durometers and precision thermometers by PTC - all in stock and serviceable at both locations.

Call us for pricing on Western Instruments Magnetic Particle equipment and pit gauges, Dakota Ultrasonics thickness gauges and flaw detectors, Spectroline UV lights, GAL Gage, Lascar data loggers, Pelican cases and lights, and Kestrel weather meters.

Stone Tucker Instruments provides first-class instrument calibration and repair service. Long-form certificates are issued to manufacturers' tolerances, in accordance with national and international standards, using verification standards traceable to NIST or other certifying body. Most service can be performed in three to five business days.

Owner Bob Tucker, a NACE-certified coatings inspector and marine coatings specialist with over 20 years' experience in a variety of industries, brings an unique level of expertise to customers due to first-hand knowledge of coatings project requirements. Technical Sales Manager Tyler Heywood, in our Ontario office, is a NACE-certified coatings inspector with many years experience both as an inspector and technical sales rep with major coating manufacturers. Other personnel receive factory training on a variety of products, have completed the SSPC Inspector Workshop, and receive on-going in-house training. Technical knowledge coupled with practical application experience ensures STI offers exceptional customer service and support for all our instrument lines.

Stone Tucker Instruments serves eastern Canada from 51 Scott Street West, St. Catharines, Ontario, and is looking forward to moving to our new western location in Edmonton, AB, at the end of March 2018. Until then, we continue to serve our western customers from 8615 6 Ave SW.

To find what Stone Tucker Instruments can do for you, call today at (905) 688-5800 or (587) 758-8367 for western Canadian customers, or email us at info@stone-tucker.com, and check our full line of inspection and test products at www.stone-tucker.com.



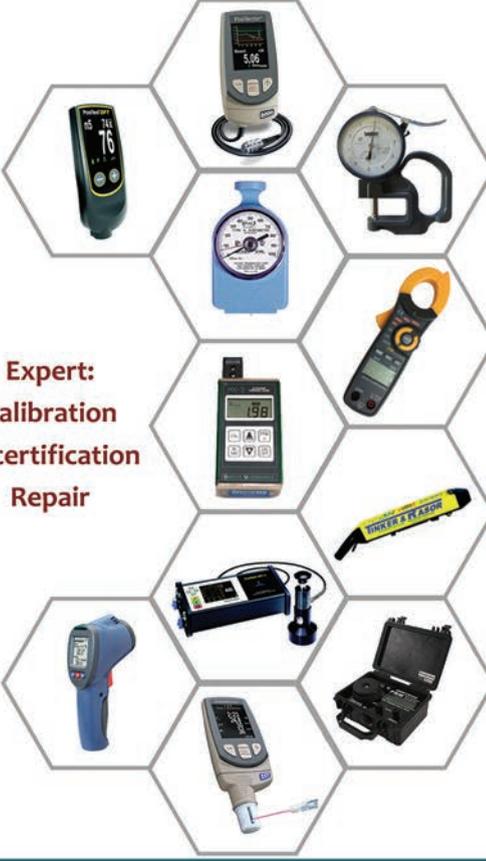
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Ontario: 905-688-5800 • Alberta: 587-758-8367 • info@stone-tucker.com • www.stone-tucker.com



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EDITOR

Edward Mason
416-423-0150
edward.mason@cfcfm.ca

PUBLISHER and SALES

Pete Wilkinson
705-296-3030
Fax: 705-296-3031
pete.wilkinson@cfcfm.ca

**VICE PRESIDENT, ACCOUNTING,
CIRCULATION and SALES**

Brian Jones
905-405-1500
Fax: 905-592-1880
brian.jones@cfcfm.ca

GRAPHIC DESIGN

Allan S. Bates
Green Apple Prepress
allan.s.bates@sympatico.ca

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Wilkinson Media Inc.

Suite 259
2186 Mountain Grove Ave.
Burlington, ON Canada
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Support for **INDUSTRY**

EVEN FOR PEOPLE who work in manufacturing, the vast range of industries is often too much to grasp. In a previous job, I edited a magazine for the plastics industry, and I never ceased to be amazed at the niches entrepreneurs found, making things no-one else did, or could.

Industrial policy in Canada has long been a neglected area. The slide in the number of companies and factories after the 2007/8 economic meltdown was scary – that plastics magazine I worked on died as a result – and total industrial activity took a long time to rebound.

One of the strangest policy missteps was the move some years ago, at all levels of government, to de-emphasize manufacturing as a critical economic sector. We were

told service industries would take over, and that the digital world would leave manufacturing to the developing nations.

The reality, of course, was that call centers didn't pay much, and in many cases ended up being in Asia. Further, algorithms, a word no-one but a few computer scientists used a decade ago, have taken over much of what used to be handled by people. That includes aspects of manufacturing, too, as automation takes ever deeper bites into the workforce. But many tasks in industry still need finishing or human supervision, and will for years to come.

Re-shoring – the process of returning manufacturing work to this continent from China or elsewhere – is said to be increasing, though the

numbers are disputed. What is certain is that off-shoring, which means sending it elsewhere, has declined sharply, as manufacturers seek to reassert control over quality and delivery.

There's an item in the News section this issue about a technique developed by Germany's Fraunhofer Institute, which can determine flow properties of paint. Fraunhofer, which includes 69 research facilities, funded mostly by industry and employing 25,000 people, has its flaws; but since its establishment in 1949, it has done an immense amount to further German industry. Germany is the stand-out example of a first-world economy that still manufactures quality products, largely because of enthusiasm to develop new technology.

Canada has made gestures in this direction, such as the National Research Council or various provincial initiatives, but these never fully achieved the impact they need to have. It takes a lot of time and long-term funding to build a capability to support industrial development. Instead, as Gary LeRoux's article in this issue points out, there is higher emphasis placed on the downsides of manufacturing – VOC emissions, or use of mica. These things need to be monitored, but without a positive policy of investigating alternatives, government constantly finds itself adversarial to a major segment of its own economy.

And if, as many pundits tell us, universal basic income is the wave of the future, then we'll need as many options as possible to generate that income. We can't expect the oil industry or mining to carry all the freight on that.

*Edward Mason
edward.mason@cfc.ca*

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Gemini has always believed in quality training and offers classes that include special effects, glazing techniques, touch up and repair of finishes, coating technologies, green coatings and spray techniques.

Wood coatings are a focus for Gemini, whether it is a conversion varnish, urethanes and acrylics, UV curable coatings,

waterborne or LEED compliant coatings. Gemini's technical staff works to stay on the leading edge of coatings technology.

Each Gemini product and service offers a promise exemplified in our company slogan, Finish With Excellence. Every Gemini Industries co-owner is committed everyday to backing that promise up!

Since 1964 Gemini Industries has been dedicated to the wood finishing industry. Founded in Oklahoma, Gemini began as a local manufacturer, grew into a regional player in the 70's, a national supplier in the 80's and now provides wood finishes to the entire US market and Canada.

Excellence is at the heart of everything at Gemini. As an employee owned company, Gemini is a different company than most wood finish suppliers. When you are talking to a Gemini team member you are talking to someone who has a stake in the outcome, an owner. You will find that you are treated better, supplied better and supported better because of this ownership culture.

It's the people at Gemini that make the difference; coming from a mid-western culture and one of ownership, the people at Gemini are interested in only one thing, supplying you with the best wood coatings in the market today. The 150 team members at Gemini are dedicated to the manufacturing of superior wood coatings, wood coatings technology and to servicing their customers.

Gemini is committed to leading the way when developing environmentally friendly coatings. Low VOC, low HAP's, low formaldehyde coatings have always been a priority for the Gemini Research and Development department.





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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/corporate-product/wood-coatings, 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.

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.

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Akzo Nobel Wood Coatings Ltd.

Ontario

155 Rose Glen Rd., N
Port Hope, ON
L1A 3Z3
Ph. 1-800-263-7951
www.akzonobel.com

PCI's POWDER COATING 2018 Technical Conference Returns to Indianapolis

New and innovative programming will be featured at The Powder Coating Institute's POWDER COATING 2018 Technical Conference from March 12-15, at the JW Marriott in downtown Indianapolis, Indiana. With four days of powder coating education, tabletop exhibits, general sessions and social gatherings, this event offers the perfect balance of training and networking for all powder coating professionals.

The event opens on Monday afternoon, March 12, with lunch and tabletop exhibits featuring powder coating manufacturers, powder coating application equipment suppliers, system houses, chemical suppliers and the various services that support the powder coating industry. The technical program kicks off with a general session, followed by concurrent breakouts and a Tabletop Exhibit & Reception.

Tuesday, March 13, begins with an insightful general session and panel discussion, followed by a unique mix of presentations and roundtable discussions. Lunch in the Tabletop Exhibit Ballroom will give attendees a final chance to meet and talk with exhibitors. There will also be an evening networking event at the

Speedway Indoor Karting facility.

On Wednesday, March 14, PCI's Technical Conference program concludes with a final general session and a Troubleshooting panel.

Beginning on Wednesday afternoon, PCI's popular Powder Coating 101: Basic Essentials Workshop will begin. The workshop includes a day and a half of classroom instruction based on PCI's *Powder Coating: The Complete Finisher's Handbook*.

Attendees can select from a variety of registration options for the event. Select both the full conference and the Powder Coating 101 Workshop to take advantage of a \$100 discount on the Workshop fee.

EVENT DETAILS

Location

JW Marriott Indianapolis
10 S. West St, Indianapolis, IN 46204

Dates

March 12-15, 2018

Events

March 12-14:
Technical Conference

March 12-13:
Tabletop Exhibition

March 14-15:
PCI Powder Coating 101 Workshop

Event Website & Registration

www.powdercoating.org/event/PC18

Hotels

To make reservations, go to the event website and click on HOTEL & TRAVEL. You will find a link to make a reservation directly with the hotel. You must go through our link to receive the discounted rates.

JW Marriott Indianapolis
\$209/night + tax

Fairfield Inn and Suites Indianapolis Downtown
\$159/night + tax

The hotel cutoff date for reservations at our discounted rates is Feb. 16, 2018. We recommend you make your reservation as soon as possible.

Tabletop Exhibitors (as of January 22, 2018)

ACT Test Panels, LLC
Arkema Coating Resins
Axalta Coating Systems
B.L. Downey Company LLC
BCI Surface Technologies
Blasdel Enterprises
Canadian Finishing & Coatings Manufacturing Magazine
Caplugs/Shercon
Carlisle Fluid Technologies
Chemetal US, Inc.
Chemical Coaters Association International
Coating Delivery Technology
Col-Met Engineered Finishing Solutions
Coral Chemical Co.
DeFelsko Corporation
DuBois Chemicals

Echo Engineering & Production Supplies Inc.
Elcometer, Inc.
Fischer Technology Inc.
Fostoria Process Equipment, Div. of TPI Corp.
Gema USA Inc.
Gemme Barium Sulfate
George Koch Sons, LLC
Global Finishing Solutions
Hedson Technologies North America
Heraeus Noblelight America LLC
Intek Corporation
IntelliFinishing
International Paint & Coating Magazine
Keyland Polymer UV Powder, LLC
Magic Rack/Production Plus
Midwest Finishing Systems, Inc.

Nordson Corporation
Parker Ionics
Pneu-Mech Systems Mfg. Inc.
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Powder Coating Institute
Products Finishing
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Rohner
RollSeal, Inc.
SAMES KREMLIN
Sandvik Process Systems
Therma-Iron-X
TQC-USA, Inc.
Trimac Industrial Systems
Wagner Industrial Solutions

Technical Conference

Monday, March 12 – Wednesday, March 14

PCI's POWDER COATING 2018 Technical Conference will offer two full days of educational programming, with both general sessions and in-depth breakouts. Industry experts offer presentations covering topics from materials to application equipment and pretreatment to curing in a non-commercial setting.

A tabletop exhibition and networking opportunities will allow attendees the chance to speak one-on-one with suppliers and learn more about the latest innovations in the powder coating market.



Powder Coating 101 Workshop

Wednesday, March 14 – Thursday, March 15

Ready to dig deeper into understanding the basic essentials of a powder coating operation? Then PCI's POWDER COATING 101 Workshop is for you! The workshop focuses on materials, application, reclamation, testing and evaluation, quality control, the manufacturing process and much more. If you are new to powder coating or considering a switch to powder, this workshop is a must! A networking reception will be held on Wednesday evening.



Technical Conference Sessions

MONDAY, MARCH 12

1:30 PM

GENERAL SESSION

1. Driving Consistent Performance Excellence

Dr. Amber Selking, *Selking Performance Group*

2:45 PM

BREAKOUT SESSIONS

2. Top 10 Fundamentals of a Powder Coating Operation

Bill Owens, *Akzo Nobel Coatings*

Jeff Hale, *Gema USA, Inc.*

3. Raising the Quality Bar

Rick Gehman, *Keystone Coating LLC*

Rich Saddler, *Industrial Finishing Solutions, LLC*

4. Determining True Applied Cost

Michael Withers, *Axalta Coating Systems*

TUESDAY, MARCH 13

8:45 AM

GENERAL SESSION

5. Responsibilities and Liabilities for Powder Coaters

Michael Cravens, *IKON Powder Coating & Powder Finishing Consultants*

10:00 – 11:30 AM

BREAKOUT SESSIONS

6. Building a Business Case and Planning for a New Finishing System Installation

Nick Liberto, *Powder Coating Consultants*

Eddie Koehler and Jorge Martinez, *JR Custom Metal Products*

7. Optimizing Your Batch Powder Coating Operations

Suresh Patel, *Chemetal US, Inc., now part of BASF Corp.*

John Cole, *Parker Ionics*

John Sudges, *Midwest Finishing Systems, Inc.*

8. Minding Your Business

Frank Mohar, *Nordson Corp.*

Joel Watts, *Alabama Power Co.*

Andrew McBride, *Marlin Business Services Corp.*

1:30 – 3:00 PM

BREAKOUT SESSIONS

9. Safety: It's Everyone's Responsibility

Marty Korecky, *Akzo Nobel Coatings*

Mike Thies, *Gema USA, Inc.*

Sergio Mancini, *BCI Surface Technologies*

10. Architectural Powder Coatings

Mike Withers, *Axalta Coating Systems*

Carl Troiano, *Trojan Powder Coating*

3:15 – 4:45 PM

BREAKOUT SESSIONS

11. Roundtable for Applicators

12. Creating a Comprehensive Finishing Specification

Michael Cravens, *IKON Powder Coating & Powder Finishing Consultants*

13. Pretreatment: Understanding Your Options

David Schimpff, *DuBois Chemical*

WEDNESDAY, MARCH 14

8:30 AM

GENERAL SESSION

14. The Robots are Coming, IIoT, and Advanced Automation

Matt Kirchner, *LAB Midwest LLC*

5. Troubleshooting Your Powder Coating Operation

Ron Cudzilo, *George Koch Sons, LLC*

Joe Glassco, *Wagner Industrial Solutions*

Ken Kaluzny, *Coral Chemical Co.*

Bill Owens, *Akzo Nobel Coatings*

Register Now At

www.powdercoating.org/event/PC18

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 customers' 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.

Fire Retardants

The Flamebloc GS series of fire retardants are clear, water-based, and contain little or no VOC, and are 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 has resulted in more diverse offerings in our product portfolio.

Coatings and Plastics

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.

It's not just about being sustainable It's about being accountable

At Buckman we are serious about sustainability, and we know our customers are too. That's why we believe in sustainability reporting by meticulously measuring how our operations affect others and the planet as a whole. It's why we strive to be transparent about our sustainability goals and our progress toward meeting them.

Sustainability is measured in all kinds of ways. In the energy we save and the water we conserve, of course. But also in how we touch others. And in how financially responsible we are as an employer, manufacturer and service provider. So we set goals and assess our progress in six key areas: economics, the environment, labour, human rights, society and product responsibility.

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

Better protection. Safer chemistry.

**Get greener, safer
Flamebloc® chemistries
from Buckman.**

Buckman's Flamebloc GS series

of fire retardants 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.

Buckman

Commitment makes the best chemistry.

NEW – Flamebloc Foam Protect

A new intumescent coating code approved (CAN/ULC-S-124) for spray foam insulation.

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TECHNOLOGY EXPO & CONFERENCE

May 7-9, 2018 | Hyatt Regency, O'Hare | Chicago, Illinois

What's happening at RadTech 2018?

More than 100 presentations and nearly 80 exhibitors

UV LEDs

25+ Presentations on the latest LED developments, panel discussions and more!

3D Printing

Sessions include new materials, formulating, innovations and UV LEDs.

Short Courses

Includes graduate- and undergraduate-level courses, design of experiments and click chemistry.

University Academic Presentations

Sponsored by the Photopolymerization Conference

Researchers from six universities and the Air Force Research Lab will present on critical results in self-assembly, novel polymerizations, controlling structure, photo-responsive networks, and light-activated dark cure.

Start-ups

RadLaunch, a new technology accelerator, will recognize it's first class, early-stage start-ups and small businesses for new tech advancements.

Student Art Awards

Awards will be presented for creative, original posters that tout the benefits of UV+EB.

Emerging Tech Awards

Past winners include: Carbon 3D, Ford Motor Co., Pepsico, Cleveland Steel Container, Gecko Biomaterials, Cambrios Advanced Materials, and Gillette-Procter & Gamble.

New Exhibit Theater

Located on the show floor, these exciting sessions include:

- 3D Printing
- Future of UV LED Chemistry
- Future of UV-C LED
- UV LED Myth Busters
- Trends in UV Inkjet/ Digital Printing
- Food Processing & Disinfection
- Future of Automotive Manufacturing & Customer Use

For more information or to register for the conference, visit www.radtech2018.com.

Protech/Oxyplast Buys Companies

The Protech/Oxyplast Group of Montreal has made two acquisitions since late 2017. One was the business and manufacturing assets of Chemionics Corp. of Tallmadge, OH. Chemionics develops and manufactures specialty plastisol and latex formulations. Protech will maintain the manufacturing operations in Tallmadge.

David Ades, president of Protech said, “Chemionics’ leading technology in plastisol and latex is a great addition to our global business. It fits nicely as it is complementary to our thermoplastics coatings product lines.”

The second was Trimite Powders Inc. of Spartanburg, SC. Trimite Powders had been providing products for many years. Protech, the company said, fully expects to benefit from the business relationships that Trimite has developed over the years with its customers.

Protech will maintain Trimite’s powder manufacturing operations in Spartanburg. Trimite’s customers will continue to be able to obtain the products they have been purchasing and, as well, will now have access to Protech’s worldwide network of products and technology. Trimite was an affiliate of Trimite UK and of Weillburger Coatings.

Earthquake-Resistant Concrete Layer

Scientists working at the University of British Columbia have produced what they claim is a seismically resistant, fiber-reinforced concrete. The material is set to begin use in retrofitting projects.

Called eco-friendly ductile cementitious composite, it was made at the molecular scale to be strong, malleable and ductile. The researchers say it can enhance the earthquake resistance of a structure when applied as a thin coating on the surfaces.

“We sprayed a number of walls with a 10-millimeter-thick layer of EDCC, which is sufficient to reinforce most interior walls against seismic shocks,” said Salman Soleimani-Dashtaki, a PhD candidate in the department of civil engineering at UBC. “Then we subjected them to Tohoku-level quakes and other types and intensities of earthquakes—and we couldn’t break them.”

The Tohoku earthquake in Japan, in 2011, was recorded as having a magnitude over 9.0. The material combines cement with polymer-based fibers, fly ash and other industrial



UBC's Vancouver campus.

additives, which add a level of sustainability to the product.

“By replacing nearly 70 percent of cement with fly-ash, an industrial by-product, we can reduce the amount of cement used,” stated UBC civil engineering professor Nemy Banthia, who supervised the R&D. “This is quite an urgent requirement as one ton of cement production releases almost a ton of carbon dioxide into the atmosphere, and the cement industry produces close to seven per cent of global greenhouse gas emissions.”

The researchers are currently working with a team of contractors for British Columbia’s seismic retrofit program. They are initially working to upgrade the Dr. Annie B. Jamieson Elementary School in Vancouver. More schools are slated to follow in India, as the research was funded by the Canada-India Research Center of Excellence, or IC-IMPACTS.

“This UBC-developed technology has far-reaching impact and could save the lives of not only British Columbians, but citizens throughout the world,” said BC’s Advanced Education, Skills and Training Minister, Melanie Mark. “The earthquake-resistant concrete is a great example of how applied research at our public universities is developing the next generation of agents of change. The innovation and entrepreneurship being advanced at all of our post-secondary institutions is leading to cutting-edge technologies and helping to create a dynamic, modern B.C. economy that benefits all of us.”

Windsor-Detroit Bridge Moves Ahead

Canadian officials have labeled the Gordie Howe International Bridge as the county’s foremost infrastructure priority, with groundbreaking for construction remaining on schedule despite the years of challenges entered by the owner of a nearby private bridge.

Officials expect to sign a contract with the selected bidder by the end of September.

Deal History

In 2012, Michigan Governor Rick Snyder with Canada to construct a second bridge that would provide another route into the northern country, a project that would later become known as the Gordie Howe International Bridge. Ambassador Bridge owner Manuel “Matty” Moroun has spent years fighting the ruling, attempting to make a case for the fact that the deal did not involve the state legislature’s approval.

In a previous ruling in October 2017, Wayne County Circuit Court Chief Judge Robert Colombo Jr. declared the deal to be legal. The Michigan Department of Transportation was also on track to take 20 parcels of land from Moroun’s company in order to construct the Gordie Howe. All of Moroun’s lawsuits have been unsuccessful to date.

Interim CEO Andre Juneau of the Windsor-Detroit Bridge Authority says he expects the winning bidder to be selected by early June. Currently, three private-sector finalists remain in the running.

Juneau added that early construction preparation work is slated to begin in July, with the financial close occurring in September.

Clariant-Huntsman Merger Off, SABIC Buys Clariant Stake

In the wake of pressure from activist investors, US-based Huntsman Corp. and Swiss-based Clariant decided not to pursue their intended US\$20-billion merger. The two companies announced the merger in May, and expected it to close before the end of the year. Both are major suppliers of raw materials for coatings formulation.

In July, White Tale, a joint venture of New York investment firm 40 North and hedge fund Corvex, began buying shares of Clariant, and pressured the company to look at other options for value creation. The firms said the merger with Huntsman would not create ideal value for Clariant investors.

In September, White Tale increased its Clariant stock to over a 15 percent share, and sent an open letter to the company’s board in which it confirmed its opposition to the merger. The hedge funds stated the merger had “no strategic merit” and undervalued Clariant, while overvaluing Huntsman. They also expressed concerns that Clariant would cede operation control to Huntsman, “demonstrating a severe lack of due

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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.

Some of our Masking Products include:

High Temperature Vinyl Caps and Plugs -

Designed for one-time use, our caps and plugs are available in various sizes and styles to meet your requirements. The high-temp Vinyl material will withstand approximately 450° F for 30 minutes.

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.

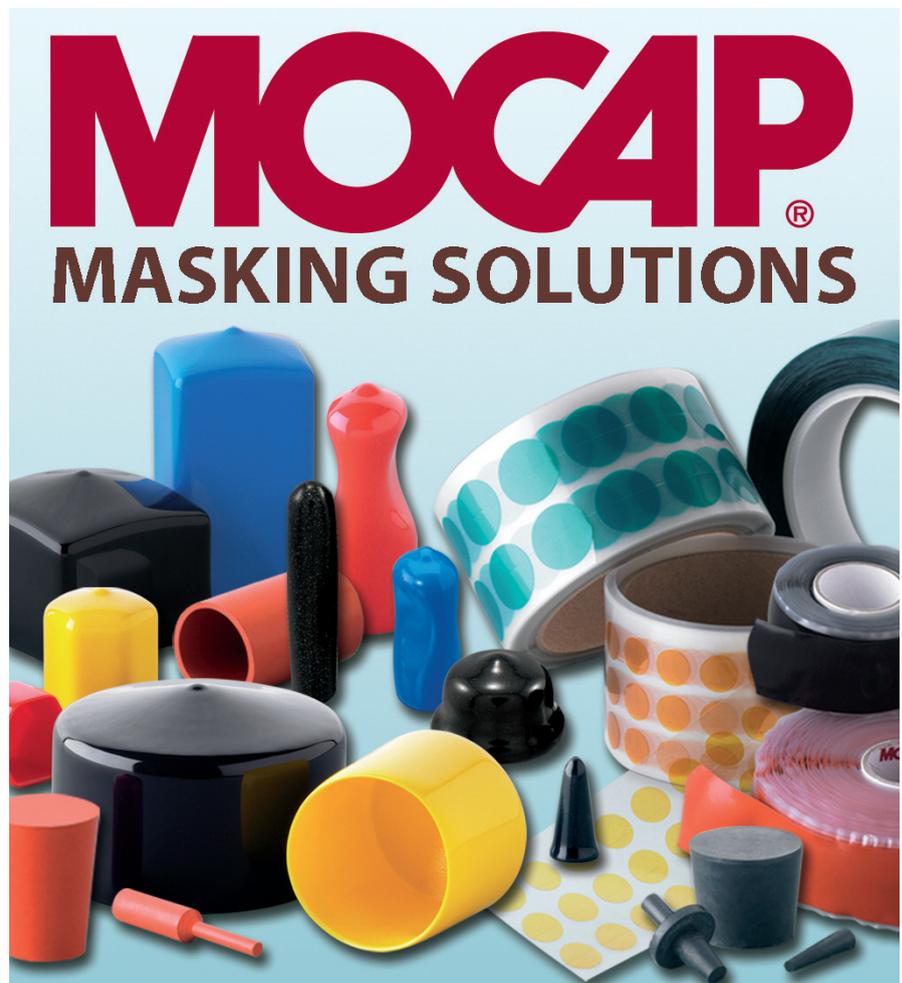
Silicone Rubber Tape - Our self-fusing tape will conform to any standard or irregular shape and works excellently as a custom mask. The tape will stretch up to 300 percent and has no adhesive, so it is safe for temperatures over 500° F.

