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In the News

Association News

CPCA takes steps to launch postconsumer recycling in Ontario

The paint and coatings industry has formally notified Waste Diversion Ontario (WDO) that it wishes to establish its own program operation for post-consumer paint recycling in Ontario. The program will be separate from the current Municipal Household Hazardous Waste (MHSW) Program now run by Stewardship Ontario. This approach is permitted under the Waste Diversion Act, and it will enable the industry to continue with successful postconsumer paint recycling in Ontario, as it has done for the past four years.

Paint and coatings is the largest category of the 9 categories of waste in the MHSW program, representing more than 40 per cent of the dollar value of the entire program. "This effort signals the paint industry's desire to continue the success it has achieved in Ontario over the past four years where it regularly exceeded established recycling targets," commented Dale Constantinoff, President of General Paint Corporation and CPCA Chair.

CPCA has partnered with the Product Care Association to proceed with the creation of a *continued on page 4*

ALSO IN THIS ISSUE

- UV Curing
- Automatic Plating Systems
- Hydrogen Embrittlement
- Powder Coating Resins
- Stewardship
- Regulatory Trends
- Stripping

MUCH MORE!

January/February 2013

Story by Sandra L. Anderson Photos By Pete Wilkinson

Broan-NuTone Canada Inc. (BNC) on Tristar Dr. in Mississauga, ON, is very proud to receive the Mississauga's Board of Trade Clean and Green Business Award of Excellence for 2012.

"We feel good about it day after day, but it is nice when there is an outside party who has a wide view of the world and region to come in and give us this type of recognition," says the company's Director of Operations, John Martinovic.

This accolade aside, Broan-NuTone has shown its ongoing commitment to the environment by also receiving the Natural Resources Canada's top award of "Integrated Energy Efficiency Strategy" in 2009 and the award for "Corporate Stewardship in 2011.

BNC is only the second company to receive recognition from CIPEC in two consecutive opportunities. In October 2012, BNC proudly accepted Partners in Project Green "People Power Challenge" Award.

Founded in 1932 by Henry Broan, Broan manufactured a quiet and efficient kitchen exhaust fan. NuTone was created by J Ralph Corbett in 1936, offering a chiming doorbell to replace annoying buzzers. Both companies grew through expansion and acquisition until 1998 when Broan acquired NuTone and merged the names together.

Broan-Nutone Canada is the country's largest producer of residential ventilation products. Products include Bathroom Exhaust Fans, Range Hoods, Electric Furnaces, Central Vacuums, Door Chimes and Energy Star Products.

Since its beginning in 1932, Broan-

UV FORMULATION UPDATE

PM # 41515012 Return undeliverable Canadian addresses to Wilkinson Media Canada Inc., 225 The East Mall Suite 1103, Toronto, ON, Canada M98 0A9 Ultraviolet (UV)-cure coating technology is one of the fastest-growing segments in the coatings industry with the global UVcured coatings market close to \$2 billion. The UV segment's growth can be attributed to the compettive advantages such as low energy costs, no pot life issues, reduced environmental impact and a fast cure speed.

1K UV CURE

In fact, one-component (1K) UV-cure coating technology is currently one of the fastest chemistries. Depending on the application, 1K UV coatings can take seconds to minutes to cure, translating into reduced costs and a rapid return to service, which is particularly advantageous for public spaces.

FORMULATING ISSUES

Ultraviolet coatings have a strong interdependency between the curing conditions and the formulation. The UV lamp is a critical component of the formulation. Important aspects must be considered by the formulator:

continued on page 37



CORPORATE PROFILE: UNIVAR SPECIALTIES

For almost 90 years, Univar has connected the paint and coatings industry with the world's premier chemical manufacturers, and has served Canada for over 60 of those years.

Established in 1924 as a local Seattle source for soda ash and a handful of related products, Univar has grown into a global chemical distributor, employing 7,000 people at 180 sites in North America, Europe, Asia-Pacific, the Middle East, Africa and Latin America.

Univar began serving Canada in 1950. Today, Univar Canada, Ltd. is Canada's leading chemical distributor, and serves Canada's industrial chemical and agricultural chemical needs from over 20 facilities coast-to-coast, from British Columbia to Newfoundland. Univar supplies its CASE (Coatings, Adhesives, Sealants and Elastomers) customers with a comprehensive line of raw materials ranging from core products to specialty chemicals. Our extensive distribution network, global reach and unparalleled logistical expertise provide our customers a consistent and reliable source of supply.

We take great pride in maintaining close, hands-on relationships with our customers, linking them with the latest technologies and products, and with a commitment to deliver what they need to be successful. In today's rapidly changing regulatory landscape, our team of business development specialists can provide unique insights on new mar-

ket opportunities and advanced product development, offering assistance with green and alternative formulations, including low-VOC.

Our commitment to the Specialties industries includes:

- A knowledgeable team of technical specialists Real solutions to green formulation challenges Expertise in safety and legislation
- An extensive warehousing network and dedicated logistics

Univar is dedicated to delivering leading-edge application and formulation strategies to help you meet and exceed your goals. Our team of technical experts has over 120 years of formulating experience to help our customers with solutions to the problems that may arise in any stage of the production process — from concept and formulation all the way to commercialization.