Silicone Tubing - The silicone tubing is sold in coils and works with any high temperature environment. It resists temperatures up to 500° F, and can be cut easily at your facility to the length required for your application.

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Contact Information: Please visit our website at www.mocap.com or do not hesitate to contact our sales staff for free samples, pricing, or to learn more about our products/processes.

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Free sample parts available for testing.

Same day shipping for all in-stock orders.

If the standard masking doesn't suit then we can design and quote a custom solution.

We can provide prototypes of our design in either moulded silicone or 3D printed simulated silicone for approval.



Tape rolls can be slit to any width required in our green or blue polyester, amber polyimide, hi-temp crepe or glass cloth tapes. Popular tape sizes are available from stock.

Many standard round, square, rectangular and donut die-cut sizes available.

Kits or custom shapes can be quoted with no-charge samples for testing.



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Please visit our website at www.capsnplugs.com



Caps'n Plugs is a leading Canadian distributor and custom manufacturer of plastic injection parts, vinyl dip parts and high temperature resistant rubber/silicone coating/plating masks. We have an extensive product line of caps, plugs, grommets and handle grips for shipping protection, paint/plate masking and product finishing for virtually any application. Please visit our website catalogue at www.capsnplugs.com.

Masking Solutions

Caps'n Plugs has the largest stock of standard paint/plating masking products in Canada including a variety of caps, plugs, silicone tubing and compressible silicone cord. All can be used for high temperature powder coating, e-coating, spray painting and plating. All our stock silicone or EDPM rubber parts are durable to withstand repeated coating and bake cycles.

Masking Tapes

We stock high temperature resistant green or blue polyester, amber polyimide, fiberglass cloth and crepe paper masking tape in logs that we can cut to whatever roll width you require on our high speed tape slitters. Most of the popular cut widths of tape are already in stock ready for immediate delivery. Our two types of sandblasting tape are much more efficient and durable at masking off parts during sandblasting with no residue than the commonly used duct tape.

We stock the most popular diameters of masking discs ideal for masking off holes or grounding areas around holes. These

high temperature masking discs remove cleanly from surfaces without leaving any residue behind. We are able to manufacture in-house on our high speed die-cutter virtually any shape or kit of tape masking as per our customer needs.

Hooks

We have a large inventory of the most popular sizes of paint line hooks. These hooks come in four basic configurations in several different diameters of wire depending on the part weight to be hung and a variety of hook lengths. All hooks are made from high quality spring tempered steel suitable for powder coating and e-coating processes.

Custom Masking

Our sales team is focused on finding solutions for our customers. If the required mask does not exist in our standard product line, we can design, prototype and produce the correct part. We can prototype custom designed prototypes in-house within 2-3 days on our 3D printer to create a simulated parts in the required durometer for fit/function analysis by the customer. Although these 3D printed prototypes can not be coated and baked, a careful analysis of the part fit will tell whether the part design will work satisfactory or design changes are required.

Once the design has been approved we can stock these custom parts for you and ship as required. Caps'n Plugs strives to find the best and most economical solution for our customers.



Huntsman CEO Peter Huntsman.

diligence with regard to Huntsman's operational track record."

Clariant said initially that the merger would create over \$3.5-billion in value, through cost and tax synergies as well as complementary product portfolios. It also noted that while Huntsman's president and CEO, Peter Huntsman, would become CEO of the new company, there would be no ceding of operational control along with the deal. In response, Peter Huntsman stated that White Tale's interests centered the "short-term, break-up value of Clariant," and were "not about Huntsman."

According to some media reports, White Tale's stake in Clariant rose subsequently to 20 percent. That increased stake, along with other investors expressing concerns about the deal, reportedly left the company uncertain if a shareholder vote on the deal would result in the two-thirds Yes votes needed to proceed.

Huntsman had over \$9.6-billion in sales in 2016. Clariant's sales were about US \$6.01-billion in the same year.

Meanwhile, in late January, Saudi Arabia-based SABIC acquired a 24.99 percent interest in Clariant. The acquisition of stakes previously held by White Tale and 40 North, make SABIC the largest Clariant shareholder.

As is customary in the industry, Clariant was informed of SABIC's intention to acquire the shares prior to the transaction. SABIC is one of the major global chemical companies, with a significant specialty chemicals business and a partner of Clariant in the Catalyst joint venture Scientific Design.

Clariant intends to engage with SABIC through the winter period to discuss the new situation and explore possible ways to create value. Clariant will also, it stated, continue the existing dialogue with all its other shareholders.

Echo Engineering Buys Ammex Plastics

Echo Engineering and Production Supplies, Inc. has acquired Ammex Plastics, a full-service plastic components manufacturer based near Detroit. Echo Engineering, headquartered in Indianapolis, has experienced exceptional growth over the last decade and plans to accelerate this success with a manufacturing facility located in the heart of the automotive industry. Ammex Plastics will operate under Echo's umbrella, as Echo Engineering and Production Supplies, Inc. DBA Ammex Plastics.

"Ammex Plastics sets the bar when it comes to providing quality components, ensuring peace of mind for their customers resulting in an unprecedented customer retention rate," said Kingdon Offenbacher, CEO of Echo Engineering. Echo's core technologies and Ammex's product offerings, he added, align seamlessly, and Ammex's reputation for producing items of superior quality while maintaining fast turn-around times matches that of Echo Engineering. Echo's extensive resources, coupled with Ammex's domestic injection molding capabilities, will allow Echo to increase its product offerings to new and existing customers of both companies, as well as their market share within the automotive plastics industry.

New Brunswick Moves on Workplace Skills

In partnership with New Brunswick Department of Post Secondary Education, Training and Labour, the Excellence in Manufacturing Consortium (EMC) is inviting all New Brunswick manufacturers to participate in improving their workplace manufacturing essential and productivity skills. In support of these manufacturers, EMC is providing fully funded essential skills training programs for two key occupations, supervisors and production workers, to address skills gaps and raise productivity levels and capabilities.

The initiative, called Manufacturing Essentials Certification (MEC), is bringing industry validated tools and resources for the manufacturing workforce across the province of New Brunswick. Workers who participate in the program learn the essential skills necessary to become more effective and productive in their roles, further increasing their engagement with their employers through workplace performance projects. With the MEC pilot project, EMC is establishing the foundation of a partnership

framework with NB Government for an external delivery model of essential skills training for manufacturing in the province.

PPG Raises Prices

PPG is raising prices an average of six percent on all of its industrial coatings technologies in North America. The change is effective November 1, or as permissible by contract, and applies to all industrial coatings end-use segments.

Significant increases in both raw material and labor costs have resulted in the need for price adjustments, according to Kevin Braun, PPG vice-president, industrial coatings, Americas. Sales representatives will communicate price increase details to their customers for all affected products.

"While PPG continues to look for ways to respond to cost increases through more efficient operations, cost-control measures have not sufficiently offset rapidly rising costs in the supply chain," Braun said. "We remain committed to providing our customers with the latest coatings and innovative technologies while delivering best-in-class technical sales and service."

AkzoNobel, Axalta, Call Off Merger

AkzoNobel and Axalta have concluded their merger discussions without finalizing an agreement. In a press release, Axalta chairman and CEO Charles W. Shaver stated, "After pursuing a potential combination of Axalta and Akzo, we concluded we could not negotiate a transaction on terms that meet our criteria. Any transaction we ultimately agree to needs to generate superior long-term value for Axalta shareholders as compared to the continued execution of our strategic plan."

For AkzoNobel, CEO Thierry Vanlacker said, "I am confident that our strategy offers significant value for shareholders and other stakeholders in the short, medium and long term. We remain focused on our strategic options to continue to develop our business and improve profitability in the future."

Separation of AkzoNobel's specialty chemicals business, and return of the majority of the net proceeds to shareholders, remain on track, per AkzoNobel. Had it happened, the would have been a merger of equals and Akzo's spinoff of the specialty chemicals business was a condition of the deal.

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3M Product Innovation Solving Customer Needs

It takes true technical expertise to develop specific and advanced solutions for improving processes. 3M's commitment to innovation is bringing new technologies to market and helps solve customer needs for many industries.

3M has been serving the paint and coatings industry for many years. While 3M offers a broad portfolio of consumer and industrial products, its industrial spray solutions are emerging technologies that are responding to customer needs in the coatings field.

The **3M™ PPS™ Paint Preparation System** allows the user to mix less paint, adhesives, coatings and finishes, reduce solvent use by up to 70% and speed clean-up time. It is an innovative system for mixing, measuring, filtering and spraying coatings. Efficiency is increased by eliminating the need for traditional mixing cups and paint strainers. Now, paint is mixed and sprayed from the same PPS™ liner, re-usable cup (available in 5 sizes) and collar with a lid and built-in filter. Specially designed adapters allow painters to use the PPS™ system with virtually any spray gun. The closed system also enables a painter's spray gun to function at any angle, even upside down. Safe from outside contamination, the PPS™ system offers a cleaner, more efficient solution for spraying small to large objects.

The **3M™ Accuspray™ ONE Spray Gun System** was added to advance the benefits of the PPS™ System with the goal of eliminating spray gun maintenance kits and cleaning. It is a highly effective, all-in-one disposable solution that helps painters do less cleaning and maintaining, and a lot more painting. Its simple design includes a range of interchangeable atomizing heads (available in 5 sizes) for every coat making the 3M™ Accuspray™ Spray Gun the ultimate all-in-one, utility spray gun solution from start to finish.

3M™ Dirt Trap Surface Protection System is a specially engineered covering material that delivers durable surface protection for paint booth walls, high-traffic areas such as walkways and floors and brightens work areas. Its non-woven construction traps dust, dirt and over-

spray and reduces airborne contaminants by up to 50% and helps to keep a shop's paint booth in top working condition. Its adhesive backing keeps it secure, smooth and wrinkle free while its low tack adhesive makes for easy application and clean removal.

About 3M

3M is science applied to life. 3M applies science in collaborative ways to improve

lives daily. With more than 55,000 products worldwide and operations in over 40 countries, 3M helps make it possible for many companies to do what they do. 3M's global head office is in St. Paul, Minnesota with Canadian operations based in London, Ontario and sales offices located in Calgary, Toronto and Montreal.

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Get the precision you need without the big clean-up

An innovative spray cup system for mixing and spraying both solvent-based and waterborne materials.

Eliminate the need for traditional mixing cups and strainers, and make clean-up a breeze with the 3M™ PPS™ Paint Preparation System. Spray at any angle, even upside down.

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- Easy to use**
Easy to filter, mix, spray and clean
- Save time**
Spend less time prepping and cleaning up
- Reduce solvents**
Use up to 70% less solvent than with traditional cups
- Improve quality**
Spray hard-to-reach areas

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WPC Names Northspec Chemicals Canadian Distributor

WPC Technologies has appointed Northspec Chemicals Corp. as its exclusive distributor in Canada for organic and inorganic corrosion inhibitors, flash rust inhibitors and wood stain blockers. WPC, formerly Wayne Pigments, has been an innovator in the paint and coatings industry since 1975. With a state-of-the-art manufacturing facility in Oak Creek WI, WPC provides products including phosphosilicates, molybdates, hybrid inorganic/organic inhibitors, chromates, flash rust inhibitors, zirconium, zinc and potassium tannin blockers.

Northspec Chemicals Corp. is a full-service, specialty raw materials distributor serving the coatings, plastics, composites, adhesives, graphic arts, construction, rubber and related industries throughout Canada.

Radtech Program Available Online

The technical conference program for Radtech 2018 is now available online. The event will be the 16th biennial conference and exhibition dedicated to UV+EB technology, and it takes place May 7-9, 2018, at the Hyatt Regency O'Hare, in Rosemont, IL.

There will be over 100 presentations covering the latest innovations in UV LEDs, 3D printing materials, printing and packaging, coatings, formulations, and more. The event also offers academic educational opportunities in 'undergrad' and 'graduate' level polymer chemistry and a course on design of experiments.

There will also be more than 80 exhibitors demonstrating the application of these technologies. Registration is open now, and phase one of the technical conference program is available online at www.radtech2018.com

RPM Buys Whink Products

RPM International's Rust-Oleum business group has acquired Whink Products, a specialty cleaners manufacturer and marketer that is reportedly the market share leader in the rust stain removal segment. Based in Eldora, IA, Whink has annual net sales of approximately \$6-million. Terms of the transaction, which is expected to be accretive to earnings within one year, were not disclosed.

Whink provides a broad range of specialty products, including premium rust, carpet and laundry stain removers; cooktop, countertop and

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Attendees at a Powder Coating 2017 session.

Powder Coating Conference Program

The Powder Coating Institute says innovative programming will be a key feature of its 2018 Technical Conference, held from March 12-15 2018, at the JW Marriott hotel in downtown Indianapolis, IN. With four days of powder coating education, tabletop exhibits, general sessions and social gatherings, this event is being praised as offering a perfect balance of training and networking for all powder coating professionals.

"We've worked hard this year to develop different programming that offers important information and ideas for the powder coating industry," says PCI's executive director Trena Benson. "We know we have a mix of newcomers and veterans that attend this event. We wanted to be sure to keep some of the valuable basic information, but we also wanted to branch out and offer some brand new sessions for the industry."

Featured sessions include: Raising the Quality Bar; Determining True Applied Costs; Building a Business Case & Planning for a New Finishing System Installation; Minding Your Business; Safety: It's Everyone's Responsibility; Creating A Comprehensive Finishing Specification; Troubleshooting Your Batch Powder Coating Operation; IIoT (Industrial Internet of Things); Advanced Automation and more.

The event opens on Monday afternoon, March 12, with a lunch and tabletop exhibits featuring powder coating manufacturers, powder coating application equipment suppliers, system houses, chemical suppliers and the various services that support the powder coating industry. The technical program kicks off with a general session featuring Dr. Amber Selking who will discuss "Driving Consistent Performance Excellence." The rest of the event will consist of concurrent breakouts followed by a tabletop exhibit & reception.

Tuesday, March 13, begins with a general session and panel discussion featuring Michael Cravens, on the topic "Responsibilities and Liabilities for Powder Coaters," followed by a mix of presentations and roundtable discussions. Lunch in the Tabletop Exhibit Ballroom will give attendees a final chance to meet and talk with exhibitors.

There will also be an evening event at the Speedway Indoor Karting facility where attendees will have the opportunity to test their driving skills like Indy car champs while networking with other attendees. This event, transportation, dinner and refreshments are included with full conference registration.

On Wednesday, March 14, PCI's Technical Conference program concludes with a talk from Matt Kirchner, "The Robots are Coming: IIoT, and Advanced Automation," and a troubleshooting session. This general session will present information on how the fourth industrial revolution has changed the powder coating industry and what is on the horizon for all powder coaters.

Beginning on Wednesday afternoon, PCI's popular Powder Coating 101: Basic Essentials Workshop will begin. The workshop includes a day and a half of classroom instruction based on PCI's Powder Coating: The Complete Finisher's Handbook, an evening reception where attendees can interact with workshop presenters and attendees, and breakfast and lunch on day two.

Attendees can select from a variety of registration options for the event: full technical conference, one-day technical conference; Tabletop Exhibits only; or the Powder Coating 101 Workshop. Those who select both the full conference and the Powder Coating 101 Workshop may take advantage of a 10 percent discount.

SAVE THE DATE

AC American Coatings SHOW 2018

Hosted by the American Coatings Association, in collaboration with Vincentz Network.

AC CONFERENCE
April 9-11, 2018

AC SHOW
April 10-12, 2018

Indiana Convention Center
Indianapolis, Indiana

www.american-coatings-show.com



wood cleaners; mineral deposit removers; and drain and septic system treatments. Among its leading brands are Rust Stain Remover and Rust Guard. They are sold through major retailers, home centers and grocery chains.

"In addition to providing us with the leading brand in the rust stain removal segment, Whink will also accelerate our expansion into other indoor cleaning solutions, adding a breadth of offerings to our rapidly growing Krud Kutter program," stated Frank C. Sullivan, RPM chairman and chief executive officer. "We welcome the Whink team to the RPM family of entrepreneurial specialty chemical companies."

Canada WoodWorking East Moves to Ste-Hyacinthe

This October, organizers of Canada Woodworking East (Bois ouvert de l'est du Canada), the country's bilingual show for the cabinet and furniture industry, announced that the event would be relocating Saint-Hyacinthe, QC for its next edition. To date, say organizers, the move has received much praise from those in the industry.

"Since we announced the move, positive feedback has been coming in," said show manager Mike Neeb. "The industry is excited about the new location and the sales are proving that exhibitors are on board; over twice the amount of booth space has been sold compared to this time two years ago."

2018 marks the third edition for this biennial woodworking industry event, which will take place October 24 and 25, 2018, at the BMO Centre at Espace Saint-Hyacinthe.

Familiar to veterans of the woodworking industry, the event's new home in Saint-Hyacinthe is easy to access and features 60,000 sq ft of dedicated exhibit space as well as lots of free parking. As Canada's furniture-producing powerhouse, organizers said, Quebec is an obvious location to host Canada Woodworking East. The show will be attended by members of the secondary woodworking industry from across Quebec and Eastern Canada, including cabinet manufacturers, furniture manufacturers, architectural woodworkers, millworkers, custom wood product manufacturers and more.

DCC Completes Re-branding

DCC has officially completed a corporate re-branding. This includes a new corporate website, corporate video, and social media platforms. They are also excited to consolidate their product

portfolio through the integration of DCC UK (formerly Gemini Dispersions) and the DCC Monteith site.

The new website (www.dominioncolour.com) aims to be more user-friendly and suitable for mobile devices, making it easier for customers to browse company and product information. An option to request samples, order pigments and match a color online will be made available. The corporate video is featured on the website, highlighting DCC's broad product range and presence on an international scale. "Your Idea. Our Solution." is the new tagline, reflecting a customer-centric and adaptive nature.

"At DCC, we earn your trust by bringing your ideas to life," states CEO Mark Vincent. "We achieve that goal by providing a vibrant and dynamic range of products that is backed by our technical expertise and our commitment to service excellence and continuous improvement. From product selection to new product development, from trials to manufacturing, we support our customers every step of the way. If we do not already have the solution you need, we will work with you to create one."

Unimin Raises Pricing

Unimin Corp., New Canaan, CT, raised prices for all its Minex, Imsil, Snobrite and Minloc functional filler products effective February 1, 2018, unless contractual agreements apply. The increases will be five percent for all products mentioned above. The increase, the company says, is necessary to offset rising production costs, critical support and continual reinvestment.

Sun Chemical Increases Prices

Facing what it calls dramatic increases in the cost of Azo intermediates and related raw materials, Sun Chemical Performance Pigments has announced it will raise its global prices on Azo pigments, specialty pigments and their pigment preparations, effective January 1, 2018.

"The cost of Azo intermediates and other key raw materials have increased significantly and continue to do so, impacting the pigment industry," stated Chris Weighill, vice-president and global classical pigment product manager, Sun Chemical Performance Pigments. "The expectation is that there will be no short-term relief in sight for these rising costs—forcing us to

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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 530 locations in 74 countries. In 2015, the company, which has a global workforce of more than 14,000 generated sales of EUR 10.3-billion (USD 11.5-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



ConnectingChemistry

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 "Connecting-Chemistry" 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

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.

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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

increase our prices.

“While we regret the necessity to take this action, current market conditions dictate that we must adjust our prices. We will continue to explore other cost reduction opportunities and productivity gains to offset the rising costs of raw materials.”

www.sunchemical.com

BASF Makes Chemetall Plans

It is just over one year since BASF's Coatings division acquired Chemetall, a global surface treatment supplier. Chemetall will operate as a brand of the Surface Treatment global business unit of BASF's Coatings division. During festive events at its headquarters in Frankfurt, Germany and facilities worldwide, the new brand image of Chemetall was officially introduced. Martin Jung, senior vice-president, Surface Treatment, BASF's Coatings division, commented, “One plus one is greater than two! Our new brand image reflects the impressive know-how of BASF in chemistry and coatings applications with the market-leading expertise in applied surface treatment from Chemetall. Together, the businesses will offer unmatched solutions competence to customers.”

Julia Murray, global marketing communications, Surface Treatment, added, “The Chemetall brand is recognized for its technology leadership, and we take a great deal of pride in our customer-focused and customer-centric approach, locally and globally. Being part of BASF's Coatings division creates opportunities to increase customer benefits from our combined expertise and commitment to continuous innovation. We expect to further advance our customers' access to best-in-class technologies, systems, and solutions across the value chain, always with the goal of enhancing efficiencies and value for our customers.”

Under the Chemetall brand, BASF develops and manufactures customized technology and systems solutions for applied surface treatment. The products protect metals from corrosion, facilitate forming and machining, allow parts to be optimally prepared for the painting process and ensure proper coating adhesion. These products are used in a wide range of industries and end-markets, such as automotive, aerospace, aluminum finishing, and metal forming.

Floor Covering Show Announced for Atlanta

Hannover Fairs USA will debut DOMOTEX USA, a show focused on the American residential floor covering industry, in Atlanta, GA from February 28 to March 2, 2019. The location will be the Georgia World Congress Center in Atlanta.

Launched in 1988 in Hannover, Germany by Deutsche Messe, one of the world's top trade show organizers, DOMOTEX is a showcase for floor coverings innovation. DOMOTEX USA will consist of exhibition space, conferences and educational programs.

Exhibitors will display the latest machine-made carpets, wall-to-wall carpeting, textile floor coverings, handmade rugs, resilient floor coverings, design flooring /luxury vinyl tile (LVT) and laminate flooring, parquet and wood flooring, as well as application and installation technologies designed for the residential flooring marketplace.

“Many industry representatives have been asking us for years to launch the DOMOTEX brand in the North American market, as there has not been a flooring trade fair in the Eastern US that demonstrates the quality and breadth of the world's leading carpet and flooring show, the DOMOTEX Hannover,” said Dr. Andreas Gruchow, member of the management board, Deutsche Messe AG, Hanover. “In addition, given the strong economy in the US, much is being invested in commercial real estate such as offices, hotels and shops. The number of residential properties is also growing considerably. These are good conditions for the sale of floor coverings in the United States.”

Research Tracks Paint Properties

Researchers at Germany's Fraunhofer Institute have developed a new, automated method to predict the flow outcome of a paint's properties. The process monitors the coating's rheological behavior, so that its properties can be used to predict how fast and completely it will level. The results can then be measured and translated into a leveling prediction.

In most cases, paint must be thin enough for easy application, but also thick enough that it will not run off inclined surfaces. To compensate, many industrial coatings have complex rheological behavior with shear-sensitive and time-sensitive viscoelastic properties.

According to the Fraunhofer Institute for Manufacturing Engineering and Automation IPA, the center that developed this new process, stan-

dard industry methods for measuring rheological behavior do not provide any data that can be used for prediction. IPA's method, however, reportedly uses the properties of paint to tell how fast and completely paint will level. Their new procedure reportedly reduces leveling outcome time from several hours to 15 minutes.

It is also possible to use the rheological properties to achieve a specific surface structure, and the method has more reproducibility than testing samples. It is also, IPA states, possible to analyze thixotropic behavior and influence the levelling process.

“From our own experience in paint recipe development, we consider that the total development time of a paint can be shortened by 15 percent,” said developer Fabian Seeler. “For an average development time of three years, this means saving 5.4 months, which represents a time advantage that could signify a huge competitive advantage when introducing new car colors, for instance.”

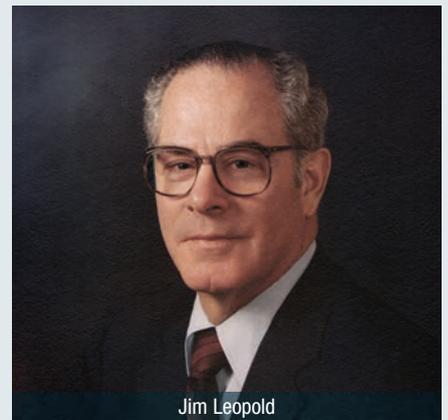
Paint development companies could also save what equates to \$185,000 per coating developed, given the reduction in the use of test samples. IPA will be offering paint characterization via using the new procedure as a service. Eventually, the measurement and evaluation software will be distributed directly to customers.

People

Jim Leopold Passes at 99

Jim Leopold, the founder of Vulcanium Corp./RIGHTech Fabrications, died on December 28, at the age of 99.

A lifelong salesman, in 1967 he purchased a Chicago area manufacturing firm that special-



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When KREMLIN REXSON and SAMES formally merged within the EXEL Industries Group in 2017, they created a powerhouse source of spray finishing technologies. It was a powerhouse that could call on almost a century of innovation in both liquid paint and powder spraying.

Kremlin introduced its first Airspray gun in the European market in 1924. The popularity of this design spread so quickly that other types of spray guns became known as 'Kremlins.'

SAMES (pronounced 'SAH-mez') was formed in France in 1947. The name derives from a French acronym for the technologies used in electrostatic spraying.

Three years later, in 1950, KREMLIN launched airless spraying in Europe, and three years after that, REXSON launched its industrial range of high-viscosity equipment. KREMLIN was acquired by the EXEL Industries Group in 1995, and SAMES became part of the same group in 2001. In 2003, KREMLIN and REXSON merged as KREMLIN REXSON.

Finally, when SAMES KREMLIN was formed in early 2017, it brought all the companies together, creating one organization that could offer the fullest possible range of manual and automatic spray technology, including quick color-change and robotic systems. The result is a company that offers an unparalleled depth of product variety, technical expertise and reliability.

The CEO of SAMES KREMLIN, Cédric Perres, has announced

a series of strategic lines of action for the company. These are:
 Making manufacturers more competitive with a wide range of products, solutions, and services while delivering enhanced performance.

The company's focused missions are: Bonding, Protecting and Beautifying in any industrial process worldwide.

And, addressing industrial issues with technology and expertise, so that SAMES KREMLIN will provide innovation with an efficient supply chain to deliver the right solution to the right place at the right time, with a focus on customer satisfaction.

There are six core product ranges in the company's offering. **AIRSPRAY®** is the longest-established, and provides high-quality liquid paint finishing.

AIRMIX®, available since 1975, provides a perfect mix between quality and productivity.

AIRLESS® is for finishers with demanding applications.

REXSON Dispense® offers high-precision pumping and dispensing capabilities.

ELECTROSTATIC Liquid® offers electrostatic expertise for high finishing quality and efficiency.

POWDER® offers the full range of today's powder coating technology.

A newly designed global website, www.sames-kremlin.com, offers streamlined menus, clear navigation, and a responsive layout for all platforms with improved structure of the content. Please visit our website or contact our marketing department at marketing@exel-na.com.



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INTRODUCING

F P R O

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Coatings and Inks were the foundation of Andicor's launch into the Canadian specialty chemical market in 2002, and remain a key focus today.

Relationships are key to our business. We work with an exclusive network of leading international suppliers enabling us to expand our product lines to meet the evolving needs of the marketplace. Formulators are assured of quality, cost-effective products such as specialty resins, additives and pigments that meet Canadian industry standards for both regulatory governance and environmental requirements.

Formulators trust Andicor. With experienced sales representatives across Canada and a national warehousing system strategically designed to provide fast, local service to our major industry partners, our reputation is built on our accountability to deliver - every time.

Late in 2017, we launched our new bilingual web-site (www.andicor.com) where customers can find a complete listing of all the principals and products we offer for each market segment. Andicor also increased its social media presence by developing a LinkedIn profile so customers can follow Andicor and keep up to date on the latest product and market developments.

Andicor complies with RDC Responsible Distribution: 2008 Code and is also a corporate member of CPCA (Canadian Paint & Coatings Association), TRFA (Thermoset Resin Formulators Association), and PAC (Packaging Association of Canada), supporting the organizations that advocate for the industries responsible for Andicor's success.

ANDICOR SPECIALTY CHEMICALS CORPORATION

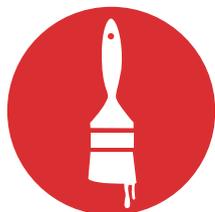
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BWAY
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HPF The Mineral Engineers
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Huntsman Advanced Materials
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ICG Specialty Chemicals
Polymer Additives

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Polyether Polyols & Glycol Ethers

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ized in titanium products for the metal finishing industry. Combining his sales skills with an approachable pragmatism in engineering and design, Leopold grew his little company into a leader in corrosion resistant equipment. He was among the first to champion the widespread use of titanium grid coils in nickel baths, the replacing of hanging slab anodes with titanium anode baskets, and the introduction of zirconium to galvanizers.

Vulcanium Corp. became one of the earliest members of the Titanium Development Association, now the globally recognized International Titanium Association. To his many friends and colleagues inside and outside the industry, he was well-known and respected for his integrity and negotiating skills.

He was also a pioneer in the titanium distribution business. In 1972, he opened Industrial Titanium Corp., later known as Vulcanium Metals International, and now part of the United Performance Metals division of O'Neal Industries.

Leopold was drafted into the Army's 47th Infantry in 1941, and won four Purple Hearts, a Bronze Star, a Silver Star and a battlefield commission during World War II's North Africa and European campaigns. He remained active in many veteran organizations.

He is survived by his sons Richard (president of RIGHTech Fabrications) and Jay, and by his daughter Susie and their families.

Huber Names New President

Huber Engineered Materials (HEM), a global producer of specialty performance ingredients for industrial and consumer products and a division of the J.M. Huber Corp., has named Dan Krawczyk HEM president. Krawczyk remains a member of the HEM Board of Directors and Huber Management Council.

Before becoming the president of HEM, Krawczyk served as Huber's executive vice-president (EVP) of strategy & corporate development from 2013. He brings more than 20 years of experience in industrial and consumer products, including expertise in financial management, strategy, corporate development, marketing and operations to his new leadership role. A native of the Detroit area, Krawczyk earned an MBA as well as an MS and BS in electrical engineering from the University of Michigan.

Before joining Huber, Krawczyk was EVP and chief financial officer of Gibson Guitar Corp. He also was global vice-president of business devel-

opment and strategic marketing for Belden, and has held financial and operational leadership roles at DTE Energy, Delphi Automotive and Ford Motor Co.

Krawczyk's leadership was instrumental in Huber's largest acquisition in over 10 years, the 2016 purchase of the Martinswerk business from Albemarle Corp., which became part of HEM's fire retardant additives business unit, creating a global non-halogen flame retardants business. This move marked the latest in a series of investments in the FRA business, including the acquisition of the Kemgard smoke suppressant product line from Sherwin-Williams in 2010 and the purchase of the Almatix specialty hydrates business in 2012. In addition, Krawczyk led Huber's \$630-million sale of HEM's Silica business unit to Evonik Industries AG in 2017.

IGM Names Lutz Vice-President



IGM Resins has appointed Melissa Lutz as vice-president, North America, reporting to CEO Edward Frindt. She replaces Patrick Maloney, who has moved to a global strategic management role as vice-president, acrylates, continuing to report to Frindt.

Lutz's goal, the company says, is to continue to build value to customers in the North American region through IGM's broad and innovative product lines and collaborative service approach. She also is responsible for development of efficient systems and procedures that ensure safe, compliant operations consistent with IGM's value creation strategies.

She brings 18 years of business, marketing, product development and technical experience in UV coatings. She joined IGM from Royal DSM, where she served since 2006, most recently as business director of the global Somos photocurable 3D printing materials business. Her previous management positions at DSM involved UV-curable coatings for flooring, pipe, optical fiber, and

powder coatings for heat-sensitive substrates such as MDF, wood and plastics. She earned a BA degree in chemistry from Denison University, and an MBA in operations management from DePaul University, and completed the Entrepreneurship Program at IMD Business School.

Maloney joined IGM in 2014, with 25 years of technical, sales, marketing and management experience in coatings, adhesives, resins and emulsions. In his new position, he is responsible for devising and implementing strategies to maximize utilization of IGM's acrylates assets, penetrating new markets and increasing global market share with new and existing products. He will travel extensively globally from his base in IGM's North American headquarters in Charlotte, NC, where the facility includes an R&D laboratory and Application Center, acrylate manufacturing, pilot plant and scale-up, sales office and distribution center.

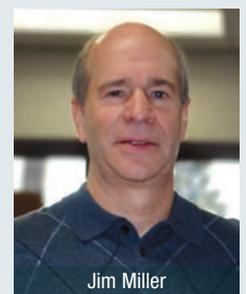
"The depth and breadth of Patrick's and Melissa's experience in key radiation-curable ink, coatings and adhesives applications will enhance the value IGM can create for our customers," Edward Frindt said. "Their backgrounds in developing and launching new products and their strategic thinking will help in spotting emerging market needs and providing materials and service to enable clients to enter new markets and remain competitive in their markets."

Jim Miller Passes Away

Long-time sales executive with TTX, Jim Miller, passed away suddenly on October 17. Miller began his long and successful career with TTX when he accepted the position of sales engineer in 1996.

He brought with him 20-plus years of engineering expertise, a sharp mind, and a passion for helping customers achieve success. By the time he retired at the close of 2016, the company says, he had designed and sold nearly \$160-million dollars' worth of finishing equipment.

Miller was born May 22, 1953 to John and Rita Miller in St. Marys, OH. He graduated from Memorial High School in St. Marys, then com-



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Baril Coatings is a developer and producer of high-quality, industrial coatings and construction paints designed to be highly durable. The company delivers them worldwide to the steel and utility construction sector; OEMs and the metal industry; marine and offshore coatings firms; and to painting companies.

The company has made sustainability and a reduced global footprint hallmarks of its approach. Since its founding in 1982, it has gradually developed its technologies, along with production facilities, to exploit this approach and widen the appeal of the coatings it manufactures. Today, it has plants in Poland, the Netherlands, and in the US, in Angola, IN.

For outdoor and exposed steelwork, which require cost-effective and durable protection against corrosion, Baril offers its DualCure and SteelKote coatings. These are noted for their durability, flexibility, adhesion, ease of application, corrosion resistance, and chemical and mechanical resistance.

For industry and mechanical engineering, the company has product lines of durable coating solutions that meet every industrial requirement for a long-lasting finish. This technology also makes it possible to significantly reduce VOC emissions. The coatings optimally protect machines and equipment

against damages. Also, a lot of time can be saved in the production process thanks to the quick-drying properties and wet-in-wet application.

Baril's pioneering position in the field of coating chemistry has resulted in a range of high solids and solvent-free coatings for the protection of onshore and offshore industry and the shipbuilding and repair industry. Its bio-based UniCure product line offers a wide range of top products/systems for the durable protection of steel under severe conditions.

All products are qualified for immersion (NORSOK and IM 1,2 and 3). They offer ocean-proof, abrasion-resistant and extreme mechanical properties, and maximum protection against corrosion. In addition, they provide long service intervals and reduced maintenance costs.

To contact Baril Coatings in North America, call:

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pleted his Bachelor's Degree in Civil Engineering in 1975 from Ohio State University. He went on to earn his Professional Engineering License (PE) in Structural Engineering.

He met and married his high school sweetheart, Connie, in his hometown of St. Marys. The two became four with a daughter and a son. He and Connie enjoyed spending time with their children and grandchildren and returned to Ohio often to visit parents and other family.

He was an avid tennis player, playing several nights a week and on four US Tennis Association (USTA) teams. He also enjoyed playing electric guitar and going to concerts. Additionally, he was a huge Buckeye fan.

His career began at the Timken Company in Canton, OH, where he was a structural design engineer in the plant engineering department. He then moved to CorTec in southern Ohio where he was engineering and facilities manager. Later he moved to Lima Register, a division of Lennox, doing the same. He became engineering manager and eventually division manager at Metokote, where TTX eventually found him and hired him.

"The finishing industry as a whole has benefited from Jim Miller's excellence to his craft," TTX stated on his demise. "Jim will be missed greatly."

Covestro Appoints Executives



Aleta Richards



Jerry MacCleary

Jerry MacCleary, currently president and managing director of Covestro LLC and head of the company's polyurethanes business unit in North America, assumed new responsibilities as chief executive officer and chairman of the board of Covestro LLC, effective February 1. MacCleary will be succeeded in his role as head of the polyurethanes business unit by Christine Bryant, currently head of coatings, adhesives and specialties. Dr. Erik Haakan Jonsson, currently chief operating officer, will succeed MacCleary as president and managing director of Covestro LLC.



Christine Bryant

chairman of the ACC Executive Committee Jan. 1.

MacCleary joined Covestro (then part of Bayer) in 1979 as an accountant, before embarking on a diverse career path that included sales, marketing and strategic management roles throughout the United States and Germany. In 2004, he was named head of the North American polyurethanes business unit – a role he maintained after becoming president of Covestro LLC in 2012. In 2015, he led Covestro's North American business through its separation from Bayer AG and establishment as an independent company.

Bryant has led Covestro's coatings, adhesives and specialties (CAS) business in North America since 2012 and also leads the unit's global key account business. She joined Covestro in 1989 and has held increasing roles in marketing, sales, distribution and business development throughout her career. A chemical engineer by training, her focus has been on creating stronger relationships with customers and developing new business and markets within the CAS area.

Jonsson joined Covestro in 1992 as a scientist in Pittsburgh. His career has led him throughout the US and Germany, as he took on diverse roles in manufacturing, innovation, supply chain and business development. He has served on the board of directors of various chemical industry, community service and educational organizations. He is a chemical engineer and holds his Ph.D. in polymer technology.

The company has also named Aleta Richards to succeed Bryant as head of commercial operations for its North American Coatings, Adhesives and Specialties (CAS) business. Having started her career at Covestro (then part of Bayer) in 1990, Richards has held various leadership positions throughout the company, including time spent in the North American CAS group, where she led global key account sales and strategic marketing for four years. She also served as head of the Bayer US HR organization, which provided HR administrative services for roughly 14,000 Bayer employees. Currently, she serves as

MacCleary, who currently represents Covestro as vice chairman of the board, is a member of the company's executive committee, and an officer at the American Chemistry Council (ACC). He will become

head of regional product management for the North American Polycarbonates business.

While her business responsibilities will change, Richards plans to continue in her leadership capacity as executive sponsor of the Covestro ACCESS employee resource group, an internal network for African American employees. She also co-hosts a book chat for female colleagues.

A Pittsburgh native, Richards received both her bachelor's degree and MBA in marketing and international business from the University of Pittsburgh.

Jason McGahey Joins American Plating Power

Jason McGahey has joined American Plating Power as manager of business development.

He has led strategic sales and marketing across numerous industrial markets in the position of a global sales manager for a rectifier manufacturer, and has nearly 20 years of rectifier experience. His educational background is mechanical engineering and communications.

"We are extremely excited to have Jason on board here at American Plating Power", said Waasy Boddison, co-owner of American Plating Power. "Jason's industry knowledge and strong customer relationships are a tremendous asset to APP. I know Jason will help APP continue its strong path of success and contribute to our rapid business expansion."

McGahey's focus is new business development as well as customer applications assistance. He added, "I have admired American Plating Power from afar for several years. There was a great allure in joining such a strong and talented team of professionals, several of whom I have had the pleasure of working with previously. I am convinced that we are second-to-none in our ability to support customers with a strong technical and sales acumen while delivering the absolute best in attentive customer care. It was clear from the beginning of our lengthy discussions, that Waasy and I had a similar vision of the tremendous opportunities for growth with our technology leading products and collective experience." www.americanplatingpower.com



Jason McGahey

continued on page 34

GAT Finishing Systems 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
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- Highest heat transfer on the market
- Centrifugal vent fans for extended bearing life
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Standard Powder Coating Room Features:

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- Temperature controlled
- Powder storage areas
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- LED Light Fixtures
- Polycarbonate observation windows
- Single & double width personnel doors and automated roll-up doors

Standard Conveyor Systems Features:

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- Engineered support style for floor or ceiling support
- Application specific
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Gelest Names Gayer CEO

Gelest, Inc., a supplier of customized and highly specialized organosilicon compounds, metal-organic compounds, and silicone materials, has named Ken Gayer as chief executive officer (CEO). He brings more than 20 years of global chemical industry leadership experience to his new role at Gelest. Most recently, Gayer served as business president of Honeywell Specialty Products, of Honeywell International. Prior to his latest role, he had a long tenure at Honeywell in a variety of leadership positions including vice-president and general manager at Honeywell Fluorine Products; vice-president of procurement, customer service, trade compliance, transportation and logistics; and global business director of foam and industrial products. Prior to Honeywell, Gayer held leadership roles at McKinsey & Company and Polaroid Corp., and served as a lieutenant in the US Navy Nuclear Submarine Force.

He holds an MBA from MIT Sloan School of Management, a Master's degree in chemical engineering from MIT, and a bachelor of science in chemical engineering from the New Jersey Institute of Technology.

Barry Arkles, who founded Gelest in 1991, will remain with Gelest as chief technology officer and as chairman of the Board of Directors. "We enthusiastically welcome Ken to Gelest," he said. "Ken has extensive leadership experience in our field, and he has a proven track record of driving excellence across commercial and operations functions. His leadership will serve Gelest well in its next phase of growth."

ICTC Holdings Names Sales Manager

ICTC Holdings Corp. has named Tony Blatchford as Canadian sales manager. His industry experience comes from his long-time association with large paint companies.

Steve Balmer, president and COO of ICTC Holdings Corp. said: "'Tony's experience working for two significant paint companies will give HERO a new perspective and understanding towards the planning and implementation of programs that will enhance HERO's position in the marketplace."

The company has also promoted Arnold Yong to director, new business development Latin America, and marketing manager. Yong has been marketing manager at ICTC's HERO Products operations for over six years. During his tenure, he has played a major role in the evolution of HERO's growth in the Latin Ameri-

can market area.

"Arnold's background and experience has substantially contributed to HERO's growth in the Latin American market," said Balmer. "His Latin American heritage has assisted HERO in better understanding the needs and strategies necessary to help both HERO and HERO's valued customers, prosper."

Yong has his MBA, a post degree in business studies, and a Bachelor of Business and Administration. He will continue to work from HERO's facilities in Vancouver.

ICTC Holdings Corp. was founded in 1969 and has been part of the paint equipment industry for almost 50 years. It claims to be one of the world's largest producers of POS paint equipment, in-plant and in-can tinting solutions for the decorative and industrial paint markets. The HERO Products Group produces its full line of dispensing and mixing products, tailored to the decorative and industrial paint coatings industry.

Vree Becomes CFO for AkzoNobel Specialty Chemicals



Renier Vree

AkzoNobel (Amsterdam) has named Renier Vree, formerly of design and engineering firm Arcadis, as chief financial officer of its Specialty Chemicals business. Specialty Chemicals is set to be spun off as a separate entity this year.

Vree is an eight-year veteran of Arcadis, where

he served as CFO and as a member of the executive board. Last year, he spent six months as interim CEO at the firm, until Peter Oosterveer was appointed to the position full-time.

Prior to Arcadis, Vree spent more than 20 years at Philips N.V., serving for part of that time as CFO of Philips Lighting.

"Renier will be an outstanding addition to our senior management team," said Werner Fuhrmann, CEO of AkzoNobel Specialty Chemicals. "He brings impressive executive experience with a strong track record of delivering operational performance, and will be instrumental in delivering on our ambitious growth plans."

Late last year, AkzoNobel shareholders approved a plan to separate the Specialty Chemicals business, either through a de-merger or via a private sale. The company expects the separation to take place in April.

SATA Canada Training Center Opens

SATA Canada Inc. has created a professional training center at its Vaughan, ON, headquarters, and in January it opened the center. The 2,500-sq ft, state-of-the-art facility is designed to be a showcase for the refinishing industry.

Shown in the photos (SATA TechbCtr-2.jpg) are Yunus Tak, SATA; Brad Schneider, Rontier Industrial Supply, Bob Wells and Brian Kigi, also of SATA; and (SATA TechbCtr-8.jpg) Robert Cojocararu, CHC, and April Chadwck, SATA, with training manikins.

The center contains a commercial dual-bay spray booth, prep areas and a classroom able to accommodate up to 30 people. A full range of SATA spray guns, filters, paint suits and CSA-NIOSH approved respiration will be available to all trainees, and a professional instructor with a professional painting background is being from the refinishing industry.

Training will be tailored to company demands, and arranged in conjunction with internal training and company meetings. The trainer will be available in the field to support a sales team with onsite training and technical assistance.

Equipment at the facility includes: an Ultra XD CTOF top-of-the-line paint booth by Global Finishing Solutions (GFS); Prep station tools and abrasives by MIRKA; and IRT curing equipment. Any paint brands can be used in training.



Top: Yunus Tak, SATA, Brad Schneider, Rontier Industrial Supply, Bob Wells & Brian Kigi, SATA.
Bottom: Robert Cojocararu, CHC and April Chadwck, SATA with friends.

News continued on page 105

Meeting Mixing and Blending Needs for more than Half a Century

Conn and Company headquartered in Warren, PA, USA, has been designing and manufacturing industrial mixing equipment for over 60 years.

Conn builds equipment to meet the customer's requirements with air or electric drive specifications to suit operating conditions; horsepower to suit service conditions; dimensional design to suit operating conditions or existing tanks. The company firmly believes in keeping it simple, durable and functional.

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.

The ITC CONN Blade® is an 8-vane open style blade providing excellent material flow, with more shear than the IT, but is not as aggressive as the ITT.

The patented P-ITT CONN Blade® is of UHMW Polyethylene and is excellent for highly corrosive or highly abrasive mixing. The P-ITT CONN Blade® is the most efficient and aggressive polyethylene blade available.

The Conn blades are available from 2" diameter to 48" diameter with mounting holes or mounting hubs to retrofit and upgrade a customer's existing equipment. Split construction is available for entry through manways. Conn also manufactures complete units and drive assemblies to mount on your tanks. Conn

supplies air or electric utility/laboratory mixers, spool-type top entry for flange mounting to the customer's tank, and drive assemblies for mounting on bridge support for open top tanks. Conn and Company just needs the customer's requirements and will be happy to be of assistance.

Conn handles all worldwide sales from the home office in Warren, PA.

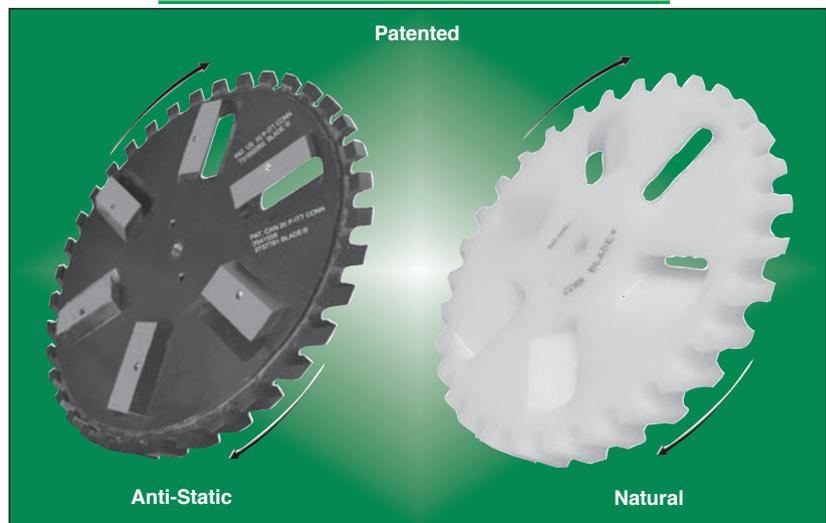
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Suppliers Endow Laval University Research on Wood Finishing



A RECENTLY ENDOWED RESEARCH chair at the University of Laval in Quebec aims to increase the use of interior appearance wood products by developing finishing products or densification processes that improve the performance of these products, or give them new attributes. The NSERC/Canlak Industrial Research Chair in Finishes for Interior Wood Products is headed by Véronic Landry, an associate professor in the Wood and Forest Sciences Department of the university.

“I have been researching wood finishes for over 13 years,” she says, “and have 10 years as an industrial researcher. My main research interests are nanocomposite and stimuli-sensitive coatings, and wood impregnation systems with a low environmental impact.”

This research chair, first announced in April 2017 is part of Université Laval’s Program for the Advancement of Innovation, Research, and Education (PAIRE), which aims to create a stimulating research environment for innovation, ingenuity, and creativity on the part of faculty members. Interior wood products, Landry says, help reduce greenhouse gases and improve comfort for building occupants.

However, these products do not appear to offer sufficiently compelling reasons for more wood to be used in indoor environments, particularly non-residential buildings. Certain wood products do not last, or are unsuitable

for strictly hygienic conditions, and are not fire resistant.