We also offer our customers with a set of unique product selection tools, designed to help customers choose the right product for their application. The Specialties Product Selection Guide gives a detailed overview of products we offer, and there are seven guides available, segmented by market focus and application: Architectural, Powder coatings, Epoxy, Polyurethane, Plastics, Robber and Low-VOC.

Unsurpassed product line

Univar offers an extensive portfolio of products to the Canadian coatings, inks and adhesives manufacturing industry, representing the world's premier suppliers. The breadth of our product line is unsurpassed, including solvents, titanium dioxide, resins, dispersants, defoamers, biocides, surfactants, plasticizers, pigments and much more.

Our CASE product line includes:

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

Services: Innovation. Expertise. Value.

Univar continuously refines its distribution business model to provide suppliers and customers with the highest level of service, reliability and timeliness of deliveries while offering cost-competitive products. We have several channels to market, including warehouse delivery and direct-to-consumer delivery.

Product availability and inventory management

We manage inventory in order to meet customer demands on short notice. Our key role in the supply chain also enables us to obtain access to chemicals in times of short supply. Our global distribution network also permits us to stock products locally to enhance just-in-time delivery and provide outsourced inventory management to our customers.

Blending and repackaging services

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

Other available services include:

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

Safety, health and the environment our number one priority.

The highest priority in the conduct of our business is safety and environmental protection. Univar mandates commitment to this priority, requiring thorough compliance with our own stringent standards and all government regulations. We are committed to constant vigilance and continuous improvement.

Our operations are guided by the Distributor Code of Practice, the industry standard developed by the Canadian Association of Chemical Distributors (CACD). We participate in the Canadian Paint and Coatings Association (CPCA), Canadian Chemical Producers (CCPA) Responsible Care Program. Our major locations are registered to ISO 9002 standards. Our commitment to these codes and standards is paramount, and is stated in our Policy.

Quality Policy

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

One network.

A world of solutions for the coatings and adhesives industry.™

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

Powerful perspective from our expert network that provides world-class product development knowledge from concept to commercialization.

Exceptional product access to the latest materials and technologies to help you bring environmentally friendly products to market.

www.univar.com caseinfo@univarcanada.com +1 855 888 8648



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the processes that support them.

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

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2 CANADIAN FINISHING & COATING MANUFACTURING JANUARY/FEBRUARY 2013

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The **Environment**

The environment and its corresponding sciences and studies is big, real big. Powder coater Broan NuTone, CFCM's Case Study this issue, is one company that took its commitment to the environment very seriously. They developed a Green plan and are living it to its fullest. They have won several awards. Their efforts even warranted a visit by the notorious 'Hurricane' Hazel McCallion, longtime Mayor of Mississauga, who took a tour of their plant and holds them up as an example of what companies should be doing. She turned 92 on Feb. 14 this year, and although people are not really believing it until they see it, she says she will retire in 2014.

Environment is big in the news with laws continually cropping up to deal with its concerns. The paint and coatings industry has been a huge recipient of the governments' "concerns" especially with the issue of volatile organic compounds (VOCs). The year 2013 will be no different. Environmental issues are going to loom far into our future, which is why when my 16-year-old daughter tells me she wants to be an environmental engi-



Sandra Anderson, Editor, CFCM, and Doug Moulton, Plant Manager Broan NuTone Canada Inc.

neer or an environmental chemist, I have to admire her initiative.

"There will never stop being jobs in the environment," she says. I tend to say that about the career choice of Funeral Director. By the way, it is interesting how her career choices have evolved over the years, considering that 10 years ago it was "princess".

CFCM has an exiting year planned for 2013. We will keep our eye on events like the Canadian Paint and Coatings Association turning 100, and their new Education committee (formerly TOSCOT). There are



John Martinovic from Broan Nutone holds up their award from the Mississauga Board of Trade, with Mississauga Mayor Hazel McCallion.

plenty of exciting trade shows happening this year. Meanwhile, we are always looking for industry experts to write for us on a variety of topics in Industrial Finishing, Paint and Coatings Manufacturing, and Plating and Anodizing. Please contact me if you are interested.

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The Carlyle Group Completes Acquisition of DuPont Performance Coatings Axalta Coating Systems to be New Company Name

Global alternative asset manager, The Carlyle Group, has completed its acquisition of DuPont Performance Coatings for \$4.9 billion and announced today that the company is being renamed Axalta Coating Systems. Axalta Coating Systems is a global supplier of coatings to the transportation and industrial sectors. The investment was funded primarily with equity from Carlyle Partners V and Carlyle Europe Partners III.

"We are excited to invest in Axalta Coating Systems and believe its strong market position and global footprint will enable the company to capitalize on opportunities in rapidly emerging markets, such as China and Brazil. As experienced investors in the industrial and transportation sectors, the One Carlyle global network can help Axalta Coating Systems grow and create value," says Martin Sumner, Principal of The Carlyle Group.

Charlie Shaver, the company's Chairman and CEO adds, "We look forward to this exciting next chapter for Axalta Coating Systems. Our global scale with 35 plants and seven technology centers around the world, combined with Carlyle's industrial focus and global network, position us well for the future."

As an independent company, Axalta Coating Systems will build on a foundation of more than 90 years in the coatings industry. The company serves more than 120,000 customers in 130 countries and provides customers with a full range of coating systems.

"In addition to driving performance and excellence, one of our greatest strengths is the systemsbased approach we take with our customers," says John G. McCool, President of Axalta Coating Systems. "Along with coatings, we provide customers a full spectrum of tools and services to help them use our products effectively. We offer customers hands-on opportunities to learn how to use these products and applications tools in our 42 training centers throughout the world. This capability helps our customers improve their performance and productivity while allowing us to enhance our offerings by gaining a better understanding of customer preferences."

The dupont.com web address will continue in use for a transitional period for communications sent or received on behalf of DuPont Performance Coatings, which is not affiliated in any way with the DuPont Company.

Continued from page 1

separate program operation for post-consumer paint recycling in Ontario. Product Care has an impressive track record as a program operator for paint stewardship programs in seven of ten Provinces with its first program established in British Columbia in 1994. Its program model was recently used in the United States to establish the PaintCare program in four States. Product Care will bring this solid track record and proven experience in managing post-consumer paint programs to Ontario. Once approved, the ISP will allow better steward control of program elements such as governance, costs, performance metrics and fee setting.

The paint and coatings industry has long been strong supporters of sustainability and has continued to exceed expectations in meeting established program targets for post-consumer paint recycling across Canada.

CPCA Now Provides Diploma in Coatings Technology

The Canadian Paint and Coatings Association, (CPCA) now provides online training courses leading to a Diploma in Coatings Technology. CPCA has acquired the Toronto Society for Coatings Technology (TOSCOT) to continue the long tradition of TOSCOT in providing valuable training and certification for those in the paint and coatings sector in Canada since 1913. The courses are now online and will be easily accessible for those interested in certification across Canada and around the world.

Dale Constantinoff, CPCA Chair and President of General Paint Corporation, says, "CPCA is indeed the logical home for TOSCOT and all that it stands for. We are indeed proud to pick up the mantle and continue in the tradition of TOSCOT to move toward creating a stronger system for training and education in coatings technology."

The most recent Chair of TOSCOT, David Saucier, comments, "CPCA is indeed the most appropriate organization to carry on important certification and training courses given that it represents the majority of manufacturers and suppliers in the Canadian paint and coatings industry."

CPCA has established an Education and Training Committee composed of members who were previously board members of TOSCOT as well as representatives who are current CPCA members. This Committee will assist in providing important advice and development assistance to ensure the certification program is updated and relevant for those working in the industry.

The training courses are now easily accessible online to all those interested in coatings technology training courses. The three semesters cover a range of subjects including relevant theoretical

CORPORATE PROFILE: CAPS'N PLUGS



maskings in Canada.

- Best prices for standard maskings in Canada.
- Very competitive prototype, production tool and piece costs for custom designed maskings.
 - Now have tape slitting capacity in-house including our new sandblasting tape.
 - Free catalogue and samples upon request.



Caps'n Plugs is a leading Canadian distributor and custom manufacturer of plastic and rubber injection mouldings, vinyl dip mouldings, compression mouldings and extrusions. 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.

Our sales team is focused on finding solutions for our customers. If a suitable part does not exist in our standard product line, we can design, prototype and produce the correct part. Caps'n Plugs strives to find the best and most economical solution for our customers. Our team is committed to achieving complete customer satisfaction with our service and products.

Masking Solutions

Caps'n Plugs has the largest stock of standard masking products in Canada of tapered plugs, pull tab plugs, flange pull plugs, several styles of caps, tape, cord, round tubing and more – that can be used for all high temperature painting, coating, plating, and preventing welding splatter getting into threads.

All our silicone or EDPM rubber parts can

shaped holes. We also stock silicone tubing ideal for a variety of applications.

We stock a variety of polyester, polyimide, hitemp crepe and other paint masking tape in logs that we are now able to slit to whatever roll width you require, if it is not already on our shelves.

Most of the popular cut widths of green polyester tape are in stock on our shelves for immediate delivery. Our three types of sandblasting tape are much more effective at masking off parts during sandblasting (with no residue) than the commonly used duct tape. Our high temperature masking discs are ideal for masking off holes or grounding areas around holes. These high temperature masking discs remove cleanly from surfaces without leaving any residue behind. Again the popular diameter discs are stocked on our shelves. We are now able (in-house) to cut shaped tape masking in polyester, high-temp crepe and sandblasting tape as per our customer requirements at a very reasonable cost.

Caps'n Plugs has been in business since 1974 and is a leading distributor/custom manufacturer of paint, plating, sandblasting, powder coating and e-coating masking and tape. We have the largest inventory of silicone and rubber painting masks in Canada ready for immediate shipment.