The purpose of the new chair is to spur development of interior wood products that meet professional construction requirements for mechanical performance, fire resistance, and appearance. To reach ambitious performance and appearance objectives, a holistic approach to wood treatment will be used. The research program will examine both finishes and densification and will touch on chemistry, wood science, and mechanical and industrial engineering. The economic and environmental viability of the products developed will be considered, to ensure the solutions are appropriate and sustainable.

There are several industrial partners with the university in this project, including Canlak, EMCO-Inortech, Portes Lambton, Boa-Franc and Canadel. Funding for the research program, which comes from the university and these companies, totals \$2.4-million over five years.

The development of products and processes that perform well and have a low environmental impact, Landry says, will help Canadian manufacturers position themselves strategically as leaders in the field of interior appearance wood products, for all types of materials. Approaches developed in collaboration with the program’s industrial partners will be used to diversify and broaden the use of interior wood products in appearance applications. They will include the use of stimuli-sensitive materials (such as

DeFelsko Corporation, a leading U.S. manufacturer of inspection instruments, offers a variety of instruments to meet to coating industry's needs. Below is a summary of the new additions to the PosiTector and PosiTest line of inspection instruments.

Duplex Coating Thickness Gage

The new PosiTector 6000 FNDS probe simultaneously measures and displays the individual layer thickness of zinc and paint in a duplex system. When taken out of duplex mode, the instrument can be used as a conventional coating ferrous/non-ferrous gage to measure the thickness of coatings on all metals.

Low voltage pinhole detector

The new PosiTest LPD Low voltage Pinhole Detector uses a wet sponge to detect holidays, pinholes, discontinuities and other coating flaws on metal and concrete substrates without damaging the coating. Supplied in a rugged inspection case, the lightweight, ergonomic PosiTest LPD includes everything needed for testing. Features include four regulated voltage output options and GroundSense™ to visibly reassure the user that the instrument is properly grounded.

Soluble Salt Tester

The new PosiTector SST Soluble Salt Tester measures the concentration of soluble salts on metal surfaces. The PosiTector SST is the first conductivity probe designed specifically for the Bresle Method and is compatible with any Bresle Method patch, including the innovative new PosiPatch™ and the economical

DeFelsko Adhesive Patch. Features include an intuitive step-by-step interface that guides users through the Bresle Method, an onscreen timer to report test duration and automatic computation of surface density of salt.

The PosiPatch uses a magnetic ring for attaching to steel surfaces and leaves no adhesive residue to clean. Sharp needles are replaced by safe, flexible dispensing tips and air is automatically removed through a watertight, air permeable membrane saving time.

Shore Hardness Durometer

The new PosiTector SHD Shore Hardness Durometer measures the indentation hardness of non-metallic materials such as polymers, elastomers and rubbers. In the corrosion industry, durometers are commonly used to ensure proper curing of pipeline repair wraps. Two models are available for different hardness ranges - Shore A and Shore D. Features include a digital display, a user-adjustable measurement time with onscreen countdown and an Auto Ignore mode.

Call DeFelsko at (800) 448-3835 or visit our website at www.defelsko.com to get assistance selecting the optimal instrument for your application.

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(L to R): Roger Mouhanna, Jean-Baptiste Moranta and Rob Forman of EMCO-INORTECH.

self-healing materials), materials with a low environmental impact (such as aqueous phase products featuring high chemical and mechanical performance) and high-speed polymerization processes for wood surface densification.

The program will provide training for at least 21 graduate students and postdoctoral fellows in the chemistry of wood finishing and densification products, and in wood densification processes. Twelve undergraduate interns will also be actively involved. They will benefit from a strongly interdisciplinary research environment (chemistry and wood sciences), and will specialize in the high-demand sector of wood product fin-

ishing and densification. The training they will receive is unique in Canada and will help address a shortage of workers in this field.

Research made possible through the chair will broaden and diversify the use of wood in indoor environments, Landry adds.

“Wood is prized for its low environmental impact,” she says. “What’s more, many studies seem to show that the use of wood has a positive effect on the comfort and well-being of a building’s occupants, just like nature does.”

Projects funded through the Chair will all target the development of low-toxicity and low-VOC (volatile organic compound) solutions. ■



Éric Vaillancourt, vice-president at Canlak, announces the new facility.



Véronic Landry explains the work of the new lab to the audience.



The research laboratory at U Laval.

A Sample of Issues Facing Coatings in Canada



Important Movement on Biocide Restrictions

At a recent meeting with federal officials of the Pest Management Regulatory Agency (PMRA) it was confirmed that the Agency intends a new way forward on its pending decisions regarding key paint preservatives and focus instead on a new “cluster analysis” approach. That separate assessment will be based on new information provided by CPCA and others such as a recent study completed by the Biocides Panel of the American Chemistry Council on uses and exposure scenarios. However, according to the PMRA 2017-2021 re-evaluation schedule, all final or proposed decisions will continue to be published for the remaining uses of those preservatives.

To further inform PMRA in their cluster analysis of other preservatives such as folpet, dazomet, chlorothalonil and sodium omadine, CPCA will issue several questionnaires for members this winter to ensure PMRA makes informed decisions on biocide use for paint especially as it relates to exposure scenarios. Industry input was not sought in the previous decisions on OIT and CMIT/MIT. Industry must be vigilant as biocides are increasingly in the crosshairs for greater scrutiny and restrictions in future. If biocides make up any part of your business this is something to watch closely and provide information for better outcomes.

PMRA has agreed to work jointly with CPCA on a key publication related to the mandatory use of registered bio-

cides in all ‘treated articles’ imported into Canada. A recent legal opinion provided PMRA with greater certainty confirming that the current Act and policies adequately cover its current obligations related to the use of registered pesticides in ‘treated articles.’ As such, a new federal policy on treated articles in this context will no longer be needed.

However, the Agency intends to proceed with the dissemination of key compliance messages to registrants and users, while at the same time working with CPCA on the development of these messages. CPCA is in the process of gathering members’ views and/or examples of claims related to biocide use in paint. There is little doubt that certain biocides will be restricted in Canada in the coming years. It is therefore incumbent upon industry to ensure key biocides are retained to maintain the integrity of a wide range of products currently in the market. Once decisions are taken on bans or use restrictions it will be too late for industry to react.

Seeking Improved Canada-US Alignment of Risk Assessment Methodologies and Registration Processes on Biocides

The ACA and CPCA submitted a joint letter to the Canada-US Regulatory Cooperation Council in December to further ensure that the issue of biocides used as in-can preservatives receive the attention it deserves with respect

to greater alignment with the US EPA. This was a follow-up to the views initially submitted last summer to the RCC requesting that this issue be made an integral part of the final RCC Joint Work Plan due to be finalized this winter.

CPCA Submits Comments to City of Metro Vancouver

In addition to dealing with chemicals management at the federal level, CPCA has been engaged with officials in Metro Vancouver, namely the air quality planners, who are seeking to pass a by-law that will bring new municipal restrictions for use of substances in auto refinishing products. The goal is to reduce VOC emissions in the Lower Mainland from auto refinish products. If passed, this would negatively impact more than 350 auto body shops or collision centres in the region.

CPCA expressed the need for Metro Vancouver to conform to federal VOC limits and demonstrated that adopting more restrictive VOC limits in the area would provide little in the way of air quality improvement. At the same time, it would disrupt business activities in the region and likely create anticompetitive pressures throughout BC. CPCA also recommended not to remove TBAC from the list of VOC-exempt compounds, since the federal government carefully reviewed an extensive dossier on TBAC in 2008 before adding it to the Domestic Substances List as non-CEPA toxic and non-VOC. Unless Metro Vancouver has new scientific data showing otherwise, it has no basis to deny the VOC-exempt status of TBAC in Canada, or ban it from use in automotive paint formulations.

Federal Chemicals Management Plan

CPCA continues to be engaged with federal officials on the chemicals management plan (CMP) given that more than 500 substances being reviewed are used in paint and coatings. The CMP-3 2017-2018 two-year rolling plan and Substances List table have been updated indicating the approach taken in addressing ecological and human health concerns in future chemical assessments of substances. The federal government encourages stakeholders to provide additional information on substances for consideration in the risk assessment process, preferably before the start date of the assessments.

Information should be provided a year in advance of the risk assessment end date. CPCA has been working closely with members to prevent surprises or excessive last minute workloads. To achieve this, CPCA has outlined the key changes in CMP's two-year publication plan for those reports, which are anticipated during the second and third fiscal years, that is, April 2017 to March 2019. This is critical for companies who wish to ensure their customers have the certainty they need to manufacture established product lines.

Enhancing Transparency in the Federal New Substances Program

Coming out of a recent Parliamentary Committee Report on the review of chemicals under the Canadian Environmental Protection Act (CEPA), the NGO community expects greater transparency with respect to new substances. This will have an impact on industry bringing new substances to market. The federal New Substances Notification program plans to assess more than 500 new substances per year, which will likely impact everyone reading this.

All 2015 summaries for 63 chemicals/polymers will be published by the spring of 2018 and the 2016 summaries for 83 polymers/chemicals will follow in the Summer of 2018. More information will be published for 2017 summaries in 2018 including 55-60 substances added to the Domestic Substances List. Starting in 2018, the government will prepare a summary table on a monthly basis for all notifications for new substances received from companies, similar to what is done in the United States.

However, only basic information will be mentioned (e.g. NSN number, date received, ID and type, schedules) and the CBI or masked information will be removed. Additional information could be rolled up in future such as function codes, consumer codes, corporation name, etc. Again, it is critical for industry to be proactive.

Federal Science Committee to Examine Informed Substitutions and Alternatives Assessment

Chemical substitution or alternatives have been part of the vernacular for a number of years and some companies have been active in this regard to enhance the environmental sustainability of their products. Chemical substitution is the replacement or reduction of hazardous substances with less or non-hazardous substances in products or processes by achieving the equivalent functionality.

Meanwhile, governments are being urged to consider 'informed' substitution more seriously and seek greater alignment of substances with technical or scientific substitution efforts occurring internationally. Alternatives assessment will be a "process for identifying and comparing potential chemical and non-chemical alternatives that could replace chemicals of concern on the basis of their hazards, performance, and economic viability."

Consideration of alternative substances/ingredients used in products will increasingly become an integral part of doing business in the chemical industry in Canada. Some companies are ahead of the game and already engaged in that effort in various jurisdictions around the world. This is an issue industry must continue to monitor and where possible engage in over the long term. ■

Helping Shape the Future of Canada's Coatings Industry, Today

CPCA was established in 1913 to represent the national paint and coatings industry, including adhesives & sealants and elastomers (CASE). CPCA champions the interests of manufacturers, suppliers, distributors and affiliated companies doing business in the coatings industry. CPCA helps support member companies delivering thousands of highly functional products in a multidimensional industry that includes: automotive refinish, decorative, general industrial, marine, OEM, coil coatings, packaging finishes, powder coatings, transportation coatings and wood finishes.

CPCA's recent independently completed economic study reveals a strong and stable Canadian coatings industry:

- Annual product shipments for coatings, A&S and elastomers at \$4.5 billion
- Annual direct and indirect economic output of \$12.3 billion
- Annual direct and indirect employment of 86,301
- Annual direct and indirect wages and salaries of \$2.85 billion
- Annual contribution to Canada's GDP of \$4.56 billion
- Annual federal and provincial taxes generated of \$1.74 billion

CPCA supports the industry by providing value-added services in key areas including environmental, health and safety (EHS); issue management; government relations; regulatory development; and economic sector analysis. CPCA strongly



CANADIAN PAINT AND COATINGS ASSOCIATION

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 members execute their business plans
- Professional development via webinars, sector working groups and online training courses in coatings technology
- Must-read communications that help members keep abreast of the latest developments impacting the Canadian coatings industry and beyond
- Networking events such as the annual conference/AGM, seminars and webinars

CPCA communications are available in print and digital formats including regular publications and updates on management and marketing, regulatory developments and compliance requirements. Members have access to all publications archived for their reference in an unparalleled and comprehensive Member Resources Centre.

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

Value-added Benefits

CPCA is the national voice of the paint and coatings industry supporting members in their quest to:

- Counter measures that increase industry risk.
- Comply with regulations governing their businesses.
- Improve public health and safety, and safeguard the environment.

CPCA provides the support and resources you need to stay ahead of the curve on regulations.

GET THE SUPPORT YOU NEED. JOIN TODAY.



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DE L'INDUSTRIE DE LA PEINTURE
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CPCA Christmas Lunch

The Canadian Paint and Coatings Association held its annual Christmas lunch in December. Around 70 CPCA members and a few guests attended the event, held at the Hilton Hotel close to Toronto's Pearson International Airport. Here are photos of a number of the attendees at the festive event.



CANADIAN PAINT
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ET DU REVÊTEMENT







THERE WAS A TIME WHEN powder coatings were available in a few dozen shades, with the promise of more to come as the right pigments were sorted out. Today, the range of decorative powder coatings alone is enormous, and offers a broad range of properties in addition to simple appealing colors.

Axalta, for example, offers its Jollypop Powder Coatings, which are highly transparent, decorative coatings. They deliver, the company says, a high level of shine, creating an illusion of depth, and the finish is glass-like in its smoothness. They use weatherable TGIC polyester chemistry, and nine colors are currently available.

Applications include auto-rims and parts, decorative outdoor projects, lighting fixtures, bicycles and bicycle parts. Improved transfer efficiency and application characteristics allow for uniform coverage of parts, making it easier to fill scratches and to reduce excessive thicknesses.

Axalta's Illusion product line features super-durable polyester powder coatings in a range of high-gloss colors. When viewed at different angles, especially in direct sunlight, the colors produce a special effect and create the illusion of changing color. This technology is designed not only to transform the look of substrates as well as help ensure their protection.

Aimed at the general industrial finishing business, due to its weatherability the Alesta Illusion collection is recom-

mended for exterior projects such as fencing, patio furniture, lawn and garden accents, vending machines, playground equipment, architectural applications, and sports equipment. They are also for interior use on a variety of surfaces including light fixtures, brackets, and metal furniture as well as small and large appliances.

Durability in other demanding exterior applications is increasingly a selling point for today's powder coatings.

"One of the largest areas of growth we are experiencing is in coatings for the RV industry," says Miguel Marin, regional sales manager with Vitraccoat. "They can be both decorative and functional.

"It seems the RV industry is relying a lot on thermosetting materials to satisfy a wide array of their coating needs. Another field where we are seeing a lot of growth is in architectural applications."

Most of the decorative coatings, he says, are multicolor, speckle, metallic bonded or non-bonded. But Vitraccoat is also seeing requests for functional applications such as anti-skid, antimicrobial, anti-graffiti, high heat resistant and sublimation coatings among others.

"I would say the biggest challenges are posed by the metallic coatings," Marin adds. "If there are rules and guidelines that need to be followed in application in general, those become extremely important to follow when applying metallic coatings."

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.

Several Anti-graffiti 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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As far as being able to offer new types of powder coatings, he says, translucent and super low-cure powders for wood or sensitive substrates would be high on the list. Formable sublimation powders would also be included.

Erie Powder Coatings reports growth in the furniture markets and the exterior architectural markets. Company president Brian Coutts says customers have seen certain design trends, possibly on reality TV, and are seeking the same kind of look

through how the powder is mixed, with two or more colors to provide the appearance, including of course the use of metallics.

The company's Powdura OneCure range uses a two-layer, single cure dry-on-dry coating that can help general finishers and heavy equipment finishers eliminate steps in the coating process. It consists of a mono-bake system that improves upon the conventional single coat, two-bake system of powder primer and topcoat.



“The biggest challenge is to get the color the customer may need and get it to them in the volumes that they want it.”

“It’s color, color and color,” he says about the decorative effects most in demand. “Years back it would have been completely shocking to see an office with a lime green metallic finish, or a baby blue filing cabinet. This is not so much the case any more, I think people watch reality TV where they are painting living rooms burgundy and bedrooms pink and think they would like, or could like, the same things at the office.”

There is no doubt, he adds, that bright, unusual colors and metallics are more difficult to apply than other finishes. This becomes a problem for the coater, as it does for the paint manufacturer.

“The biggest challenge is to get the color the customer may need and get it to them in the volumes that they want it,” he points out. “We have moved to produce custom and specialty colors in ever smaller batches, for customers who want a truly custom fit.”

Customizing is clearly one of the key advantages powder coatings offer. Sherwin-Williams, for example, offers around 80 standard high-gloss colors for customers to work with, as well as a range of black and white powders. The company takes the reasonable view that being able to differentiate product appearance is an inexpensive way to ensure products distinguish themselves in the marketplace, and powder coatings offer this without the downsides of liquid paint.

The company offers, among other options, powders with a rough-textured sand effect; a river texture that provides a wrinkled swirl; or a spice effect, which may be described as a salt-and-pepper look. This is achieved

In the three years since it introduced its Envirocron HTE (for high-transfer efficiency) powder coatings, PPG has established these materials as highly efficient for applications where transfer can be difficult. They are aimed at products such as wheels, wire racking, metal shelving and other products with complex shapes.

PPG says they have been tested to reduce oven temperatures by 10 percent over more conventional polyesters. They use a proprietary bisphenol A-free polyester formulation, their proprietary cross-linking technology enabling them to adhere evenly to metal parts with recessed cavities.

The recommended curing time is 10 minutes at 350 deg. F, and the product range is available in a standard formulation, as well as in an ultra-durable version. PPG manufactures the coating in a wide range of colors and gloss ranges.

Powder coatings impose certain limits on pigments and special effects, partly because of mixing issues, and partly because of the need to cure the coatings. The latter can rule out certain classes of organic pigments, which are more susceptible to breakdown under the impact of sustained heat.

That noted, the reality is that pigmentation technology offers a broad variety of options for formulators and their customers. The real limitation lies in finding ways to guarantee effective mixing and long-term stability. And the industry is always full of creative notions for doing just that. ■

New Generation Powder Spray Equipment

AS POWDER COATINGS gain constantly broadening market share, so do the properties of the powders themselves widen. From simple pigmented polymers, the coating materials now might have ceramic, metallic or other additives that can complicate the process of applying them.

This has created a situation where suppliers of spray systems have had to re-engineer some of their products to accommodate the new generation powders.

“We now have three versions of our Encore automatic pump,” says Robert H. Benson III, global product portfolio manager with Nordson. “We are on the third generation of this pump.

“One example of newer materials our systems have to manage is porcelain enamels. These are almost like glass in the way they behave.”

Nordson is using Tivar ultra-high molecular weight (UHMW) polyethylene to help prevent wear and tear on the pumps. It has the added benefit of a shinier, more appealing finish.

Nordson’s Spectrum HD feed center integrates Nordson’s premium HDLV (high density, low velocity) pumps with its latest generation feed center system. As a result, Benson says, “customers can achieve precision dispensing, sophisticated color change control, and ease of use, all for the lowest cost per painted part.”

This new system was unveiled at the Fabtech show in Chicago, in November. Nordson says it can now achieve color changes in about 19 seconds with its newest robotic systems.

Gema is also offering a dense-phase powder system the OptiSpray AP01, which features a single-channel, inline concept. This, says regional manager Greg Taylor, can achieve high-quality finishes even with challenging special-effect metallic and textured powders. The inline chamber design allows for a straight powder path, and thus optimal spray-pattern control.

“Another new thing from Gema is a robot that uses dynamic contouring,” he says. “This can sense the dimensions of a part that is brought close to it, and can adjust to those contours.”

The different axes of the unit offer in-and-out position-

ing. This type of 3-D scanning is increasingly in demand, he says.

The system finished beta-testing last fall, and is now released commercially. It is recommended, Taylor says, for items like hoods and other irregular shapes.



Gema's OptiSpray system.

“When the axes pull back,” he adds, “it expels accumulated powder in the tube, so there’s no build-up of powder to deal with.”

Wagner has always focus on complete control systems for powder coating. Its PXS system is designed to manage the complete coating system, as the entire system control is already integrated in the switch cabinet, and operates via a central touchscreen.

The compact design, the company says, permits space-saving and ergonomic integration of the system into a customer’s individual work environment. Because of its diverse functions, which enable a high degree of automation as well as efficient powder application, this system is recommended for challenging coating tasks with varying demands.

There is a fresh powder supply coming directly from the powder box, or from a BigBag. There is vibration and fluidization of the powder for optimal powder preparation, and a change of collector nozzles takes only five seconds.

An optional ultrasound sieve reduces entry of dirt, and the system permits automatic optimization of color change processes. There is an integrated powder consumption

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POWDER SPRAY EQUIPMENT



Nordson Encore pump unit on a dolly.

documentation feature, and the system is integrated with the PEM-X1 Corona manual gun.

This gun, the company adds, combines balance, maximum service life and optimum handling. Its balanced ergonomics ensure flexible and fatigue-free operation. It is a competitor in the field of lightweight guns, weighing just 490 gm. It offers, Wagner states, a homogeneous and stable powder cloud, and even layer thickness distribution.

There is a quick-release coupling for the powder hose. This makes the paint change easier and quicker.

Parker Ionics' Pulse Power system is well established in powder coating. This is now in its third generation.

The most recent version, the GX8500A system, features the GX132 powder gun, which the company claims says is the lightest currently on the market. It weighs just 480 gm, and it was given an ergonomic design to reduce operator fatigue. It also features multiple nozzle options.

Additionally, the Super Pulse Power advanced corona-charging technology features three pulse-width modulation cycles. These are optimized for the most widely used powder coating conditions: flat or simple shapes, Faraday cages, and recoats. A user can program up to 250 individual recipes.

The GX8500A includes the company's Dual Air Control system. Each controller can be configured for either total air and percentage main, or independent main and sub-air, giving the operator the choice of using whatever system is preferred. Gun cable length in all cases is seven meters, with five or 10 meters as options.

The system, the company adds, offers consistent smooth surface finishes, excellent Faraday cage penetration, and low flow injector options.

Powder Parts Inc., which supplies lower-cost, drop-in powder coating equipment, offers powder guns that use a relatively new design of electrode, along with a nozzle that maximizes the charge and the transfer efficiency. Company president Grace Vargas says the company's approach offers a cost advantage over OEM prices, in part because it allows Powder Parts to control its costs better.

"We're growing because of this, and since we manufacture in North America, everything we offer is UL-approved. This isn't always the case, especially with some imports from Asia."

One technology that is still seeking widespread commercial acceptance is the Polifluid system. This technology, developed by Italy's Eurosider SaS, makes use of generated nitrogen as opposed to regular air, for both liquid paints and thermoset powders.

It optimizes powder coating operations with a new high-density carrier composed of a mixture of gases contained in compressed air, modifying their molecular percentages and eliminating all harmful elements for an optimal application at a constant temperature. It concentrates the nitrogen in the compressed air through the principle of selective permeation, using it as the pushing fluid in all the powder application stages.

Similarly to the Nitrotherm Spray systems used for liquid coating spraying guns, Polifluid features a polymeric membrane that the company calls it a molecule discriminator. This is a cylindrical container of aluminum or ABS, the operation of which is based on three elements to extract the nitrogen-rich flow from the compressed air:

It produces an inert and dry gas (consisting of a mixture of nitrogen and argon) at a controlled temperature, keeping the values of humidity and temperature – two uncontrollable variables up to now – constant. The system is installed between the air compressor and the coating application point.

It does not replace but rather works with existing spraying equipment, such as crown systems and triboelectric guns. It enables the use of any type of powder coatings, including the metallic and special effect ones.

The coating is applied with a clean gas perfectly suitable for powders, which easily absorb contaminants such as oils or the moisture in the compressed air. Another advantage is the possibility to manage the temperature of the fluid, ionize it with positive or negative charges depending on the need, and adjust the amount of charge up to 20 kV according to the type of surface to be painted. The application thus takes place under the same ideal conditions throughout the day and in all weathers.

Powder coating is now a well-established approach to finishing parts. However, it is clear there are still ways in which it is being optimized to make it faster and more efficient. Indications are, this evolution will continue for some time. ■

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Cleaning Up Your Act

STRIPPING PAINTS AND POWDER COATINGS from metal hooks, rack and other parts is perhaps the least-loved aspect of finishing. It is not directly conducive to generating profits, and determining the best method of doing it provokes many debates. Capital cost, the cost of supplies for the process, the amount of space stripping systems occupy, and the energy they use, all entail complex, variable factors.

Stripping is never a step that can be managed lightly. Barbara Kanegsberg, a partner in consultancy BFK, points out that “Residue is a major concern for manufacturers. Consequences of inadequate residue removal include undesirable appearance (such as spotting or staining), poor coating adhesion, low yield, and catastrophic product failure.

“To successfully remove residue, it is useful to understand what that residue is and where it came from. Also consider: what is it you are trying to clean? Changes in materials or construction of product you are manufacturing can impact cleaning and surface quality.”

A small change in one material of construction, she notes, can necessitate a change in the cleaning process. One manufacturer she cites successfully fabricated bronze products, and had done so for decades. Then, the company introduced a new product line containing brass. Both bronze and brass contain copper; brass is an alloy of copper and zinc.