Caps'n Plugs 🌞

165 Sun Pac Blvd., Unit 4, Brampton, Ontario L6S 5Z6 Toll Free: **1-800-668-3235** Phone: **905-791-1303** Fax: **905-791-3178** Email: **sales@capsnplugs.com www.capsnplugs.com** withstand repeated painting and bake cycles.

Our several plug styles can be pushed or pulled into a round hole (two sides hole), used for threaded or unthreaded round holes, beveled or unbeveled round holes and sometimes contort to fit off round holes.

Our caps can mask off external round threaded studs, round pins, and they can even stretch to fit odd sizes or irregular shapes.

Our flexible silicone foam easily compresses to seal off grooves or holes, and it can seal irregular

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



concepts, important information for industrial paint applicators and information of a non-technical nature for those working in the field of sales, marketing and purchasing. Once completed, it will lead to a Diploma in Coatings Technology.

For More Information, Please Contact: Micheline Foucher Tel: 613-231-3604 Canadian Paint and Coatings Association 170 Laurier Avenue West, Suite 608 Ottawa, Ontario K1P 5V5

Since 1913, the Canadian Paint and Coatings Association (CPCA) has represented Canada's major paint and coating manufacturers, and their industry suppliers, with three primary product categories: architectural paints, industrial and automotive coatings. The industry has more than 261 paint manufacturing establishments in Canada with annual sales of more than \$6 billion and employing directly and indirectly 31,800 employees.

Canadian Coatings Industry Launches New Website

The Canadian Paint and Coatings Association (CPCA) has just launched its new website. It outlines the programs and services needed to ensure CPCA remains a strong voice for the industry in Canada. This year (2013) marks the 100th Anniversary of the Association, and as such, the

Association plans to celebrate and acknowledge this important milestone."The industry has recently gone through a number of significant changes including corporate consolidations, a severe economic downturn, increasingly stiffer regulations for its products and growing pressures to sustain the industry with the skills and expertise needed to grow the sector," says the CPCA Chair and President of General Paint Corporation, Dale Constantinoff.

To mark the 100th anniversary, CPCA has developed a new look and feel for the association that will help celebrate the centennial in 2013, and serve the association well in the years beyond. Branded, A World of Colour, the new image highlights the value members bring to the industry, the Canadian economy and all Canadians through their innovative — and colourful products. CPCA is proud to display a World of Colour on the new Web site, in the new video and throughout its communications tools.

The Association's new website highlights how the Association plans to work toward a stronger sector for the next 100 years. The new site shows the industry is present all around us in the products we use daily in the home and at work. It highlights the industry's strong commitment to the environment evidenced by the fact that it leads the world in post-consumer paint

recycling. Mr. Constaninoff continues, "Paint manufacturers continue with extensive efforts in every Province of Canada to ensure that paint and the containers it comes in are fully recycled." It should be noted that the U.S. and European paint industry is following Canada's lead on postconsumer paint recycling.

The industry continues to invest in new and innovative technology that allows it to bring new, sustainable products to the consumer. It does so while ensuring the sector is fully compliant with government regulations at all levels. www.cdnpaint.org

CMTS 2013 to be Bigger and Better than **Before, Say Show Organizers**

Canada's manufacturing eyes will be on the newly-improved The International Centre September 30 – October 3, 2013 as the country's national manufacturing event, the Canadian Manufacturing Technology Show (CMTS), returns to the venue after 14 years in downtown Toronto. Asking visitors to "expect more" from the upcoming show touted the IMTS of Canada –organizers are poised to unveil more details of the dynamic changes to this year's bigger-and-better event in the months to come.

The event is sponsored by the Society of Manufacturing Engineers (www.sme.org), the world's

LETTER TO THE EDITOR

A couple of very important items released this month.

First, Canada has resurrected their Proposed Volatile Organic Compound (VOC) Concentration Limits for Certain Products Regulations. Comments regarding the 2008 proposed Regulations and further suggestions submitted through subsequent consultations have resulted in additional revisions. It is the intent of the Government of Canada to publish the final rule in the summer of 2015.

Information about the proposed rule here: http://www.nexreg.com/regulatorynews/in dex.php/2013/01/23/jan-23-canada-revisionsto-the-proposed-volatile-organic-compoundvoc-concentration-limits-for-certain-productsregulations/

I highly recommend looking at the rule and seeing if any of these changes will impact your products. NOW is the time to get changes to the rule, if needed.

Second, Canada is making some progress on their adoption of GHS, but do not expect a final rule any time soon. The government is committed the implementation of the Globally Harmonized System (GHS) of Classification and Labelling of Chemicals for workplace chemicals in Canada by June 1, 2015. More information here: http://www.nexreq.com/regulatorynews/ index.php/2013/01/24/jan-24-canadaimplementation-of-the-ghs-in-canada/

Best regards, Mike Moffatt, Ph.D. Nexreg Compliance, Inc. www.nexreg.com

CORPORATE PROFILE: COMPLIANT

Knowing the importance of getting it right the first time is the way we do business. From the 20-plus years of experience that our management team has in the paints and coatings industry, the most valuable lesson we've learned is to take great care of our customers by offering high quality booths and superior service. Compliant Paint Booths strives to provide that custom solution you need with the specifications that make it compliant at every level, so you get the perfect booth and the confidence in knowing that it meets all the compliance standards. When looking for superior paint booth technology and the best customer experience around, you'll get all that from Compliant.

Our paint spray booths we supply are available in a variety of standard configurations, or they can be constructed and customized to fit the needs of your shop space or specific application. Our line of paint spray booths and related equipment includes, but is not limited to, the following: Automotive Paint Spray Booths, Industrial Paint Spray Booths, Truck & Large Equipment Paint Spray Booths, Wood Finishing Spray Booths, Powder Booths (Spray-to-Waste or Reclaim), High-Capacity Finishing Systems, Mixing Rooms, Powder Cure Batch Ovens, Air Makeup Units, Exhaust Walls, Blast Enclosures, Prep Stations, Intake and Exhaust Filters, Light Fixtures, Exhaust Duct Packages, Control Panels, and Spray Booth Accessories

There is a better and easier way to find the paint booth that's right for you. Compliant Paint Booths consists of a reliable team of people who will listen to your questions or concerns, so that we understand your application needs and provide the service you require. Let Compliant's seasoned managers and industry professionals who have the experience, knowledge and energy provide you with that perfect "compliant" solution.



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to final installation and setup,

vou can count on us.

For superior customer service – from our initial consultation, through all the specs and details of your project, to final installation and setup – you can count on Compliant Paint Booths.

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leading resource for manufacturing information and knowledge.www.cmts.ca

Welcome to uv.eb West

RadTech, organizers of uv.eb WEST 2013 have confirmed Disney Research, The Boeing Company, General Mills, Frito-Lay, Skullcandy, and Ste. Michelle Wine Estates to speak about innovative practices and technology development from an end user perspective February 26-27, 2013 in Redondo Beach, California.

In addition, there will be 40 table top exhibitors, several opportunities to network with co-suppliers and customers, and innovative presentations focused on:

- Enabling Clean Air Manufacturing and Reducing Climate Accelerants
- Using UV Curing Technology to Protect Vital
 Underground Infrastructure
- Low Migration Inks
- UV LED Technology
- Valuable End User Insight & Perspectives
- Developing Heat Resistant Coatings
- Overcoming corrosion & weathering issues
- PVD Coating Technology for electroplating replacement
- Coatings for pipe & tube applications
- Composites manufacturing
- Advancements in coil coating technologies

- Future & Smart Coatings Technology
- Overcoming adhesion issues
- Special Session on Regulatory Issues with Coalition for Clean Air
- Special UV/EB Chemistry Short Course www.uvebwest.com

Company News

Sansin Corp. donates 100 gallons of Eco2 wood stain to town of Souris, Prince Edward Island

The Sansin Corp. – which focuses on wood stain products and technologies – believes very strongly in preserving and protecting Canada's national heritage and history, the company reports. When the company was contacted by the Town of Souris on Prince Edward Island to support its "Paint Our Town Beautiful" program, Sansin donated 100 gallons of Eco2, a zero-waste, recycled exterior wood stain.

A sub-committee of S.T.E.P. (Strategic Tourism Expansion Program), called the Main Street Improvement Committee, launched Souris' beautification program to spruce up historical cedar shake homes and farm buildings on Main Street, which reflect the area's farming heritage and rural nature. "We've had some challenges lately with a factory closing, and we wanted to rally our community together and apply the love for our community to a project that will reflect our town's pride," said Joeanne Roche, special events coordinator for the town of Souris.

Sansin sent two Eco2 colors – Adobe and Lava – to the town and volunteers came out on Sept. 11 to begin staining five buildings.

The town of Souris on the eastern tip of Prince Edward Island (www.sourispei.com) is the gateway to the lles De La Madeleine Ferries. "Wood staining and preservation go hand in hand in our business," said Sjoerd Bos, VP at Sansin. "Our company is very pleased to have helped this community's efforts to preserve its rural heritage and the history that resides in those Main Street wood buildings."

Sansin Wood Stains Featured on University of British Columbia Earth Systems Sciences Building Built to LEED Gold Standards

Sansin's KP-11 and Sansin Enviro Stain ENS are featured on the wood ceilings, stairs, beams, posts and roof of the University of British Columbia (UBC) Earth Systems Sciences Building. The building is built to LEED Gold standards and is considered the largest panelized wood building and the largest application of cross-laminated timber in North America.

Recognized as pushing the envelope for creative use of wood in a commercial building, the

UBC building features a gravity-defying wood staircase, more than 1,300 tons of British Columbia-sourced and engineered cross-laminated timbers (CLT) and a mixture of Douglas Fir, laminated strand lumber and CLT pine. Sansin coating on the UBC wood stairs comprises Sansin KP-11, Sansin ENS and Sansin Purity Floor.

The UBC Building represents a growing trend to use more wood in construction for durability and sustainability. According to the Canadian Wood Council, wood performs equally well or better than other building materials. Additionally, engineered wood products offer a strong combination of environmental performance and sustainability, design flexibility, cost-competitiveness and structural integrity.