“They thought: ‘How different could manufacturing be?’ Very different! The brass parts exhibited significant surface quality problems. They had to modify the cleaning process.”

Any cleaning process, she adds, is a ‘Catch 22’ situation that involves balancing effective cleaning with good materials compatibility. With materials compatibility problems, the cleaning process itself causes damage. Examples include anything from product deformation or even dissolution to subtle surface changes.

Surface damage can mimic residue, and can impact adhesion and overall product performance problems.



A burn-off oven from Amiberica.

“Many successful manufacturers,” she adds, “choose to invest in separate cleaning processes, even separate cleaning machines, for high-value product. Segregating product lines does not necessarily mean purchasing new equipment. For example, for small scale ultrasonics applications, cleaning product lines in separate beakers can be a cost-effective option.”

The primary range of stripping methods remains what it has been for many years: chemical strippers, burn-off ovens and fluidized beds. Other methods are always coming into the field, but the existing ones offer the benefit of being well understood, proven and cost-effective.

Guspro Inc., which produces the Bayco line of burn-off ovens, has specialized in high-temperature installations. One produced last year for Metalco, an Ohio company needed to reach 2200 deg. F, with a two-second retention time. Al Moon, sales and marketing manager with Guspro, says that the afterburner for this unit is wider than the oven itself.

“Any cleaning process is a ‘Catch 22’ situation that involves balancing effective cleaning with good materials compatibility.”

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Many paint and coatings operations prefer to stick with chemical stripping methods, such as this tank. (Photo: GEA)

“They were processing a particular material that needed this temperature,” he explains. “Some materials break down in a way that you have to work to break down emissions further into by-products. One by-product for this company was hydrogen chloride, and it needed to be broken down so it didn’t get into the atmosphere.

“The US Environmental Protection Agency took some time to okay the installation, but it is operational. We previously did a similar type of installation for a company in Etobicoke, ON, so we have a track record in this field.”

Pollution Control Products Co. is another supplier of burn-off systems. A key advantage of them, says Jordan Mosby, who handles marketing for the company, is that they only use high heat, and require no chemicals that need later disposal.

“Also, a burn-off oven is much faster than a blasting system,” she says. “It can also be very labor-saving, since you can leave a load of hooks or racks in the oven overnight if necessary, with no harmful effects.”

There is production of ash, obviously, which is unavoidable with pyrolysis. But this is a known, and manageable, residue.

Also, it is possible today to make ovens that have no emissions. Pollution Control has done a special, emissions-free unit for a company in California, which has extremely strict standards, and the unit emits nothing.

Dinamec Systems, which distributes the Schwing line of equipment in North America, recently produced a front-end loading system. It says this reduces operating costs.

Its primary equipment uses a pilot burner above the surface of the bubbling sand to ignite the gas-air mixture. The flame then spreads across the whole bed surface.

Normal operating temperatures are between 780 and 850 deg. F. In order to warm up the sand before commencing operations, gas is mixed into the primary air.

All bonded organic surfaces are gasified, Process gases rise through the fluidized bed, and are directly burned by a flame-shield.

Inorganic particles are removed from metal parts by the

slight movement of the sand, and are carried along with the flue gas stream. They are separated from the flue gases by de-dusting under the cyclone, or a ceramic filter. The particles fall into a collector reservoir under the cyclone or filter, and can be removed easily.

Some suppliers of stripping systems also take on contract work for customers. Kolene Corp., to cite one example, has increased its capabilities for commercial processing using its salt baths at its Detroit headquarters.

“Some people prefer not to spend the money on the equipment themselves,” says general manager Todd Martin. “There are also environmental issues to deal with, and we have solid experience in managing those.”

There are, Martin estimates, around 100 users of salt baths in North America. However, the lack of chemicals needed for the process often builds strong customer appreciation, and that leads to repeat orders.

“I’ve often sold second units to companies, 12 to 15 years after their first purchase,” he says.

Molten salt bath stripping processes remove virtually all organic coatings, including liquid paints and powder coatings; polyesters and nylons; epoxies and hybrids; chlorinated and fluorinated polymers; and CARC (Chemical Agent Resistant Coating).

Kolene also has its Recover system, which is a mid-temperature (300 – 325 deg. F) organic fluid paint stripping process that the company says is compatible with a wide variety of metals.

It can strip both E-coat and powder coatings quickly, without any attack on the base metal. Even highly polished components such as aluminum wheels can be safely stripped without any dulling occurring.

For many users, the lower capital costs involved with chemical stripping systems still make them attractive. When BASF bought Chemetall just over a year ago, it was not acquiring a company whose product line was near the end of its life-cycle.

Chemetall now operates as a brand of BASF’s Surface Treatment global business unit, a division of the Coatings division. BASF recently marked the anniversary of the acquisition with a celebration at its headquarters in Frankfurt, Germany.

Julia Murray, global marketing communications, Surface Treatment, noted, “The Chemetall brand is recognized for its technology leadership, and we take a great deal of pride in our customer-focused and customer-centric approach, locally and globally. Being part of BASF’s Coatings division creates opportunities to increase customer benefits from our combined expertise and commitment to continuous innovation. We expect to further advance our customers’ access to best-in-class technologies, systems, and solutions across the value chain, always with the goal of enhancing efficiencies and value for our customers.” ■

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FABTECH

Once again, the FABTECH show for industrial finishers was held in November at Chicago's McCormick Place. Suppliers of spray systems, industry automation and finishing materials filled the finishing section of the show. On these pages is a selection of photos of exhibitors and some of the thousands of attendees.



Brad Pallister, Len Thompson Lures, Lacombe, AB.



David Thomas, Interlock Roofing, Delta BC.



Derek Bowen, Lewis Veraldi, Steve Aunan, Bex Spray Nozzles, Mississauga, ON.



Diego Bertolo, Kevin Higgins, Francois Morales, S.T Rajan, Regan Murray, Jean Murray, Mark Charbonneau, Ami Anzures, Kirk Shirar (Deimco), Rhonda Joslin, SAMES KREMLIN.



Eddie Waters, Michael Beamish, Ian Maxwell, DeFelsko Corp.



Michael Thevasagayam, Pathmasri Jayanthan, Alpha Conveyor, Scarborough, ON.



John Daugherty, Mike Lane, Daifuku.



Grace Biondi, Lalla Alhousseini, Vanessa Ades, Mark Lazares, Protech Powder Coatings, Montreal, QC.

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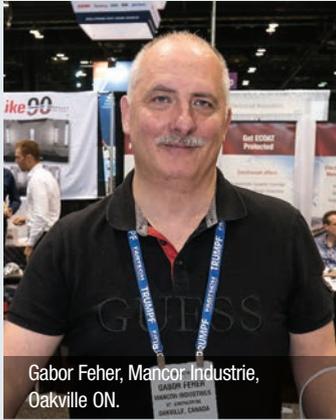


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Dave Bell Accurate Stamp, Calgary, AB.



Henric Fagelind, Colin Hammacott, Hedson Technologies, Oakville, ON.



Marc Sarrazin, Remi Pacquet, BRP, Valcourt, QC



Christian Nusser, Mark Rooney, Andrew Scott, Nicole Mihlan, Nutro/Venjakob.



Roland Sanchez, PCP, Dave Freeman, ProQuip Consultants, Ron Pierce PCP Pollution Control Products.



Jeff Hale, Greg Taylor, Gema.



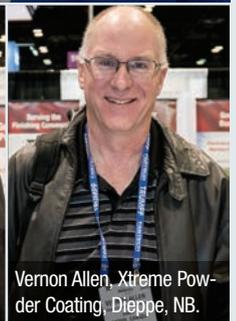
Dick Dooley, Scott Rempala, Mighty Hook.



Steve Sunnen, Jeff Scholtens, Guspro, Chatham, ON.



Gerald Renaud, Concorde Precision Machining, Windsor, ON.



Vernon Allen, Xtreme Powder Coating, Dieppe, NB.



Ryan Schlinke, Dale Hirt, Jenny Kucjec, CFS Custom Fabricating.



David Duron, Dura 21 Sudbury, ON.



Ryan Watt, Duroair, St. Catharines, ON.

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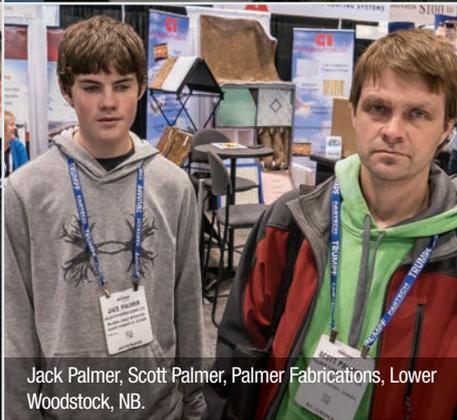
Alex Houle, Jessalyn Hadden, Echo Engineering and Supply.



Abby Grommet, Lizabeth Bjarnarson, Pedro Castillo, TTX Therma-Tron-X.



Marhya Evans, Joe Friesl, Jeff Paxon, Axalta Coating Systems.



Jack Palmer, Scott Palmer, Palmer Fabrications, Lower Woodstock, NB.



Aivars Freidenfelds, Dennis Housewart, ElektroPhysik.



Kevin Taylor, Tim Stechschulte, Chris Kane, Stefan Bachman, Eisenmann Corp.



Stephane Giradine, Richard Provost, Alexander Descoteaux, IST International Surface Technologies, Laval, QC.



Mike Floyd, Hrvoje Terzic, Uni-Spray Systems, Waterloo, ON.



George Caia, Gary Efronson, Fischer Technology.

CUSTOM FABRICATING & SUPPLIES

Custom Fabricating & Supplies (CFS) was established in 2001. It supplies numerous industries with masking and other custom tapes, plugs, diecuts, hooks, tape dispensers and related products.

The company began with a small office in downtown Milwaukee, WI, but grew rapidly and soon needed more space. In 2003, it moved to its second facility located in South Milwaukee.

By 2005, CFS was doing more and more custom work, and doubled in size, and moved for a third time to Greendale, WI. It continued to expand its flexible converting capabilities, and in 2008 became an approved converter of 3M products. In 2013, CFS became ISO 9001:2008 certified.

In 2014, operations moved for a fourth time to the current 30,000 sq ft facility in Franklin, WI. It also has four other service locations across the US.

CFS' line of caps and plugs includes products made from silicone, EPDM, polyethylene and vinyl. Styles include tapered plugs, pull plugs, dual-washer pull plugs, high-temperature self-threading plugs, oversized caps and silicone tubing, cords and sheets. Rubber grommets and hang-tabs are also available.

The range of tapes includes: double-sided, self-fusing, glass cloth, polyimide, polyester, crepe, foil, PTFE, vinyl, transfer, blasting, duct, packaging, PTFE coated fabric, printed circuit board, plotting and flame spray tapes.

These items can be supplied for metal finishing, painting and parts protection generally.

A company specialty at CFS is Flash Cutting Technology. This is the process of fabricating a part that has all of the characteristics, multi levels and profiles, of a custom molded part combined with the lead time and low up front cost of a custom die cut, while maintaining no hard tooling commitment. Additional benefits include the capability to handle low and high volume runs, quick revisions, and parts up to 5x10 ft and 5-in. thick.

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<p style="text-align: center; font-weight: bold; font-size: small;">Custom Molded</p> 	<p style="text-align: center; font-weight: bold; font-size: small;">3D Printing</p> 	<ul style="list-style-type: none"> SAME DAY SHIPPING on all STOCK ORDERS Fastest turnaround time in the Masking Industry 3M Preferred Converter MULTIPLE locations Nationwide RAPID PROTOTYPING available with our 3D Printer Expert Design Engineers to create CUSTOM SOLUTIONS VMI (Vendor Managed Inventory) Programs available 	

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Toronto Woodworking Show

The biennial Woodworking Machinery and Supply Expo was held at Toronto's International Centre from November 2 to 4 last year. There were 130 companies exhibiting, and the show drew several thousand visitors. On these pages are photos of some of the people at the event.



Mike Baglione, S.T. Rajan, Michel Bresolin, Doug Leroux, Regan Murray, Jean Murray, Paul Kelly, SAMES-KREMLIN.



Jason Jiang, Doug Peacock, Grace Liang, Fanny Lu, Prona Tools.



Daniel Ayotte, Brigitte Roy, Jacques Villeneuve, Sun-Spot Inc.



Mike Macdonald, Jason Hanlon, CCI/Finishworks Canada.



Laurent Guay, Jody Leclair, Marie-Sophie Guindon, Normand Guindon, Paul Sanderson, Dan Martens, Eric Bertelsen, Richard Killman, Rob Heckard, Stefano Antoniazzi, CanLak Inc.



Axalta.

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

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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.

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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.

At the forefront of KCI's new product introductions is the PURE™ line of formaldehyde free coatings. For companies wishing to be greener but reluctant to make the switch to waterborne coatings, the PURE™ formaldehyde free solvent based

line up is a great alternative. They can be used as a drop-in replacement for traditional solvent-based systems. There is a clear pre-cat called PUREGUARD™, a conversion varnish called PUREVAR™ and a sanding sealer called PURESEAL™. The top-coats can be used self-sealing or with the companion sealer.

KCI is now a proud distributor of the Sirca line of Italian wood coatings including polyurethanes, acrylic polyurethanes, polyesters, waterborne products, interior & exterior finishes and colour systems. The Sirca line offers an unsurpassed level of durability for premium cabinetry, millwork, furniture and doors & windows.

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.

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Fax: 905-637-8918

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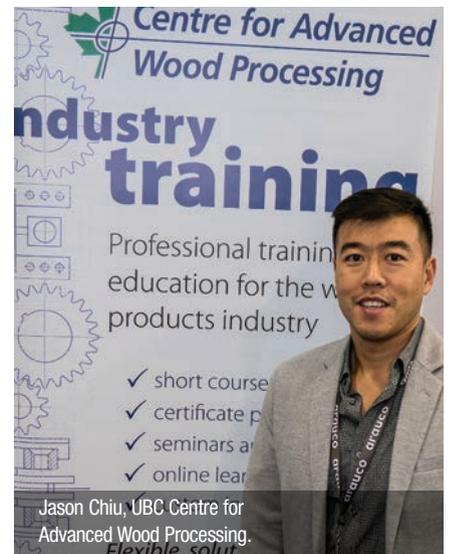


Sirca
THE WOOD COATINGS

Toronto Woodworking Show



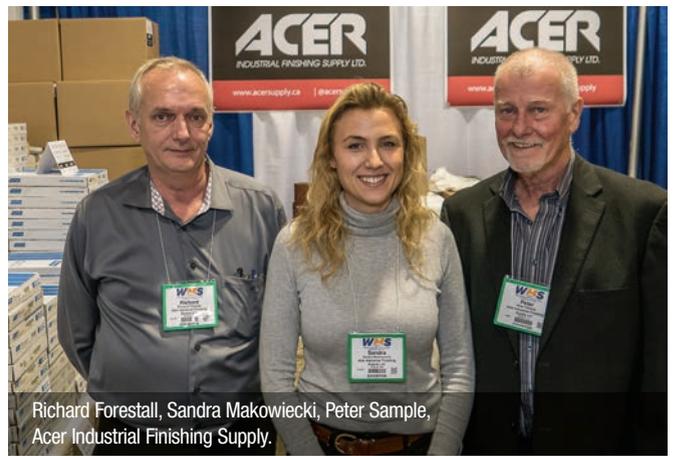
Mike Allard, Robert Legg, Rob Penfold, Mike Reis, Jamie Dickens.



Jason Chiu, UBC Centre for Advanced Wood Processing.



Kevin Roach, Brent Fischer, The Sherwin-Williams Company.



Richard Forestall, Sandra Makowiecki, Peter Sample, Acer Industrial Finishing Supply.



Steve Bosley, Superfici America, Inc.



Caroline Levesley, Debbie Levesley, Jose de Sousa, Mark Levesley, ICA North America.

ICA North America is a family run business that has been running for 18 years in West Lorne, Ontario, just west of London, Ontario. ICA North America works through a distribution network and has distributors from the East to the West Coast of both the United States and Canada.

ICA North America oversees the importation of ICA products into North America. ICA specialises in the production of high end, technologically advanced coatings for wood and glass. Their range of products include water and solvent stain systems, 2k solvent-borne polyurethanes, polyesters and some of the very latest water-borne products. ICA North America addresses a variety of markets including architectural millworks, kitchen and cabinet manufacturers, retail fixtures, furniture manufacturers and all high end finishing needs.

ICA North America imports its products directly from the headquarters, ICA Spa, in Civitanova Marche, Italy. The Canadian operation is constantly in touch with the Italian laboratories to ensure that all the very latest products are available to the distributors. ICA Spa is the leading producer of specialized high-end coatings for wood. It was the first European wood coatings manufacturer to achieve ISO-14001 certification. The manufacturing of the coatings is carried out at the two production plants in Italy. It has been a family run business since 1972, when Claudio Paniccia founded the company. He and his family still operate ICA Spa, which currently employs over 500 employees and has over 10,000 clients.

The production plant in Civitanova Marche is highly automated to ensure the highest quality in what it produces. It uses a state-of-the-art computerized system to ensure perfect replicability of all its products. Tests are conducted on each batch in order to verify that the each lot of products corresponds to the stated requirements. If a coatings pass these quality control tests, it is ready to be filtered and packaged for sale.

ICA North America has a network of highly efficient representatives that service all North America. The technical sales representatives are highly qualified with many years' experience in the coatings industry. They are constantly travelling throughout North providing assistance and guidance to both distributors and end users.

If you have any questions or inquiries ICA North America's main office looks forward to addressing to addressing them. Please contact: info@icaamerica.biz

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Toronto Woodworking Show



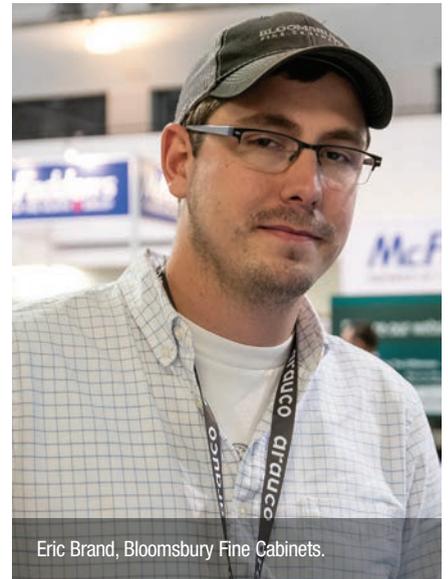
Neil Thompson, Mohini Patel, Cheryl Davidson, Andrew Scott, Venjakob.



Nestor Lopez, David Bartholomey, IC&S ILVA.



Steve Clarke, John Okovic, Tony Colanardi, Royal City Paint.



Eric Brand, Bloomsbury Fine Cabinets.



Vincent Janisse, Umar Sutar, Lemmer Spray Systems.



David Woods, Giuseppe Saglimbeni, Bill Fiorillo, Siva Coatings.

Prona Tools Inc. was established in Taiwan in 1985, and has had North American offices in Toronto and Vancouver since 2013. It is also active in Italy, Germany, United Kingdom and various Asian countries. 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 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 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 has focused on becoming an internally recognized brand, and enters global markets where it intends to maintain a permanent presence.

Prona's signature products are its spray guns, pressure tanks, fluid agitators and double-diaphragm pumps. Their new product R-2200, the air-assisted airless manual spray gun, sprays phenomenally on all surfaces with all materials, because it comes with a large selection of nozzle sizes. Excellent transfer efficiency meets the highest requirements of today. The R-4300S is their newest product in air spray gun, fully suitable for all waterborne material. Proven technology in atomization has been incorporated into this spray gun,

making it extraordinary. The MRS2 spray gun is light-weight, works with all waterborne material, and is great for mold-release agents, as well as wonderful for sprayers with smaller hands. It is also easier to maneuver.

Prona aims to be a leader in the industry, and a serious partner for the customers that purchase their products. The company's commitment is to offer all of their clients reliable, high quality products and superior services.

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Tel: (416) 739-6868
email: sales@pronatools.com

Vancouver Office:

4141 Grandview Hwy,
Burnaby, BC, V5C 4J1
Tel: (604) 436-0061
email: admin@pronatools.com

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Prona Tools Inc.
www.pronatools.com

Toronto Office
2899 Steeles Ave. W.
Toronto ON M3J 3A1
Phone: 416-739-6868
sales@pronatools.com

Vancouver Office
4141 Grandview Hwy.
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OPCA Christmas event

The Ontario Painting Contractors' Association gathered for its annual lunch before Christmas. Here are some of the people who attended.

(Photos: OPCA)



Color is an essential component in the manufacturing of coatings, and no one knows color better than X-Rite. This Michigan-based company is the only company that offers complete end-to-end solutions to manage color from inspiration and design to formulation, production and quality control. Its products are used across a wide variety of companies and industries from electronics, furniture and fashion, to signs, packaging, retail, buildings, cars, and aircrafts – just to name a few.

X-Rite provides software; portable, benchtop and inline instrumentation; and visual evaluation equipment to ensure accurate and consistent color for paint and coatings. The company also offers color management solutions to meet the unique requirements for the plastics, print and packaging, textiles, cosmetics, food and design industries.

The company was founded in 1958 with a focus on delivering innovative products. Through the launch of groundbreaking products and strategic acquisitions, X-Rite quickly grew to become a global leader in color science with insights from Gretag Macbeth, Munsell Color and Pantone. In fact, more than 10 million designers and producers around the world employ Pantone Products and Services to communicate color, and control consistency across various materials and finishes.

Continuing in its tradition of innovation, X-Rite is the first company to combine imaging and spectral data to deliver instrumentation that goes beyond color to characterize material appearance. This new capability, available in the MA-T family of multi-angle imaging spectrophotometers, helps manufacturers ensure accurate and consistent color across a range of complex materials and coatings such as aluminums, pearls or special effect pigments like Xirallics. The MA-T is a next-generation device that characterizes color, sparkle and coarseness with greater repeatability and reproducibility. It enables the quantification of color and material appearance in the way that the human eye perceives these characteristics. This can reduce approval cycles, minimize costly rework and waste, and accelerate time-to-market.

Other X-Rite products that combine imaging and spectral data include the MetaVue VS3200, a 45/0 non-contact

instrument for industrial applications; and the Total Appearance Capture ecosystem, a material scanning solution for the capture, communication and digital presentation of physical materials in the virtual world.

As materials become more complex and manufacturers continue to use color and effect finishes to differentiate themselves, color management will play a growing role in formulation, production

and quality control. With solutions from X-Rite, companies can achieve accurate and consistent color in production while improving efficiencies, reducing cost and generating new business.

Our contact for Canada is:

Bob Balland, bballand@xrite.com
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Evolving the Surface Coatings Industry

Air blowers with metal plating using evolve.

BY MARIOLA BRANDES,
MACDERMID ENTHONE INDUSTRIAL SOLUTIONS

WHILE ELECTROPLATING is widely regarded as a finishing process for metal applications, it is increasingly being specified for a range of non-conductive components. For over 40 years, electroplating on plastic has been used to enhance decorative and functional characteristics of electrical, cosmetic and automotive products.

Designed for applications that require a high degree of surface durability, Plating on Plastics (POP) is a term used to describe the decorative or functional application of electroplating metal onto plastic substrates. The process enables manufacturers to improve aesthetics on complicated molded parts, save on expenditure and reduce the weight of parts.

Electroplating: the Process

Plating on Plastics is the procedure of a non-conductive material, such as ABS (acrylonitrile butadiene styrene) being coated with a conductive layer, typically electroless nickel or copper, followed by electroplated copper from an acid electrolyte. This stage is then followed by multi-metal layers and decorative chromium being deposited onto the component, to achieve good corrosion protection and improve the decorative appearance. Suitable for products and components of almost any size, the process can

achieve a wide variety of finishes and colors from white to dark chromium as well as gold, silver and copper.

Etching of Non-conductive Materials

ABS was one of the first polymers to undergo the Plating on Plastic process, and remains the most common plateable substrate material today. The grade of the butadiene content in the polymer and injection molding conditions has a significant impact on the effectiveness of electroplating. Specifying the correct content is important to ensure the success of the chemical treatment used to etch the surface and develop good adhesion of the electroplated layers. The metallic layers applied to the plastic surface also need to exhibit good bonding to the resin for maximum endurance.

Superior durability with ABS is achieved by chemically etching out the butadiene phase within the surface layer, leaving behind a 'microcavity' surface topography. This ensures subsequently applied metal deposits can undergo two mechanisms, mechanical and chemical bonding. A strong mechanical bond is created due to the 'button hole' effect using the etched cavities as sites in which the metal deposits are partly embedded in the plastic surface. Chemical bonding is then achieved between the initial metallic

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. Partners Dennis Rogers, Charles Morris and Stewart Tymchuk established Dynamix in 2007 and over the years the business has adapted to the needs of 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 9001:2015, marketing and sales, enables Dynamix to provide high quality products and cost-effective opportunities to all customers.