"When people think of massive structures, they tend to think of steel, glass or concrete. But the UBC Earth Systems Sciences Building proves that wood is an incredible, resilient building material that can last for centuries. It also conveys a grace and beauty that only gets better over time, especially with durable coatings that let the natural grain shine through," said Sjoerd Bos, VP at Sansin.

Sansin KP-11 is a concentrated, penetrating, low-VOC coating that provides a long-term protective undercoat for millwork and wood products that are subject to wet conditions. Sansin KP-11 is designed to reduce swelling, wood rot and mois-

CORPORATE PROFILE: SILTECH CORPORATION

Looking for new partners with new ideas?

Servicing the Paint and Coatings Industry with unique silicone additives

Innovative Silicones for your Technology



Innovative Silicones for Your Technology

As an Innovation company, Siltech has built our business and reputation by creating new silicones for new customers with new applications.

Using our proprietary technologies, Siltech develops, manufactures and markets a full line of organo-functional silicone compounds and related specialties for specific customer applications. With more than 25 years of experience, and two manufacturing facilities, we offer the coatings industry a broad line of Siltech® additives and Silmer® reactive silicones as well as more unique chemistries.

Additives

Siltech inks & coatings additives have long been recognized as providing special properties, including improved slip, gloss, mar resistance, flow, leveling and foam control. Furthermore, because these silicones are efficient at very low concentrations, they are cost effective, and widely used.

Most recently from our labs, Siltech C-602 and Siltech C-618, have been shown¹ to significantly lower the surface tension of solventborne coating systems. This increases the efficacy of the solvent and allows for comparable coatings properties from even higher solids systems.

In some systems, these materials were shown

R&D

Our R&D, Technical Service and Process R&D laboratories are modern, well-equipped, co-located with our manufacturing facilities and staffed with firstclass chemists and engineers. These scientists have years of experience in synthesis and key applications such as personal care, polyurethane foam stabilization, inks and coatings, and silicone gel formulation.

Our first rate analytical labs support the quality of our manufactured products as well as new product development and technical service.

Siltech's track record of innovation and outside-of-the-box problem solving is demonstrated by our broad portfolio of product types. Our early history as an organic surfactant company gives us a different perspective from other silicone manufacturers and results in classic organic surfactant derivations to silicone such as Silamine[®], Silphos[®] and Silquat[®] grades.



to provide comparable films with half of the resin manufacturer's VOCs.

Of course, by so effectively reducing the surface tension, these additives also improve or eliminate defects such as fish eyes, craters, orange peel, etc.

Silmer[®] Reactive Silicones

Our expertise and portfolio of reactive silicones aligns with industry needs to bind into a coating as well as to modify resins obtaining hybrid properties.

In articles being published in 2013, Silmer® EPC epoxy functional silicones and Silmer ACR acrylate functional silicones are shown to react into a film and increase flexibility, impact resistance, lower slip and CoF, as well as provide improved stain resistance. Check our website for updates.

Manufacturing

All Siltech products are manufactured to the highest standards to ensure that they meet our customers' needs. Siltech also offers the flexibility of providing many of these products either in an appropriate solvent, or neat. They are designed to meet specific requirements of various coating systems such as high solids, water-based, or energy curing.

In addition to our extensive portfolio of products, Siltech welcomes the opportunity to partner with customers to develop unique silicones for specific applications.

"Our success is measured by our customer's success. When they succeed, we succeed"

1Tom Seung-Tong Cheung: Bob Ruckle; Rick Vrckovnik;" Silicone Additives to Increase Solids and Lower VOCs in Solventborne Systems"; Proceedings of the Waterborne Symposium; 2012





ture absorption.

Sansin ENS is a two-coat, low-VOC protective finish that provides exceptional beauty for longlasting durable protection with a finish that highlights the wood's natural character. ENS offers an extremely tough finish that will absorb dents without chipping and is ultra-UV resistant and will not darken over time.

Sansin Floor is a technologically advanced, water-bourne alkyd gymnasium grade floor finish that is UV resistant, washable, low in VOCs, high in solids, and non-flammable - with easy soap and water clean-up. Sansin Floor provides exceptional clarity that enhances the natural beauty of the floor without the plastic reflection found in acrylics.

Project Overview:

Architect: Perkins & Will, Vancouver office Engineer: Bernard Gafner, Equilibrium Consulting Ltd.

Contractor: Bird Construction Wood structure: Structurlam Products Penticton Assembly of wood structure and wood finishing: Nicola Logworks Wood finishes: Sansin Corporation

For 25 years, Sansin has been the only wood

protection company focused exclusively on researching, developing, and introducing environmentally-friendly, 'water-borne' interior and exterior wood products and technologies that deliver outstanding color, durability and performance without the toxicity found in conventional stains. Sansin Enviro Stains use water, not oil, to deeply penetrate and protect wood naturally, from within. Headquartered in Strathroy, ON, Canada, Sansin has dealer locations across Canada and in the U.S. *www.sansin.com*.

Protech and Thermoclad

The Protech/Oxyplast Group of Montreal, Canada is pleased to announce that they have reached an agreement to purchase the thermoplastic powder and liquid coatings businesses of the Thermoclad Company of Erie, Pennsylvania. Thermoclad is a global leader in the production and marketing of PVC powder coatings for fabricated metals such as fencing and dishwasher racks. The company also develops environmentally safe paints as well as other thermoplastics such as nylon and co-polyesters.

David Ades, Managing Director of Protech says, "Thermoclad's leading position in thermoplastics and especially PVC powder coatings will add a new dimension to our growing powder business. We are excited about the opportunities and synergies which will be generated."

Martin Renkis, chairman of the Thermoclad Company and son of founder Alan Renkis says, "Thermoclad has a 50 year history in protective coatings as well as valuable relationships we expect Protech will benefit from. My father immigrated from Latvia after World War II and came to Erie as a young man. From his start as a local paperboy to becoming a leader in the Erie business community, Dad always had a strong sense of pride in his work, especially in the ground-breaking technologies Thermoclad developed. Our family is pleased to see another successful family-run company like Protech continue Thermoclad's tradition of innovation and keep our dedicated employees here in Erie."

Protech will maintain Thermoclad's liquid and powder manufacturing operations in Erie, PA. The transaction is expected to close in mid-December 2012. www.protechpowder.com

PPG to acquire AkzoNobel North American Architectural Coatings Business

Company also announces 2013 share repurchase intentions.

PPG Industries will acquire the North American architectural coatings business of AkzoNobel,

ECE Canada Limited is a Canadian-owned business founded in 1982 to distribute Electrostatic Coating Equipment and Associated Products. We have since expanded our product offering and capabilities to include all aspects of the finishing process. ECE has grown to be a recognized leader in the industry, by providing top quality after sales service to the Automotive Industry, Feeder Plants and the General Industrial Sector. ECE has Technical Application Specialists located all across Canada which are Factory Trained on a regular basis and provide many years of application experience. We are very conversant in a wide variety of processes and substrates including Metal, Wood, Plastic and Fiberglass Reinforced Products. We work closely with the Coating Manufacturers to provide compatible

equipment for applying their products. ECE Canada Limited has the ability to provide Coating Application Systems including Electrostatic and non E-Stat Processes, Paint & Fluid Dispensing Systems, Fluid Measuring, Monitoring & Control, Customized Controls to Include Electrical, Pneumatic and P.L.C. Integration, Special Spray Gun Mounting Fixtures and Gun Moving Devices, Customized Liquid & Powder Spray Booths, Paint Kitchens, Air Replacement Units, Baking & Curing Ovens, Quality Control Testing and Monitoring Equipment.

The Manufacturers we represent are World Leaders in the Coating Industry, and they are the major producers of Coating Equipment. Our suppliers lead the way in innovation and technology. Our expertise covers Application Equipment both Liquid and Powder from relatively simple Handheld Applicators and Automatic Machine-mount Applicators, to fully integrated Robotic Application Systems. ECE can provide Complete Fluid Management from Pressure Tanks and Paint Pumps, to fully Engineered Circulation Systems and Paint Kitchens. ECE can also provide the equipment that is necessary to Control and Monitor Fluid Flow. Our Engineering Team works with customers to develop a finishing process that meets their specific requirements. Each project, whether new or an upgrade, is managed through a process of client consultation, design and standard product integration along with custom modification or fixture

designs. We co-ordinate, fabricate and stage the equipment for installation in our customer's facility.

Our objective is to provide the right products for our customer's requirements. ECE strives to achieve the highest efficiency possible by saving application time, reducing coating consumption and producing the fastest ROI possible. We always concern ourselves with safety, and we maintain the highest levels possible from both the employers and the employee's standpoint.

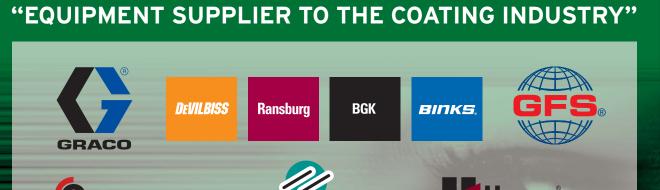
We maintain an extensive inventory of Equipment and Service Parts for all of the manufactures we represent. This allows for fast and efficient delivery that our customers can rely on. ECE Canada Limited has a Full Service Repair Facility with Factory Trained and Certified Service Technicians, whom are capable of repairing or rebuilding and testing all of the equipment we market. ECE also provides training in both application technique and equipment maintenance.

CORPORATE PROFILE: ECE CANADA LIMITED

Our Full Service Laboratory, with an overhead conveyor; has the ability to provide equipment demonstrations and simulate production line situations. Our Technical Application Specialists can also perform on-site trials of portable application equipment. For more elaborate applications, we encourage utilization of our manufacturers' fully equipped testing facilities, which can simulate most of the situations encountered in Modern Finishing Systems.

ECE Canada Limited is headquartered in Mississauga, ON., with branches in Montreal QC. and Vancouver, BC. We are committed to providing our customers with outstanding Sales and Service.

You can view our complete line of products and services at www.ececanada.com or e-mail us at: get.help@ececanada.com.