Our Philosophy

"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."

Main Focus

The primary focus of Dynamix is the design and manufacture of specialty chemicals for the metal finishing industry, covering all aspects of metal finishing from anodizing to zinc plating. Toll blending, packaging and distribution of custom formulated products are also available.

Distributing Partners

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 supply of a wider variety of chemistries, including automotive and aerospace approved products.

Our Strength

Dynamix's strength is in zinc plating, as it has well over 200 zinc lines presently in service across North America. What sets it 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 its 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.

The company has two locations, Markham, ON, and Montreal.

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

Let Dynamix demonstrate how to maximize your plating chemistry produc-

tivity by providing the most robust chemical processes available.

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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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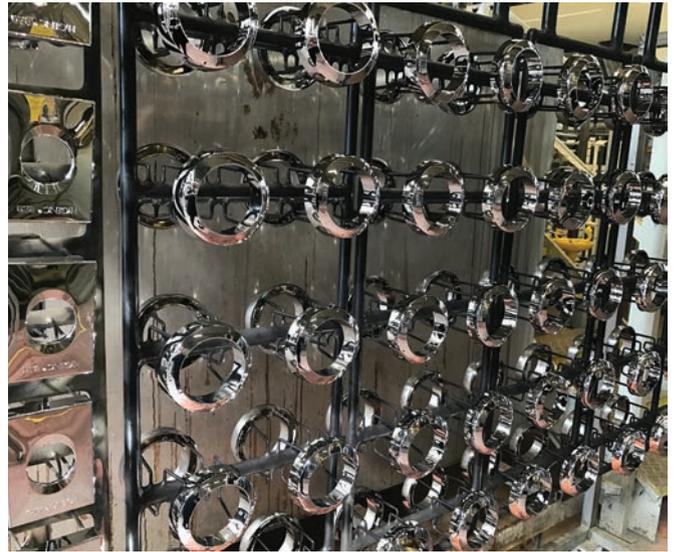
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PLATING ON PLASTICS



Above: evolve-plated plastic components.

Left: Metal-plated automotive bumpers.

immersion layer and the polymer surface by covalent bonding with oxygen atoms created during the etching process and strength.

Etching of the resin surface is the first significant chemical step in the Plating on Plastics process. The most common chemical etchants are based on chromium trioxide and sulfuric acid.

However, in 2003, chromium trioxide was reclassified as a class 1 carcinogen due to its cancer inducing capabilities. As a result, alternatives have been developed for use in many metal finishing applications. Although this has led to successful replacement in many instances, such as (passivation) for zinc alloys and decorative chromium electroplating, there has not been a viable alternative for the etching of plastics.

Changing Regulations

Since the European Union's introduction of the REACH (Registration, Evaluation, Authorization and restriction of Chemicals) legislation in 2007, controls have been put in place on the use of certain chemicals throughout Europe. This regulation classifies many commonly specified components in the surface coatings industry as Substances of Very High Concern (SVHC), which are dangerous to human life and/or the environment.

All such harmful chemicals are placed on a candidate list, which details when the substances can legally be last used and the purposes for which they are authorized.

Significantly affecting the manufacturing of surface coatings, the list now includes chromium trioxide, which is widely used across the industry for its powerful oxidizing properties.

The Evolution of evolve®

In response to the new legislation and increasing global environmental pressures, MacDermid Enthone, a leading international surface finish provider, and Italian electroplating company, Galvanoplastica Srl, have worked together to create a new chromium-free etching system called evolve®. Through years of research & development, the process has been specifically designed to meet the increasing requirements of the high performance decorative Plating on Plastics market. The innovative technology has led to one of the most advanced plastic plating processes, completely removing the stage of using carcinogenic chromium trioxide from the complete process line. In conjunction with decorative trivalent chromium electroplating process, evolve offers the end-user the first totally hexavalent chromium-free system for decorative Plating on Plastics.

Providing similar performance benefits as the traditional process, evolve enables manufacturers to reduce the environmental and safety liabilities that come with using the toxic chemical, while enhancing its technical capabilities. evolve has excellent adhesion strength and meets the demanding performance requirements of industries such as automotive, plumbing and other industry segments. It incorporates a conditioning step which greatly improves the etching speed and efficiency, enabling a wide range of plastics to be processed using the same routine and conditions. Processing time is almost comparable to traditional

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to combine and configure different test methods and probes for virtually any coating/substrate combination. Fischer DataCenter software makes it possible to easily integrate any desired measurements, statistical values and graphic displays via drag and drop. This eliminates the need to work with pen and paper.

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 Coating Thickness
  Material Analysis
  Nanoindentation
  Material Testing

chromium trioxide etching and, similar to traditional processes, can be altered based on the plastic resin and injection molding characteristics. For instance, the evolve etching cycle takes approximately 10 minutes for ABS materials between 65 deg. C – 68 deg. C and 15 to 20 minutes for Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS)-types at 70 deg. C – 72 deg. C.

evolve also enables the etching process to be operated at much lower concentrations than with previously used chromium trioxide/sulfuric acid types, resulting in a

significantly simpler rinsing process and less costly waste water treatment. The operating temperature is also lower than traditional methods, adding to the process compatibility with thin wall injection moldings. In addition, yield can be further improved as the process eliminates voids and skip plating.

With more than one million euros of investment in the process, the research has led to the creation of Galvanoplastica's state-of-the-art 'evolve' hexavalent chromium-free plant. This new facility not only provides a healthier environment for

workers, but also offers a more efficient production process, ensuring the company stays competitive in the marketplace. Since the first introduction of the project in 2015, the wider evolve process has seen interest from a range of renowned global companies to produce parts, as well test samples of 'total green' products, including IKEA and many major Tier 1 Plating on Plastic platers; plastic suppliers as well as automotive and sanitary component manufacturers.

Reacting to the elimination of chromium trioxide in the surface coatings industry is vital, due to the number of impending regulations and the constant need to advance technology. In fact, specifying a chromium-free process, such as evolve, will be crucial to facilitating the continuation of effective decorative plating in Europe. Over the past 20 years, MacDermid Enthone has significantly increased its efforts to eliminate dangerous and hazardous substances from plating production.

Reaching for a Greener Future

As the REACH deadline fast approaches, demand for innovative surface coatings with superior performance capabilities continues to grow. Across the industry, applicators are increasingly looking to specify 'green' and sustainable components that comply with the strict impending EU regulations. To stay ahead of competition and meet the growing restrictions, innovation and technology development is key in driving forward the surface coatings industry. MacDermid Enthone's advanced Plating on Plastics metallization process and decorative coatings provide manufacturers with superior styling options and engineering compliance. The process enables end-users to overcome complex formulation and regulatory challenges, by allowing for improved consistency and advanced performance. ■

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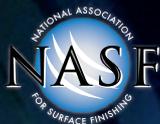


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NTS, Northern Technical Solutions is a supplier of proprietary chemicals to the aluminum finishing industry in Canada.



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Technical Solutions facility and being there when the need arises to support our customers.

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Demand Pushes Prices in Nickel

NICKEL REMAINS ONE OF THE MOST used metals in the world. Annual production as of 2016 has been estimated at 225-million metric tons. Most of this goes into high-grade steels, though it has been used in various plating applications for over 150 years.

Naturally occurring deposits are being depleted, with 78-million metric tons being the accepted figure for the world's currently known reserves. Canada is generally reckoned to be the 10th largest producer in the world, with 2.9-million metric tons extracted annually. Australia, Brazil and Russia lead the pack.

However, any specific point at which nickel becomes unavailable is highly conjectural. A large amount of nickel is recycled and re-used, which is helping to keep prices manageable. About half of all nickel use in stainless steel, for example, has been recycled.

Some supply factors are having effects on current pricing and availability, however. Jeff Brassard, general manager with Palm Commodities International, points out that the Canadian nickel miner, Vale Ltd., has closed its refinery in Thompson, MB. This means there is a tighter supply situation for nickel.

A famous image - the Big Nickel in Sudbury, ON, the home of Canadian nickel mining for most of century.

Photo: www.trover.com.

"I expect to see reduced supply and increased prices for both nickel plating anodes and refined nickel chemicals used in plating," he says. "There is a reduction in the amount of plating grade nickel metal anodes while demand remains relatively high."

The ramp-up of production of both electric vehicles (EVs) and plug-in hybrid vehicles has put stress on the available supply. Both types of vehicles require significant amounts of nickel produced using nickel chemicals such as nickel sulfate.

"Prices of these products to plating customers are already increasing," Brassard says, "and will continue to do so as the battery industry and Chinese and European surface finishing companies compete with their North American counterparts for refined nickel anodes and chemicals.

"We are heading into a very interesting time for our industry."

In one sense, nickel is a victim of its own success. The Nickel Institute in the US, which is affiliated with the

“Canada is generally reckoned to be the 10th largest producer in the world, with 2.9-million metric tons extracted annually.”

National Association for Surface Finishing, estimates that there are about 3000 nickel-containing alloys in everyday use, and that about 90 percent of all new nickel sold each year goes into such alloys.

Two-thirds of that total is used in stainless steel. Overall nickel use, the Institute says, is growing at about four percent annually, while use of nickel-containing stainless steel is growing at about six percent.

The standard Watts bath for nickel plating is already a century old, Prof. O.P. Watts having developed the formula for it in 1916. His recipe – 240 gm/l nickel sulfate, 20 gm/l nickel chloride and 20 gm/l boric acid – is still in use, though with various technical modifications to provide higher performance and plant safety.

International standards for the Watts process were established during the 1930s. These included raising temperatures and the use of air agitation, as well as brighteners to offset the dull surface typical with Watts' original process. Electroless nickel plating required a different chemical composition, however.

In plating, whether the method be electroless or uses an electrical exchange, nickel has the advantage over chromium in relative toxicity. The European-based International Nickel Study Group While notes that while it is implicated in carcinogenicity and dermal sensitization, these problems are largely associated with either nickel production and refining, or industries such as jewelry-making.

Plating processes allow for safer working conditions for employees, and rapid elimination of fumes from the work area. Across North America and Europe, the risks are managed and controlled by existing workplace regulations.

The applications for nickel plating of all types in a regular passenger vehicle are extensive. The Nickel Institute lists zinc-nickel plating on fasteners and tubes; nickel plate under decorative chrome; electroless nickel plating for wear and corrosion protection on pistons, suspensions, brake systems, fuel lines and gears; and a range of electrically related uses.

Electroless nickel plating is primarily used in the automotive industry on this continent in cases where the coat-

ing produced can be free from heavy metal stabilizers.

Coventya's ENOVA RI electroless nickel process is one of the most recent introductions in the electroless field. It uses a reduced ion, low-nickel method that the company says improves both process and deposit performance.

Customers, Coventya states, are reporting increased resistance to salt spray, brighter, smoother deposits, and less occurrence of staining. The critical differentiating factor is operating levels of three grams per liter of nickel, as opposed to a more usual six grams.

One influencing factor in developing the ENOVA RI process was that, since concern and reduced use of hexavalent chrome is essentially a settled issue, regulatory bodies are starting to look at nickel more closely, though more in Europe than North America at the present time. However, industry spokespersons have cautioned this might become an issue in Canada in time. And nickel does have its limits.

Last year, in speaking of the shift towards trivalent chrome plating processes, Collin Peters, North America business manager, functional chrome and electroless nickel, with Atotech Canada Ltd., noted there are significantly lower health and safety concerns with nickel. This means there are lower reporting requirements, but there are also performance issues.

“The electroless nickel processes Atotech provides offer uniform deposition, as well as acceptable wear resistance as deposited for certain applications,” he said. “Nickel has the ability to co-deposit particles such as silicon carbide or Teflon to further enhance some deposit properties. But as an alternative to hexavalent functional chrome, it is application specific, as electroless nickel cannot match all the properties at once.”

As we move towards the third decade of the 21st Century, nickel therefore faces its challenges. Those include the relative scarcity of new chemistries, possible regulation and, in the near-to-medium term, possible price hikes as demand from the batteries industry grows.

That said, it remains an essential metal for corrosion resistance and surface protection. And overall, there is no conceivable alternative coming to replace it. ■

“There is a reduction in the amount of plating grade nickel metal anodes while demand remains relatively high.”

Palm Commodities International, LLC



Palm Commodities International, LLC is a wholly owned subsidiary of Umicore North America. Umicore is a global materials technology and recycling group, with about 10,000 employees and a turnover of \$10 billion in 2016. Umicore generates the majority of its revenues and dedicates most of its R&D efforts to clean technologies, such as emission control catalysts, materials for rechargeable batteries and recycling. Umicore's overriding goal of sustainable value creation is based on an ambition to develop, produce and recycle materials in a way that fulfils its mission: materials for a better life.

Palm is chemical manufacturing and distribution business based outside of Nashville, in LaVergne, TN. Palm produces high purity liquid nickel concentrates such as nickel bromide, nickel chloride, nickel sulfamate and nickel sulfate solutions. Palm also offers toll blending, con-

tract manufacturing and private labeling services for liquid chemical products. In addition, Palm distributes over 150 chemical and metal products to industries as diverse as the electroplating, surface finishing, glass, ceramic, catalyst and water treatment markets.

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Thermal Control in Plating

REGULATING OPERATING temperatures in anodizing and plating temperature regulation is a constantly developing area. The introduction of microprocessor control some years ago took much of the guesswork out of things, but there are plenty of system variables that can complicate the process.

Measuring components need occasional tuning or adjustment, and plant managers need to be sure they are measuring all aspects of a metals bath, and not, for example just one end of a tank. With several metals, cathode efficiency, for example, falls with any increase in operating temperature, even if higher operating temperatures do permit higher current density.

But without accurate measurement and control of the operation, this is not possible. There are also the issues of cost and durability to watch for with the different systems in the market, even when the overall technology has proven itself viable and trustworthy.

There are also such issues as agitation to watch for. In nickel plating, for example, factors such as agitation and temperature can increase the diffusion rate of the ions into the cathode film.

The temperature range is important in its effects on the physical properties and appearance of the plated finish. Along with continual agitation, it helps to mix the bath components, keeping them dissolved and functioning optimally.

Titan Industrial Heating specializes in autocatalytic nickel plating, among other areas; the more usual term for this is electroless nickel plating. The process needs to be performed in a heated tank, so heating consistency is critical.

The ideal heating system heats the solution quickly, according to the company. This usually means a period between two to three hours. Titan offers gas-fired or electrically heated designs for polypropylene tanks, stainless steel tanks and double boiler tanks.

There is a range of heating methods available for electroless nickel plating, and the style of controls that is adopted will be affected by the method a plating shop makes. Polypropylene tanks, for example, usually use immersion heaters, as do many stainless steel tanks.

Alternatives include a configuration of pump outside, heater inside; pump outside along with heat exchanger; pump outside and grid steam coils inside; or pump inside and filter outside. In addition, Titan says, some plants have the pump outside and a tube heat exchanger, or an outer tank of stainless steel in a 'double boiler' tank, with gas heating.

The company also offers systems for black oxide plating, or blackening, which is used to add mild corrosion resistance to ferrous materials. This is usually performed at 290 deg. F in electrically heated or gas-fired metal finishing tanks.

Sheath material for immersion heaters used with black oxide plating tanks should be 316 stainless steel, derated to 10 WSI (Watts per sq in.), the company states. This application has a high solution evaporation rate, so that an L-shaped or bottom immersion heater is recommended. Over-the-side immersion heaters can also be used.

In each case, controls technology has to be specified carefully, to match the tank capacity. A liquid level control is also recommended for this application.

Baker Technology Associates, which specializes in rack and barrel plating systems, makes energy-conserving designs its specialty. The use of state-of-the-art temperature controls is integral to this. Through minimizing losses from heated tanks, the company states, and reducing exhaust cfm, often by over 80 percent, its systems can deliver significant savings in recurring heated make-up air and energy consumption.

Baker Technology exclusively uses Aucos control systems and has done so for 20 years. All its control systems offer production scheduling, advanced real-time simulation, verification of layout and capacities, and optimized concurrent processing of widely varying dwell times and process recipes.

Additionally, unlike some scheduling systems, there is no need for part/fixture storage or a queue. The controls are available in UNIX, LINUX and Windows platforms. Baker's patented Platexpress System, the company adds, provides a more consistent finish with lower operating costs. It also offers a hybrid system that uses many of the Platexpress features, but with a traditional barrel/hoist orientation.

Price Walgren, a division of George Koch Sons, LLC, specializes in temperature controls tailored to customers' individual product, process and throughput requirements. The company says it maintains extensive in-house capabilities, in both the US and Asia, for the engineering and implementation of these.

Process control is through Allen Bradley, Siemens or Omron, controls. However, Walgren also partners with Aucos, GPR and Kempe Software Solutions, which specialize in controls for anodizing, plating and specialty finishing systems.

These partnerships, the company states, allow it to effectively meet clients' unique needs for speed, flexibility and documentation.

Specifying a temperature control system is not difficult, but it does require care. Plant managers need to stay abreast of the newest developments, and make sure that competitors have not gained an advantage simply because they were more attentive to what was coming into the market. ■

A Brite Company is a chemical blender of our own line of industrial cleaners and environmental products as well as a toll blending stocking distributor for MacDermid Enthone Industrial Solutions. We are a regional distributor for Palm metals and Houghton International metal-working fluids. A Brite also manufactures and maintains a large stock of many types of industrial, surface finishing and environmental equipment and parts.

Founded in 1982, we began life in the surface finishing business. As needs grew, we found ourselves not only providing chemicals and consultation on the finishing lines of our clients, we also learned how to maintain their work areas and deal with their waste products.

Chemistry, equipment, laboratory services and supplies and consulting are the elements that have made us, over nearly 40 years, a leader in the surface finishing industry. Whether a line is large or small, if it needs chemistry or troubleshooting, we can solve the problem and keep production moving forward.

Our experts look at the big picture of what you are trying to accomplish as a finisher. Rather than looking at a problem in isolation, we know what it takes to specify, equip and then run a variety of finishing lines. Consequently, when it comes to recommending or blending chemistry, because we've provided and integrated the equipment into the line, we come up with the best, seamless solution.

At the heart of an efficient, compliant and productive manufacturing facility is cleanliness. From the floor and general-purpose cleaning to industrial cleaners used in manufacturing processes, A Brite Company will either find or blend the best solution to your problem.

Our chemical cleaners are typically water-soluble, multi-purpose general maintenance cleaners. Hydrocarbon-free and

bio-degradable, they are safe to use on most surfaces.

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Our experts understand a broad range of manufacturing facilities and processes. Consequently, they collaborate with you on the best options for the cleaning of your facility and machinery.

As veterans of the surface finishing industry, we know what comprises most waste generated by manufacturing processes. From processing to disposal, we have developed this allied business from our expertise.

We can identify waste from samples in our lab and come up with appropriate plans for its treatment and disposal.

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A family-owned and operated company based in Garland, TX, A Brite is proud of its Texas roots and its relationships in the metal finishing industry. Members of the NASF, the Garland Chamber and the Dallas County Manufacturing Association, we are committed to the success of our community.



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CASF Conference

Once again, the Canadian Association for Surface Finishing drew a solid crowd for its Conference. The event, held at the Hilton Garden Inn in Vaughan ON, during November, drew scores of people to the technical talks and regulatory updates, and to check out the tabletop exhibits.



Michael Kuntz, CASF.



Robert Smith, CASF.



Paul Clipsham, CME Canadian Manufacturers and Exporters.



Tim Tan, DeNora.



Jeff Weber, Maria Abad, Kontek.

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 construction of custom-built filtration systems. It regularly manufac-

tures 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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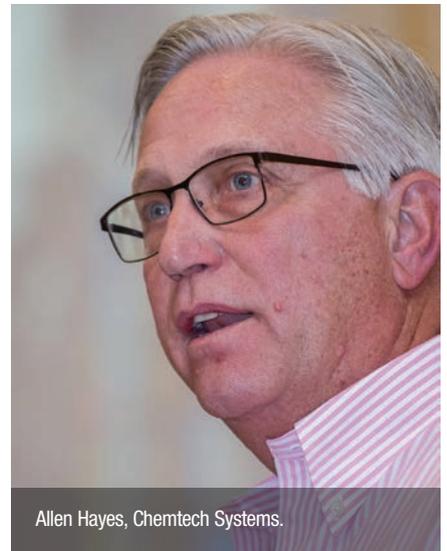
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Allen Hayes, Chemtech Systems.



Depp Singh, Vish Nadasar, Peerless Custom Rack.



David Gasparovich, MacDermid Enthone.



Hongbo Wang, Canbecmont International.



Stephanie McCallum, CASF.



Haidar Dahnoun, Patrick Camire, Gologic.



Anthony Tran, Charlie Salomon, Service Filtration Canada.

De Nora Tech is a global leader in the development, manufacture and sale of mixed metal oxide anodes for electrochemical plating processes. De Nora Tech (DNT) provides support to its customers by providing high-level on-time electrode delivery, ISO 9001-2015 product consistency, and proven superior plating performance. DNT provides specialized customer and product technical assistance supporting their commercial needs.

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De Nora Tech demonstrates proven experience, excellence, and reliability across its diverse electrochemical product line. De Nora's Dimensionally Stable Anodes (DSA®) technology is widely used in chemical, metal electrowinning, electrolysis, water treatment, cathodic protection, and other industries.

With its state-of-the-art Technology Center located in Concord (Ohio -US), and electrode manufacturing/ coating facility located in nearby Chardon (Ohio - US), De Nora Tech remains well positioned to service its North American clients. Currently DNT has established coating capacity to 1.6 million ft² (150,000 m²) annually. Building on the legacy of ELTECH Systems (acquired in 2005) De Nora Tech continues to plan for the future with present construction of a state-of-the-art designed, 130,000 ft² (12,077 m²) manufacturing facility in nearby Mentor, OH. The \$31 million investment will be operational in spring of 2019.

De Nora Tech is part of the worldwide De Nora Network operating 12 manufacturing facilities across the globe with De Nora's Corporate headquarters located in Milan, Italy. With over 95 years in business, De Nora aims to strengthen its position as the world's leading provider of electrochemical products and services by uniting a unique value proposition of economic success, respect for the environment, and social responsibility.

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7590 Discovery Lane, Concord, OH 44077

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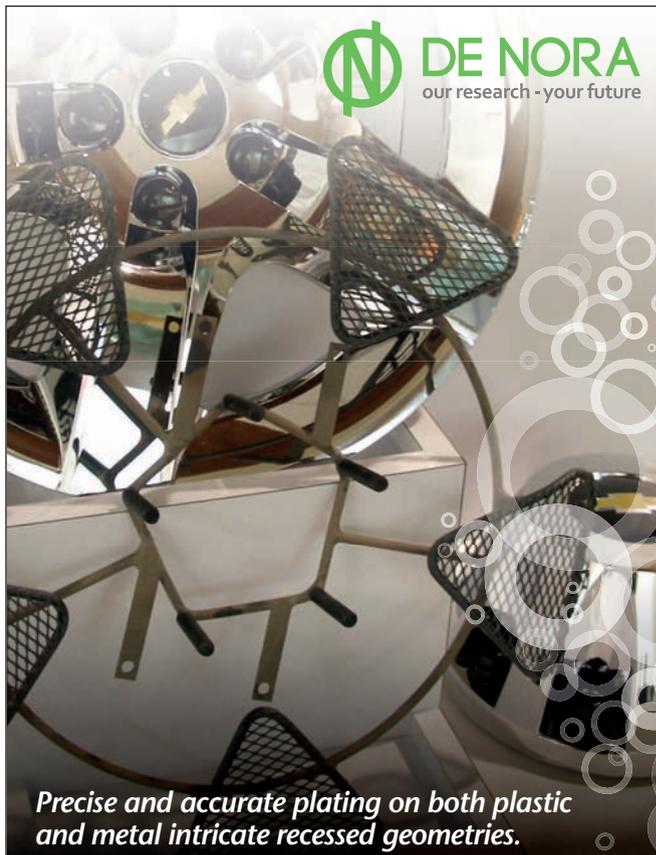
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CASF Conference



Donna Arts, NRCan/CIPEC.



Melissa Starchild, Palm International.



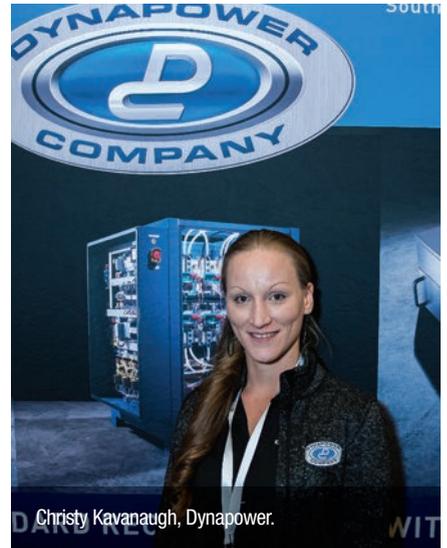
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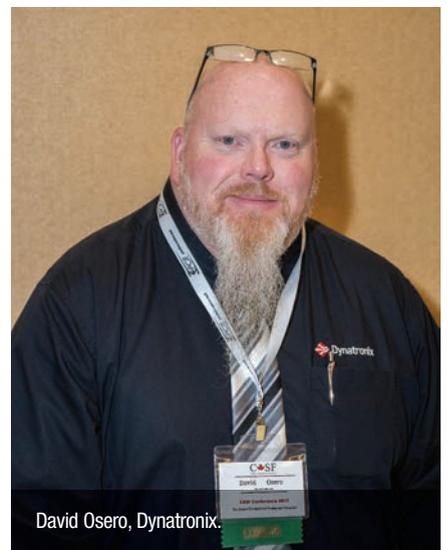
Ken Lemke, Canadian Finishing Systems.



Christy Kavanaugh, Dynapower.



Michael Bernier, David Waltho, Lorenzo Lamanna, Stewart Tymchuk, Dynamix.



David Osero, Dynatronix.

Making the Most of **Special Effects**

An eye-catching finish – Republic Bike makes this style of bike for use at Google headquarters.



POWDER COATINGS PRODUCTION offers some unusual opportunities for use of pigments that create special effects. As new pigment morphologies and combinations appear, so do those opportunities develop.

Architectural applications are reportedly showing some growth, but a more promising market for some suppliers has been the RV industry. Miguel Marin, Midwest regional sales manager for Vitraccoat, says this is for both decorative and functional applications.

“It seems the RV Industry is relying a lot on thermosetting materials to satisfy a wide array of their coating needs,” he says.

The decorative coatings for which Vitraccoat is seeing a demand are: multicolor, speckle, metallic bonded and non-bonded. The company is also seeing requests for functional applications such as antiskid, antimicrobial, anti-graffiti, high heat resistant and sublimation coatings, among others.

The market for metallic pigments, Marin says, is per-

haps the most challenging. Certain practical rules and guidelines have to be followed in using them, or problems arise with the look or durability of the finish.

The same principle, of course, applies to other powders. Marin notes that those requiring special care in application included translucent and super-low cure powders for wood or sensitive substrates, as well as formable sublimation powders.

Deciding whether the market for decorative pigments is growing separately from the overall powder coatings market can be difficult. Fiona Levin-Smith, marketing and specification manager with IFS Coatings, says the overall impression is that the demand for special effects market is growing, but not to a huge degree.

“We see the growth most in the architectural and automotive sectors,” she says. Particular interest lies in 3-D, shaped aluminum pigments, and also synthetic mica pigments. “These are both very interesting,” she says, “as they have better optical properties.”

SPECIAL EFFECTS

The main requirements from customers IFS has noted include a focus on particle size, the pretreatment of the pigments, and finally the shape of the pigment. All these in their different ways produce the types of effects the market today is looking for.

There are, in addition to the obvious market segments, unexpected applications that come up. IFS, Levin-Smith says, has glow-in-the-dark pigments that are being used on exit doors.

"This pigment absorbs interior light," she says. "It isn't designed to work with exterior light with high UV levels. And of course, it can be used for Hallowe'en items as well as for emergency signs."

Translucent pigments, she adds, can be produced that allow a corporate logo show through from underneath. This has been an increasingly popular use recently for such items as reusable water bottles.

Sun Chemical is another company that sees the automotive market as a prime customer for special effects pigments, especially in multilayer finishes that combine such products with high-transparency organic pigments. Michael T. Venturini, marketing director, Coatings, with the company, says it anticipates more future use of such automotive finishes.

"We see growth in the utilization of both pearlescent and aluminum pigments in both the red and blue color space," he says. "However, the trend for straight silver shades is flat or down, so on balance, growth is very moderate. Growth is expected to continue for effect pigments in exterior architectural and industrial powder coatings, mainly driven by the robust construction and housing markets.

As a major supplier of effect pigments for powder coatings, Sun Chemical has seen architects and powder paint producers specifically request its SunMICA EXTERIOR and Benda-Lutz MAXAL EC pigments because of their high color consistency and durability respectively. Batch-to-batch color consistency, year-over-year, is particularly important for monument buildings, he says, where construction/painting of one building can span several years.

"In the area of decorative architectural coatings," he says, "the trend for effect pigments is changing toward less sparkling effects and we have now developed several satin finish SunMICA products to support the demand."

Interest in new types of effects varies significantly, he adds, depending on the end applications. Pigments and the effects they create are very different for the securities ink market, for example, that is driven by shifting colors and other unique optical properties than for the traditional coatings market that has the biggest interest in exterior grade effects. Chrome-free SunMICA EXTERIOR XR is of particular interest, and Sun has expanded its range of pigments to fill the tight supply of popular white and russet colors.

Growth for metallic pigments also varies by market segment. For industrial and exterior architectural applications, the company has seen good demand for its encapsulated Benda-Lutz STABIL and MAXAL EC grades.

"These solutions enable customers to meet the demanding specifications of AAMA 2605 and in certain situations, allow formulators to eliminate a costly and energy intensive clear coat," Venturini says. "Automotive applications have been relatively flat for metallic pigments as the color trend has been steadily shifting away from straight silver shades to highly chromatic multi-layer tinted clear coats, utilizing high transparency Sun Chemical Perrindo and Quindo organic pigments.

"Because of their flake structure, effect and metallic pigments are versatile and have several uses other than decorative applications. One important area for aluminum flakes is anti-corrosive coatings to protect ferrous substrates. Benda-Lutz Aluminum pigments are used in combination with Benda-Lutz Zinc to provide galvanic and barrier protection."

Sun Chemical offers two types of zinc flakes, use of which depends on the desired galvanic activity and color needed.

Another functional area for aluminum pigments is thermal management for residential attic spaces. Leafing grade aluminum flakes are applied on the underside of roof-decking to reflect heat either in or out of the space depending on the need. Waterborne coatings are common for this application.

"Benda-Lutz COMPAL WS pigments are desirable," Venturini says, "not only because it is stable in waterborne systems, but have zero VOCs and no odor. Both are important attributes for residential applications.

"Leafing grade aluminum flakes like Benda-Lutz Leafing are widely used in asphalt and elastomeric roof coatings. Since they are UV opaque, lightweight and highly durable, they provide economical long-term UV protection to the binders used in these roofing systems."

A further non-decorative application is the use of special mica pigments for anti-static floor coatings and fork-lift partitions. Pigments are modified to be conductive to assist coatings in draining away static charge build-up from normal foot and fork-lift traffic in hazardous environments.

"A lot of what's done with special effects is very much custom work," notes Mike Knoblauch, president of Keyland Polymer. "If, for example, a bike manufacturer wants something reflective, we work with them to develop the specific effect. That might call for pearlescents, glass beads, or hammertone pigments."

"Anti-graffiti coatings fall under the same bracket – they're specialized special effects. Or, you might say, anti-effects." Lead times in such applications, he points out, are obviously longer than for more typical products. ■

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CONTACT INFORMATION:

Central Region

Noel Shahnazarian

Cell: 416-432-7788
Fax: 905-508-3952
noel@northspec.com

John MacLean

Cell 416-434-5986
Fax 416-496-0453
jmaclean@northspec.com

Joe Loncar

Cell: 647- 680-0093
Fax: 905-990-2555
jloncar@northspec.com

Robert Jacksteit

Cell: 416-574-2758
Fax: 416-496-0453
rjacksteit@northspec.com

Quebec and Atlantic Region

Isabelle Bernier

Cell: 514-449-6223
Fax: 416-496-0453
ibernier@northspec.com

Gary Chaks

Cell: 514-928-6363
Fax: 416-496-0453
gchaks@northspec.com

Western Canada and Prairie Region

Lanchi Clark

Cell: 403-389-8951
Fax: 416-496-0453
lclark@northspec.com

Customer Service

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Battling Corrosion WITH CHEMISTRY

ALMOST ALL COATINGS, in one sense, aim to prevent corrosion. Paint, powder and plating technologies all work to preserve surfaces, but metals especially, from rust and other forms of breakdown.

But in addition to direct protection methods, there are corrosion inhibitors that slow down the attacks of water, salt, and other substances or working situations that can corrode the surface of metal parts. This is an area where old-style chemistry, though with new-style formulations, is the key. As a result, suppliers to the market are not about to farm out their research work, or simply license other companies' developments.

Last year, Chemetall was bought by BASF, and the company was recently re-launched as a brand of BASF's Surface Treatment global business unit, a division of the Coatings division. Chemetall offers a broad range of surface treatments of various kinds, but anti-corrosion systems are a key part of the portfolio.

Martin Jung, senior vice-president, Surface Treatment, BASF's Coatings division, said at the re-launch at BASF's German headquarters, "Our new brand image reflects the impressive know-how of BASF in chemistry and coatings applications with the market-leading expertise in applied surface treatment from Chemetall. Together, the businesses will offer unmatched solutions competence to customers."

"The Chemetall brand is recognized for its technology leadership," added Julia Murray, who handles global marketing communications for Surface Treatment, "and we take a great deal of pride in our customer-focused and customer-centric approach, locally and globally. Being part of BASF's Coatings division creates opportunities to increase customer benefits from our combined expertise and commitment to continuous innovation. We expect to further advance our customers' access to best-in-class technologies, systems, and solutions across the value chain, always with the goal of enhancing efficiencies and value for our customers."

The company's stance for some time has been that it sees the best opportunities in high performing, cost-effective programs as a sustainable alternative to higher cost coatings such as paint, plating, or more costly substrates. And it reports seeing significant growth around ultra-high performing corrosion inhibitors."

These include thin film, water-displacing solvent oil blends that combine advanced rust inhibiting additives in a synergistic manner to provide exceptional performance. Such performance can rival paint systems in terms salt spray protection, making them suitable for use in challenging environments. It is also seeing growth in environmentally focused synthetic rust inhibitors that provide sufficient corrosion protection, but are more compatible with subsequent operations, such as painting, brazing or bonding.

For example, in the soluble oil market, Chemetall has focused on formulations that provide a long term stable emulsion that can inhibit biological attack and minimize residues. With synthetic rust preventives, higher performance levels along with hard water stability are desirable factors for customers.

There are, of course, environmental issues that have to be addressed. Rust preventives are under intense pressure to conform with the increased regulations the entire chemical market faces. Chemetall has striven to reduce VOC levels while producing minimal residues workpieces. Among other chemistries it employs, barium has been replaced with alternative sodium and calcium salts that are more environmentally accepted, and that with recent advancements can now provide equal or better performance. The company also sees worldwide environmental pressure on compounds like boron, a material highly regulated in Europe, where major manufacturers have chosen to eliminate its use.

Cortec is another supplier of anticorrosion chemistries. Its EcoFog VpCI-309 Nano product claims to offer a means of coating recessed spaces that are easily missed by more common types of corrosion inhibitors.

This product is a vapor phase corrosion inhibiting powder that will protect ferrous metals in hard-to-reach recessed areas, interior cavities, and voids. Due to the submicron particles it uses, it diffuses faster, travels longer distances, and has a much larger specific surface area compared to a product with larger sized particles. The product, Cortec says, offers protection with unique physiochemical advantages, making it an extremely efficient method to treat hard-to-reach spaces within an enclosed space.

It is a complete replacement for nitrogen blanketing

Company Description

Chromaflo Technologies is one of the largest independent global suppliers of colorant systems, chemical and pigment dispersions serving customers in the architectural and industrial markets as well as thermoset composites market. Based in Ashtabula, Ohio, Chromaflo has production, sales, and technical support in many countries around the globe. At Chromaflo, each colorant and dispersion are a solution to our customers' most complex color and appearance challenges, created by applying the right blend of skill and craftsmanship. When the art and science of color is mixed with diverse technical skills and custom manufacturing capabilities, the possibilities are endless. This is Where Art Meets Technology.

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Chromaflo Technologies offers a broad range of universal and water based colorants for point-of-sale and in-plant tinting, as well as specialty architectural coatings. Our broad portfolio of chemistries and colorant products offers superior performance in areas such as exterior durability, opacity and color space coverage and can be optimized for a wide range of applications. We were first to market with Low-VOC colorant technologies and remain the independent, global leader in formulating colorant solutions for your architectural paints and coatings.

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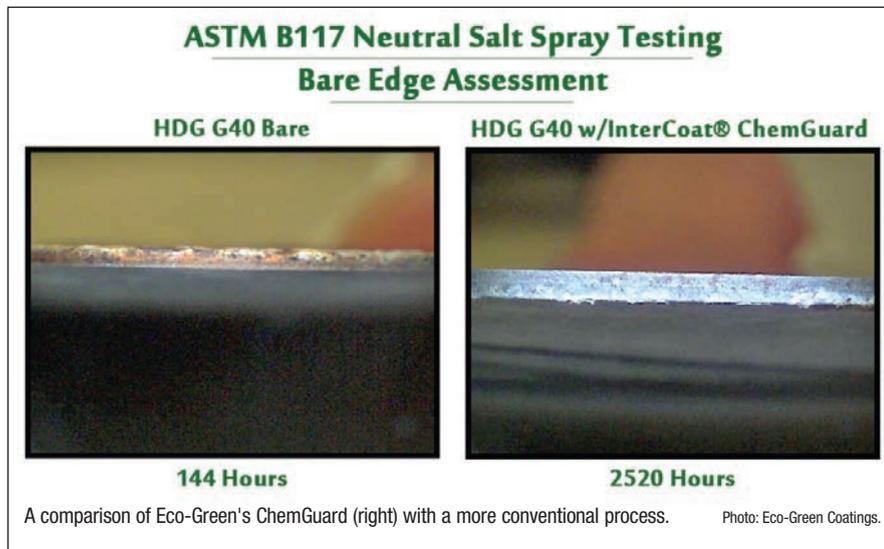


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and dry air systems, which can be expensive both to install and maintain. Nitrogen blankets can, in some cases, pose a health hazard to personnel entering the interiors.

Vapor phase corrosion inhibitors in Ecofog VpCI-337 migrate and protect metal surfaces, resulting in time and cost savings. The material is used to protect edges of coils and stacks or to fog void spaces, tanks, containers, packages, and enclosures.

These labor-saving techniques use a minimum of product, Cortec says, to protect large areas or volumes. It is applied as a fog or mist without dilution.

Ecofog VpCI-337 is effective on ferrous and non-ferrous metals as well as aluminum, plated steels, and copper. It is also, the company states, consistently successful in providing protection to the basic metals, metalworking, and packaging industries.

Sherwin-Williams' Protective & Marine Coatings division has launched Zinc Clad 4100, a high-solids coating featuring recoat times as short as 30 minutes. This, the company says, allows for accelerated shop throughput, enhanced project schedules, and fast field project turnarounds.

The three-component, organic zinc-rich epoxy coating eliminates any need for sweat-in time. In addition, its straightforward packaging allows applicators to mix components directly in the Part A container, for faster and more accurate mixing.

Designed for use over properly prepared blasted steel, the organic zinc-rich primer provides cathodic protection to reduce corrosion potential in the event of the steel substrate being exposed due to coating damage. In addition, the coating exhibits self-healing properties if it becomes damaged.

Zinc Clad 4100 enables expanded application opportunities for the bridge and highway and structural steel markets due to these performance characteristics. The coating meets Class B requirements for slip coefficient and creep resistance as defined by the Research Council on Structural Connections (RCSC) for use in slip-critical bolted connec-

tions in all US states.

It also meets the performance requirements of NEPCOAT List B for use on highway bridge steel in the northeast US. Further applications include stadiums and sports complexes, steel fabrication shops, piping, barges and ships, drilling rigs, and refineries.

One alternative chemistry for this field comes from Eco-Green Coatings, with its InterCoat ChemGuard. This, says company president Bill Capiz-

zano, is for use on galvanized steel, and uses a type of coating technology that employs covalent bonds. This approach enhances the effectiveness of zinc, and substantially improves corrosion protection on galvanized steel.

Heavier zinc coatings, Capizzano says, have normally been applied to provide longer protection.

InterCoat ChemGuard, instead, reacts with the zinc to form a permanent, covalent bond on the surface of the metal. The product is applied over a light layer of zinc, which reacts with the zinc to improve its corrosion protection properties. The bond which is formed at the molecular level, and reportedly cannot be washed or worn off.

This process allows bending, stamping, post-painting and even shearing, while providing self-healing characteristics that help protect newly exposed zinc that naturally occurs during secondary processing.

The product is RoHS compliant and continues to protect during stamping, roll forming and shearing. It is also weldable.

With a low coefficient of friction, it actually enhances these processes, the company states. InterCoat ChemGuard is designed to be applied on the galvanizing line or, for custom formulas, by the original coil coater and developer of the compound.

A key savings arises from the lack of a need for heavy zinc coatings. In many applications, the material reduces the need for zinc coatings heavier than G30.

The product also eliminates the need for temporary corrosion protection coatings. It is usable in many industries, including automotive, aerospace, construction, electrical conduit, wall studs, furniture, fixtures, appliances, outdoor and highway railing, agricultural, lawn and garden and other products using galvanized metals.

Nothing can prevent corrosion indefinitely. However, the ever-broadening variety of chemistries available today means it is much easier today to limit the harm corrosion can do, and to predict product lifespan. ■

CASF Conference



Mike Kuntz, Ken Lemke, Richard Thibodeau.



Michael Tingle, Ortech.



Marissa Maiorano-Gillis, Anita Li, Hossein Naghdiane, Environment and Climate Change Canada.



Matt Sisti, Thomas Castleman, Coventya.



Christian Richard, NASF.



Sebastian Kuehne, Atotech.



Michael Moffat, Precious Metal Sales.

Smoothing the Way

WAXES AND PTFE (polytetrafluoroethylene) are essential components in a range of paints and coatings. They are critical parts of recipes for graffiti-resistant coatings, and aid in providing special characteristics to a range of other finishes.

PTFE is often (not always) the more expensive material, so it tends to be used in demanding applications where its famously low coefficient of friction – 0.05 to 0.1 – makes it a standout ingredient. One of its less well-known capabilities is to help create paint and flooring surfaces where insects cannot gain traction, thus preventing them from entering buildings. And of course, protective PTFE tapes can be used in coatings applications where ambient temperature go up as high as 300 deg. C.

It maintains its beneficial properties at extremely low temperatures as well as under the effects of any naturally occurring higher temperature. It is also highly resistant to chemical attack, though it can be susceptible to damage from alkaline metals, such as sodium or potassium.

PTFE industrial coatings, which usually use a primer and topcoat, can be used on carbon steel, aluminum, stainless steel, steel alloys, brass, and magnesium, as well as on non-metallics such as glass, fiberglass, some rubbers, and various plastics. Optimal adhesion can be obtained by roughening the surface before applying the coating.

Waxes, especially polyethylene-based types, are used extensively in various types of coatings. Among other properties, polyethylenes offer high rub and mar resistance.

BASF's Luwax and Poligen brands, for example, are used extensively as additives in coatings and varnishes. Their unique hydrophobic properties, the company says, make them an essential component in many applications where surface interactions and properties are crucial.

BYK Additives offers its Aquacer range of waxes, with a focus on water-based coatings. For example, Aquacer

497 is a paraffin-based wax emulsion for aqueous coatings, printing inks as well as care products and polishes. It is used, the company says, for improving water repellency and surface slip.

Aquacer 513 is a HDPE-based, VOC-free wax emulsion for improving surface protection in aqueous coatings and printing inks as well as in aqueous care products and polishes. It is, BYK states, compliant with FDA and/or EU food contact regulations.

The 531 grade is a wax emulsion formulated on a modified PE basis to improve surface properties of aqueous coatings and printing inks. It, too, is compliant with FDA and/or EU food contact regulations.

And Aquacer 593 polypropylene-based wax emulsion reduces the surface slip of aqueous coatings and printing inks. It is similarly food contact-compliant.

Increasingly, purely organic sources are being sourced for industrial waxes. Cargill, for example, uses soybean, palm oil and linseed oil among other substances in its product offerings.

The company says linseed oil is particularly suited to applications that require excellent film forming properties. It offers crude (degummed and filtered), supreme (alkali refined, bleached and dewaxed), and reacted (DCPD modified, increased viscosity) linseed products.

Vegetable waxes represents a modest but growing part of global demand, the company says. They outperform mineral waxes on a number of points, and can be modified and combined with other waxes to achieve optimum price and performance.

Vegetable wax prices can be agreed for up to one full year, allowing purchasers to budget reliably and focus more of their resources on development of their business. In addition to any technical benefits, or availability, there is also the consume appeal of using renewable resources that are free from genetically modified oils, and contain no

One of PTFE's less well-known capabilities is to help create paint and flooring surfaces where insects cannot gain traction, thus preventing them from entering buildings.

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animal-derived substances.

One example from Cargill is Oxi-Cure 210. This is a highly reactive vegetable oil-based ester made entirely from bio-renewable materials. It has, the company says, has a rapid cure rate with high color stability, and does not yellow in coating applications. It can be used in oil-modified urethanes, exterior wood finishes and alkyd resins.

Among other organically derived waxes for coatings, AkzoNobel's Nature-N beeswax is supplied for application on wood, including cabinets and furniture. The company says it features good transparency, low wetting, and a natural appearance, and is easy to apply.

It is heat resistant up to 120 deg. C, step proof and dirt resistant. It also features a two-year shelf-life. The one drawback might be that re-treatment is necessary with time.

Micro Powders Inc.'s range of micronized waxes includes its AquaKlean range. AquaKlean 401 is a paraffin/polyolefin wax emulsion for water beading and gloss retention in wood coatings, while AquaKlean 402 is a paraffin/carnauba wax emulsion for water resistance and scrubability in interior wall paints.

AquaKlean 403 is a paraffin/polyethylene that, the company says, offers maximum water and scrub resistance in architectural coatings. And AquaKlean 418 wax emulsion offers scrubability, burnish resistance and resistance to

water beading in paints, stains and other coatings.

Michelman's Michem range of emulsions includes the 47950 grade, which is a sacrificial anti-graffiti material. It is a nonionic paraffin emulsion that also assists with water beading and water resistance.

It is supplied as a white, opaque liquid. It features a pH between 4.0 and 10, and a specific gravity between 0.94 and 0.96.

Other Michem products include the 48040M2 grade, which imparts block resistance and promotes release in paints for buildings. It is a nonionic microcrystalline wax emulsion with a pH to <10.0, and specific gravity between 0.96 and 0.98.

Similar properties are found in the 62330 grade, though this is an amber, translucent product, not a white, opaque one. The pH is 9.4 to 10.4, and the specific gravity 0.97 to 0.99.

Wax selection is usually a straightforward process, though naturally, anyone who has worked in a paint kitchen knows that there are always factors that produce unexpected or unwanted results. But with the broad variety of waxes available today, it is unlikely there is no wax emulsion or additive that will not fit the bill for even the most demanding finishes. ■

HUGE TRIPLE SHOW ISSUE

Triple Show Issue: Bonus Circulation from our Booth at:

American Coatings Show: April 10-12, 2018, Indianapolis IN
 • american-coatings-show.com

RADTECH 2018: UV+EB Technology and Expo, May 7-9, 2018, Hyatt Regency O'Hare - Rosemont, IL
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CPCA Conference: May 23 -24, Marriott Eaton Centre Hotel, Toronto, ON
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Publisher & Sales
 Pete Wilkinson
 1-705-296-3030
pete.wilkinson@cfc.ca

Editor
 Edward Mason
 1-416-423-0150
edward.mason@cfc.ca

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Global Issues

Impact Local Business

BY GARY LEROUX

THERE ARE A NUMBER of emerging policy issues on which CPCA continues to monitor via its participation in the International Paint and Printing Ink Council (IPPIC). IPPIC has regular meetings throughout the year with coatings associations from around the world. All global issues are eventually local issues requiring action. It is important to be reminded of such issues as we continue our work on a number of home grown challenges.

Recently IPPIC reviewed the issue of ‘microplastics,’ which is getting renewed attention around the globe. The goal is to ensure there is greater clarity on the terms macroplastics, microbeads and microplastics. A recent literature review published by a credible organization provides broad environmental science background on the emerging issue of “microplastics” and points to research findings and opportunities for expanded research on specific questions.

Those engaged on this issue must take an honest and robust approach to the research to prevent inconsistent collection, proper characterization and quantification of the methods, as well as address underlying problems with

data interpretation. This is especially critical with respect to inferences made on the sources and pathways of observed hazards for “microplastics” in the environment.

As such IPPIC will continue to address this matter in a meaningful way with more focused research to help guide policy in this area. This issue is now on the radar of businesses in the coatings industry such as the suppliers of resins for coatings, including adhesives and sealants, as it continues to be a growing market worldwide. IPPIC views this as a priority and will work to ensure there is full and complete understanding of the matter as governments work toward a full assessment of microplastics.

VOC emissions have been on the coatings industry agenda for many years. New regulations in Canada in 2009 for architectural and automotive coatings saw industry reduce emissions by an impressive 75 percent, while still delivering highly functioning products. This period also saw a tremendous movement to waterborne coatings over solvent products with tighter limits placed on VOCs, with most of them following similar limits to those of the California Air Resources Board (CARB). Now CARB is once

again revisiting their VOC limits for AIM coatings and looking at further reductions.

The question for industry has always been, how can VOC emissions be further reduced, while still retaining the utility of the products? This question will be put to the test as CARB considers removing critical compounds from the exempted list of VOCs, compounds that actually help lower VOCs in a number of product categories. For example, consideration is being given to lowering the grams per litre for basement specialty coatings from 400 to 100; concrete curing compounds from 350 to 100; fire-proofing coatings from 350 to 150; metallic pigmented coatings from 500 to 150; waterproofing sealers from 250 to 100; and the list goes on. This effort will be closely monitored in the coming weeks and data points will be gathered to challenge decisions based on the science and the requisite utility for those products that could be implicated in this exercise.

Many of these products also have important uses to address environmental, safety and health concerns of the public and as such must become part of the equation in considering further limits *via-a-vis* the exempted compounds. This is important for Canada as the last round of VOC limits followed the actions taken in California under CARB.

Another area of keen interest for IPPIC is the ongoing initiatives in Europe related to TiO₂ categorization as a carcinogen. IPPIC members have confirmed substantial process and applicability concerns with the recent RAC opinion classifying TiO₂ as a Category 2 Carcinogen under the ECHA-CLP regulation.

At the recent CARACAL meeting, EU officials from member states deferred consideration of the RAC opinion until March of 2018. As such they will be accepting “new” information and other inputs from member states and key stakeholders. Industry’s position, as promulgated by the European Paint Association (CEPE), continues to be: 1) that the CLP is inappropriate for classifying hazards of poorly soluble, low toxicity dusts like TiO₂; and 2) should any classification move forward, it must focus on dust hazards and provide a mechanism to exempt formulated mixtures that contain TiO₂. IPPIC members continue to liaise with the coatings association in Europe, under the leadership of CEPE, as they press forward on this important issue with updates provided in the coming weeks.

Lead in paint has been a preoccupation of IPPIC for a number of years and IPPIC has been part of the Lead Paint Alliance under the United Nations. While lead in paint has long been addressed in countries like the United States and Canada and 60 other countries, representing 95 percent of global paint production, there are still 70 countries around the world with no lead paint controls. The UN and responsible member countries continue to advocate for

proper controls for lead in paint and this will continue in the coming years.

IPPIC has taken a similar approach on Mica, which is a substance harvested for use in automotive refinishing coatings among uses in other industries. It is harvested primarily with child labour and the majority of that, more than 70 percent, is in India. A number of responsible multinational paint companies operating globally, as well as IPPIC itself, have joined the Responsible Mica Initiative and continues to work via that forum to secure global change.

Another effort emerged some time ago and continues to evolve related to Chemicals in Products (CIP) program CIP with the objective: “... of facilitating the development, expansion and implementation of information systems on chemicals in products throughout their life cycle,” while taking into account the existing GHS program. This will impact a large range of stakeholders across multiple business lines as well as governments and non-governmental organizations.

It will impact supply chains in terms of the need for a greater exchange of information on chemicals in products, associated hazards and sound management practices that will be required. It will also require greater disclosure of information relevant to stakeholders outside the supply chain to enable more informed decision-making. There has been some guidance provided on the kind of information exchange required on chemicals in products, in advance of legislation or regulation that seems inevitable. Companies must understand these implications now in order to help shape future actions, which will unquestionably impact business operations.

CPCA and other IPPIC partners will remain vigilant on the issues noted above and other initiatives that may, and likely will, impact the coatings industry going forward. In addition to the above, IPPIC partners are also focused on the following:

- Possible IPPIC support for the UN Global Compact
- Additional IPPIC work on “ISO Technical Standards” for paint
- Additional IPPIC support for SAICM (at UN Environment) on chemicals management
- IPPIC IARC-related research summary
- Additional IPPIC efforts on TDG and GHS initiatives

It is important for companies engaged in the coatings industry to stay informed on these initiatives in the context of their respective business plans to limit the impact on their many customers. ■

Gary LeRoux is President and CEO of the Canadian Paint and Coatings Association, www.canpaint.com

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Gregg Landry, Hunter Chemicals.



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Calendar of Industry Events

March 14-15, 2018: Minnesota Paint and Powder Coating Expo. Century College, White Bear Lake, MN. www.ccaiweb.com

April 10-12, 2018: American Coatings Show, Indianapolis IN. www.american-coatings-show.com

April 24-26, 2018: ECOAT 18 Conference. Innisbrook Golf & Spa Resort, Tampa Bay, FL. www.electrocoat.org

May 7-9, 2018: RADTECH 2018, UV+EB Technology and Expo, Hyatt Regency O'Hare Hotel, Rosemont, IL. www.radtech.org

May 23-24, 2018: Canadian Paint and Coatings Association Annual Conference and AGM, Marriott Eaton Centre Hotel, Toronto. www.canpaint.com

June 4-6, 2018: SUR/FIN 2018, Huntington Convention Center, Cleveland, OH. www.nasfsurfin.com

June 12-14, 2018: Fabtech Canada 2018, Toronto Congress Centre, Toronto. www.fabtechcanada.com

September 13-14, 2018: CanWeld 2018 Expo and Conference, Place Bonaventure, Montreal. www.canweldexpo.com

October 10-12, 2018: Pacific Northwest Society of Coatings Technology, CoatingsFest 2018, The Inn at Laurel Point, Victoria, BC. www.pnwsct.org

October 24-25, 2018: Canada Woodworking East, Espace St-Hyacinthe, St-Hyacinthe, QC. www.canadawoodworkingeast.ca

November 6-8, 2018: Fabtech 2018. Atlanta, GA (Venue to be announced). www.fabtechexpo.com

Architectural Coating System



Sherwin-Williams Co.'s Coil and Extrusion Coatings division has introduced Valspar Acryliccoat, a coating and resin system that the company says delivers a smooth, glass-like finish and hard surface on extruded aluminum architectural products. Acryliccoat is intended for high-traffic residential and industrial areas, and Sherwin-Williams says it is ideal for windows, door frames, metal panels, column covers and other aluminum extrusions in both exterior and interior environments.

The company adds that the hard surface resists scratches and meets or exceeds the American Architectural Manufacturers Association 2603-17 industry standard for high-performance coatings.

"We're proud to present a true single-coat solution that applies better, hides better and ultimately costs less," says Jeff Alexander, vice-president of sales for Sherwin-Williams Coil and Extrusion Coatings. "With a wide curing window, it also offers applicators the option of curing at a lower temperature to save energy and money, or curing at a higher temperature for increased throughput at a higher line speed."

The product is offered in a wide range of gloss levels and 18 colors, though custom solid and metallic colors are available upon request.

www.valsparcoilextrusion.com

Large Paint Booths

Large Equipment Paint Booths by Global Finishing Solutions (GFS) are now available with full ETL and ETL-C listings on all pre-engineered models and options. Recognized by local inspectors and authorities throughout North America, the ETL listed mark is proof of compliance with national safety standards. This facilitates faster, more successful installations and inspections.



Joining General Purpose Paint Booths, the Large Equipment Paint Booth line is GFS' second fully ETL-listed industrial paint booth line. In order to achieve the ETL listings, both paint booth lines completed intensive third-party reviews to validate performance and safety.

"We are excited to now offer two industrial booth lines with the ETL and ETL-C mark," says Mike Lampshire, vice-president of industrial sales at GFS. "The ETL listing is available on all standard product models at no additional charge, a feature that sets us apart from many of our competitors."

www.globalfinishing.com

Iwata Supernova Lotus

The Lotus 3-Eleven Limited Edition Supernova spray gun is being offered in a special limited edition, to celebrate 15 years of partnership between Anest Iwata and car company Lotus. It is available in two versions: the WS-400 evo compliant model, and the LS-400 entech HVLP model.

The limited, numbered edition is delivered in a customized, waterproof and solvent vapor-resistant case. It includes a 600-ml 3M PPS starter set; an air pressure regulator; a complete cleaning kit; and a credit-card sized certificate of authenticity.

www.cpcoatings.ca



Water-based Primer

PPG has introduced Aquacron 834 industrial shop primer, a new water-based primer that offers a product platform for manufacturers or custom coaters who need an economical rust-inhibitive shop primer for steel applications. With volatile organic compounds (VOCs) of only 2.8 lb per gallon, the primer meets stringent environmental regulations while delivering robust protection in corrosive environments. It provides, PPG says, excellent flow and leveling characteristics to create a smooth finish for steel fabrication, automotive racking, waste containers, industrial machinery, material handling equipment and other miscellaneous metal fabrication applications.

The quick-dry formula of the primer can increase shop production and provide manufacturers and custom coaters with a cost-effective option that uses water for reduction and clean-up. With the ability to make in a variety of colors, PPG Aquacron 834 primer works well with PPG Aquacron 488, PPG Aquacron 880 and PPG Aquacron 890 Series topcoats.

www.ppgtruefinish.com

Dow Corning 904H Coating Additive

Dow Performance Silicones, a business unit of DowDupont Materials Science Division, has introduced Dow Corning 904H Coating Additive, a silicone additive for architectural façade coatings that supports enhanced aesthetics for building exteriors. This additive is designed to help coatings reduce the 'snail trail' effect commonly seen when surfactants and other water-soluble ingredients in coatings formulations leach to the surface. Dow Corning 904H Coating Additive can also improve water resistance, repellency and beading in coatings by increasing their surface hydrophobicity.

"Architects, building owners and other specifiers around the world now use a wider range of paint colors. In more frequently used darker and brighter colors, typically the 'snail trail' effect is more visible when it occurs," said Silicones Marketing Leader Coatings & Leather EMEA, Damian Froklage. "We recognized the need for a coating additive that could reduce surfactant leaching to resist this effect, especially for coatings applied in cold and humid weather conditions where 'snail

trails' are encountered more frequently."

This additive offers coatings formulators a simple way to minimize snail trails and improve water resistance. By adding it to an existing formulation, formulators can enhance the performance of their architectural façade coatings with minimal impact to the remainder of the formulation. This additive also contributes to formulation freedom when compared to other complex and time-consuming approaches to increasing coatings' resistance to the snail trail effect, including reformulation.

"Dow Corning 904H Coating Additive addresses the growing importance of visually appealing, brightly colored façades by providing paint formulators with an add-in method to develop coatings that better resist 'snail trails' and have superior water resistance performance," Froklage said.

Dow is introducing the new Dow Corning 904H Coating Additive globally, with subsequent full commercial availability in the Americas in early 2018.

www.dowcorning.com/content/paintink

Protective Caps

Echo Engineering and Production Supplies, Inc., has introduced shower caps as a new standard catalog product as of January 2018. These offer protection for manufacturers looking to cover large openings or intricate parts at a low rate.

Because of the elastic band in the cap, shower caps wrap tightly around the part to ensure the component is clean from unwanted dirt, debris, and moisture. Echo's catalog shower caps are available online or by phone in eight sizes, and are made from 0.05mm thick, clear polyester.

Echo's shower caps join the protection product category, which includes plastics caps, plugs, and netting with the purpose of protection against contaminants.

Although shower caps are new to the catalog, they are not new to Echo. For the last few years, Echo supplied custom shower caps for multiple manufacturers, like engine manufacturers to keep their products clean throughout the manufacturing line, shipping, and storage.

www.echosupply.com

Color Formulation Software



Datacolor has launched Match Pigment 4.0, the latest iteration of its color formulation software for paint, coatings and plastics manufacturers. Employing Datacolor's Smart-Match technology, Match Pigment helps manufacturers achieve their desired color while saving time and money.

The company says Match Pigment 4.0 improves match acceptance on the first try, optimizes the cost and quality of recipes, and reduces the need for physical matches. With a streamlined workflow and user-friendly interface, manufacturers can expect up to 50 percent increase in overall speed and productivity.

"We have spent over 40 years perfecting our proven color technologies to help our customers maximize their product quality," said Cheryl Johnson, director of product management, Datacolor. "We know inaccurate color can cost businesses hundreds of thousands of dollars, not to mention delay to market. With Match Pigment, manufacturers can now have confidence in their color quality, knowing they have obtained it quickly and cost-effectively."

With Match Pigment 4.0, users can realize additional benefits, such as increasing productivity with automatic transfer of multiple formulas to the dispenser queue; supporting greater custom/individual needs with flexible matching criteria options; improving product quality by assuring colorant compatibility for customer use cases; and streamlining daily operations with an enhanced user interface.

www.datacolor.com/matchpigment

Manual Spray Gun

SAMES KREMLIN has released its new FPro Manual Airspray Spray Gun Pressure Range. The new FPro Manual Airspray gun is, the company says, perfectly balanced and provides a superior finish for all painters.

Thanks to innovative patent pending technologies inside the gun, the painter has complete control with the paint application. The paint speed controller and spin effect deliver a perfect atomization with very high transfer efficiency – up to 78 percent in HVLP.

www.sames-kremlin.com



Test Oven for Paint Coupons



No. 915 is a gas-fired, 650-deg F cabinet oven from Grieve, currently used for testing paint coupons. Workspace dimensions measure 26x26x38 in. The modulating gas burner has 100,000 BTU/hr installed, while a 1000 CFM, 1-HP recirculating blower provides vertical upward airflow to the workload.

This cabinet oven features an aluminized steel exterior, 6-in. thick insulated walls and Type 430 finish stainless steel interior. A 12x8-in. access hatch is installed in the main door of this oven.

Also onboard No. 915 are a digital indicating temperature controller, a top-mounted control panel and all safety devices required by IRI, FM and NFPA Standard 86 for gas-heated equipment, including a 325 CFM, 1/3-HP powered forced exhauster.

www.grievcorp.com

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The screenshot shows the CFCFM website interface. At the top, there is a navigation menu with links for HOME, MAGAZINE, NEXT ISSUE, MEDIA KIT, BUYERS GUIDE, NEWS, SUBSCRIBE, PHOTOS, CLASSIFIEDS, and CONTACT US. A search bar is located on the right side. Below the navigation is a large image of a factory interior. The main content area features several news articles under different categories: PAINT & COATINGS NEWS, FINISHING NEWS, and NEW PRODUCTS. Each article includes a small icon, a headline, a brief summary, and a 'MORE' link. On the right side, there are two vertical banners: one for 'The Benchmark of Quality' and another for 'Sames NANOGLUE™'.



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Drum Handling System



Liftomatic Material Handling, Inc. now offers attachments to handle up to four drums at once. It is selling two forklift-mounted attachments suited for high-volume drum handling.

They do not require hydraulic or electrical connections. Both units are capable of handling 1, 2, 3 or 4-rimmed steel, poly and fiber drums with a total load capacity of 8,000 lb.

The LOM-4 units come in two configurations, to handle up to four drums at once. The model L4F can handle one to four drums and is useful for mixed loads, single stacking in trucks and trailers and for fill-line movement. The model S4F handles four drums at a time only, for double stacking in trucks and trailers where overall height is limited.

Both models are available with spark-resistant and EE-rated components. Each can handle a mixed group of four drums, steel, plastic or fiber at one time, as long as the drums heights are within 1.5 in. of each other. Crane and carriage-mount models are also available.

www.liftomatic.com

Anti-Fouling System

AkzoNobel is moving ahead with a new fouling prevention technology that uses ultra-violet light-emitting diodes (UV-LED). The solution, which uses underlying technology developed by Royal Philips, will be applied to underwater surfaces to eliminate fouling growth.

The process will integrate UV light-emitting diodes in a protective coating scheme that will allow for the UV light to be emitted from the coating surface, providing the total prevention of biofouling accumulation on the surface of the protected area. The fully biocide-free solution will offer complete fouling prevention to the hulls of ships and boats. The total control of biofouling represents a substantial economic and environmental benefit, and when realized, the impact of this new technology on vessel owners and operators will be hugely significant.

"In our Sustainable Fouling Control initiative, we actively explore and develop alternatives to biocidal-based solutions," said Oscar Wezenbeek, director of AkzoNobel Marine and Protective Coatings. "This development is a great proof point of our continuous focus on delivering eco-friendly solutions to our customers."

Despite the complexities of this project, AkzoNobel is confident they will be overcome, and ultimately expects the technology to revolutionize the fouling control industry. Initially, the focus will be on applications for ships, yachts and offshore assets, but the project could potentially be extended to include other surfaces challenged by bio-fouling issues. "This unique project is fully aligned with AkzoNobel's continuous focus on innovation," explained Klaas Kruithof, AkzoNobel's chief technology officer. "In our quest to not only protect and color, but also functionalize surfaces, we actively look for complementary technologies and partners to innovate with. In this case, the combined capabilities and technology of Royal Philips and AkzoNobel will enable us to accelerate the realization of this transformative innovation, which we intend to initially market ourselves and consider licensing out to third parties for large-scale adoption."

www.akzonobel.com

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Process Technology Acquires Dynatronix

Process Technology, a global manufacturer of thermal solutions for surface finishing, high-purity, and aquaculture applications, has completed the acquisition of Dynatronix, Inc.

“Our acquisition of Dynatronix complements our product offerings within our core industries. Dynatronix’ high-end portfolio of DC, pulse and reverse power supplies fits well with our market strategy,” stated Jody Richards, president of Process Technology. “This acquisition also demonstrates our commitment to delivering quality and value to our customers in the surface finishing and high purity markets by offering a high quality, made in America product line.”

Founded in 1971 and based in Amery, WI, Dynatronix is a manufacturer of DC, pulse and pulse reverse power supplies for the surface finishing and semiconductor industries.

“We view this acquisition as an opportunity to strengthen the competitive position of both companies within the markets we serve,” said David Osero, vice-president of sales and marketing for Dynatronix. “Additionally, our ability to join forces and share technologies will help us to continue to offer products that exceed our customers’ expectations for quality and reliability. We feel that we are handing over the reins of Dynatronix to a company with the same core values that have allowed us to be successful these past 47 years.” Dynatronix will continue to operate at the facility in Wisconsin.

www.processtechnology.com

AkzoNobel Releases 2017 Figures



AkzoNobel has released a preliminary report of its unaudited financial numbers for 2017, which indicated the complete internal separation of the Specialty Chemicals business and a small increase in overall revenue. The Specialty Chemicals part of the company is ready for full separation through a private sale or de-merger. The

company says this is still on track to take place in April this year.

Moving forward, Specialty Chemicals is being reported as discontinued operations. Despite the operations adjustment, the segment continued to deliver performance-wise throughout 2017. Revenue, including discontinued operations, is expected to be up three percent for fiscal 2017 at 14.575-billion euros (US\$17-billion). In comparison, the company saw 14.1-billion euros in revenue in 2016. Under the same parameters, EBIT for 2017 is expected to be around 1.525-billion euros, up slightly from 2016’s 1.502-billion euros.

AkzoNobel also reported positive developments continuing for its Decorative Paints segment, especially in Asia. The Performance Coatings segment was impacted by less-than-ideal conditions in the marine and oil and gas industries, which included factors such as higher raw-material costs and adverse effects from foreign currency.

The company has also confirmed its financial guidance for 2020, with Paints and Coatings projected to net 15 percent return on sales, and return on investment predicted to be greater than 25 percent. Specialty Chemicals is also projected to earn 16 percent ROS with 20 percent greater ROI, reflecting AkzoNobel’s continued probability growth.

The company’s focus on becoming a paints and coatings firm is also reportedly progressing well, with associated one-off costs falling within expected parameters. The first phase of creating a paints and coatings organization is on track to achieve 110-million euros in savings in 2018. Measures to mitigate market challenges are also still being implemented.

AkzoNobel will be releasing full-year and fourth-quarter reports on Thursday, March 8. The delay is due to financial reporting related to the separation of Specialty Chemicals.

www.akzonobel.com

Axalta Releases 2017 Data

Axalta has announced its sales and revenue data for 2017. Net sales were \$4,352.9-million, up seven percent versus 2016, largely driven by contributions from acquisitions.

Net income, the company said, was muted by impacts from US tax reform, Venezuelan deconsolidation, severance charges and acquisition-related costs. There was a slightly lower adjusted EBITDA due to moderate pricing pressure in

Transportation Coatings, lower volumes in Performance Coatings, raw material inflation and natural disasters.

Operating cash flow was \$540-million in 2017 versus \$559.3-million in 2016. Free cash flow was \$415-million versus \$423.1-million in 2016.

“Axalta’s fourth quarter demonstrated a return to solid growth following our more challenged third quarter result, with net sales and Adjusted EBITDA performance both at or above our revised guidance ranges,” said chairman and CEO Charles W. Shaver. “Our stated expectation of improved financial performance beginning in the fourth quarter was met and was supported by broad-based market strength and sound execution by our business teams.

Performance Coatings net sales were \$732.3-million in Q4 2017, an increase of 20.7 percent year-over-year including 4.2 percent favorable foreign currency contribution. Constant currency net sales increased 16.5 percent, driven by a 14.5 percent acquisition contribution and 2.5 percent higher average selling prices.

The Transportation Coatings segment produced net sales of \$432.5-million in Q4 2017, an increase of 2.8 percent versus fourth quarter 2016. Constant currency net sales increased 0.2 percent year-over-year, driven by a 2.4 percent increase in volumes, largely offset by 2.2 percent lower average selling prices.

Axalta ended the year with cash and cash equivalents of \$769.8-million. Its net debt was \$3.1-billion as of year-end, compared to \$3.3-billion as of Sept. 30, 2017.

For 2018, Axalta is updating its outlook for the year as follows:

Net sales growth of eight to nine percent as reported, or six to seven percent excluding FX tailwinds; an adjusted EBITDA of \$940–980-million; and an interest expense of about \$165-million;

It anticipates an income tax rate, as adjusted, of 19–21 percent reflecting the anticipated benefit of the enactment of the US Tax Cuts and Jobs Act legislation. Free cash flow should be between \$420- and \$460-million, and capital expenditures will be in the range of \$160-million.

Depreciation and amortization of will be around \$365-million, and diluted shares outstanding of \$249 million.

www.axalta.com



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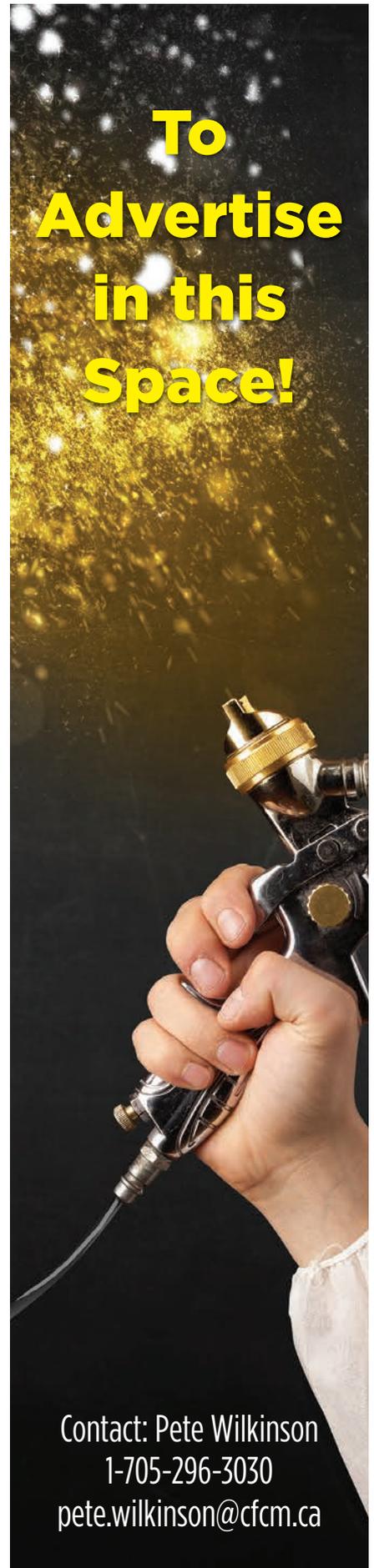
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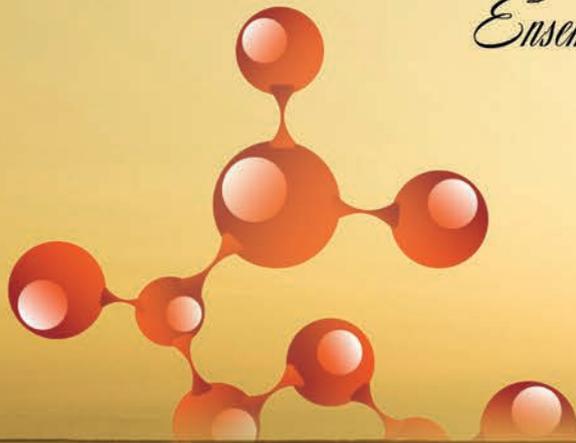


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