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N.V., Amsterdam, for US \$1.05 billion. The transaction has been approved by the boards of directors of both companies and is expected to close in early second quarter 2013, subject to regulatory approvals.

The acquisition includes the addition of about 600 AkzoNobel-owned paint stores, creating a combined network of about 1,000 companyowned stores serving the North American market, and includes all AkzoNobel North American architectural coatings manufacturing and distribution facilities, paint stores, product lines and employees related to the production, sale and distribution of architectural coatings in the United States, Canada and the Caribbean.

Leading brands included are GLIDDEN, FLOOD, LIQUID NAILS, SICO and CIL. PPG also will license the following brands: DULUX, DEVOE architectural coatings, and SIKKENS architectural wood products.

The \$60 million improvement anticipated upon closing includes costs that will not be incurred by PPG relating to defined benefit pension expense, amortization expense relating to prior AkzoNobel acquisitions and various administrative costs that will not transfer to PPG. The company says the expected incremental savings of \$30 million by the end of the first year and an additional \$70 million by the end of the third year following the acquisition include cost synergies

stemming from overlap in administration, distribution and manufacturing.

AkzoNobel is a leading global paints and coatings company, and a major producer of specialty chemicals. The company's architectural coatings business operates approximately 240 stores in Canada and is the leading architectural coatings company in Canada. The business employs about 5,000 people and has a number of manufacturing locations across the U.S. and Canada.

PPG Industries' vision is to continue to be the world's leading coatings and specialty products company. Founded in 1883, PPG has global headquarters in Pittsburgh and operates in more than 60 countries around the world. www.ppg.com.

BYK Additives & Instruments Invests in North America

The work to construct a new 3-storey production building has begun on the newly acquired company grounds of BYK USA in Wallingford, Connecticut.

"This investment in Wallingford underlines once again our aspiration to grow on the North American market and to produce as many products as possible locally," says Dr. Roland Peter, President Division BYK Additives & Instruments.

The company says the overall project, which will cost roughly 36 million euros, represents an important milestone in the global corporate strategy of BYK Additives & Instruments and, moreover, is the biggest investment of the ALTANA Group to date as a whole outside of Germany. Completion and commissioning are expected to occur in 2014.

Freeman Technology Appoints ATS Scientific Inc. as Distribution Partner in Canada

In a move that reflects sustained sales growth throughout North America, powder characterization company Freeman Technology (Tewkesbury, UK) has appointed ATS Scientific Inc. as its distributor for Canada. Headquartered in Burlington, ON, ATS Scientific now assumes responsibility for sales of Freeman Technology's FT4 Powder Rheometer throughout this territory.

Freeman Technology provides systems for the measurement of powder flow properties. www.ats-scientific.com

Reorganization of the Management Team at ALTANA AG

The specialty chemicals Group ALTANA AG has made changes in the top positions of its four divisions. The presidents of the company's divisions, BYK, ECKART, ELANTAS and ACTEGA, will each take over responsibility for another division of ALTANA AG. With this rotation, ALTANA aims to promote the transfer of knowledge within the Group and further strengthen its innovative capacity.

CALTANA **C** BYK **C**ECKART **C** ELANTAS **O** ACTEGA Dr. Wolfgang Schütt Dr. Guido Forstbach

continued on page 12

CORPORATE PROFILE: DEFELSKO CORPORATION

The Measure of Quality

DeFelsko, a leading U.S. manufacturer of coating thickness gages and inspection instruments, offers a variety of instruments designed specifically to meet the coating industry's requirements.

The PosiTector 6000 coating thickness gage is now smarter, faster and more powerful than ever before. Both Standard and Advanced models feature built-in memory, onscreen statistics, USB mass storage, and new Fast mode. Advanced models also include hi contrast reversible color LCD, Scan mode to store continuous readings, onscreen

help, real time graphing, and more.

The PosiTector DPM Dew Point Meter measures and records climatic conditions including: relative humidity, air temperature, surface temperature, dew point temperature and the difference between surface and dew point temperatures. Available with either a Built-in or Magnetic Separate probe, and 2 models to choose from – Standard and Advanced. All models include memory, Auto Log, statistics, USB port and Smart Trend TM indicators to help you identify rising, falling or stable readings. Download

and transfer options include USB, Bluetooth and PosiTector.net cloud-based memory storage. No software is required.

The PosiTector SPG Surface Profile Gage measures and records peak to valley surface profile height in accordance with ASTM D4417-B and others. Available with either Standard or Advanced features, the PosiTector SPG has a fast measurement rate of over 50 readings per minute - ideal for quickly and accurately measuring surface profile over large surface areas.

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

DeFelsko also offers quality inspection instruments including the PosiTest Adhesion Tester and the NEW PosiTector 200 Ultrasonic Coating Thickness Gage for measuring polyurea and other protective coatings on concrete.

For more information: Tel: 315-393-4450 Email: techsale@defelsko.com Web: www.defelsko.com **DeFelsko** Corporation 802 Proctor Avenue Ogdensburg NY 13669 USA



- All models include memory, statistics, HiLo alarm and a USB port
- PosiTector 6000 accepts all DPM, SPG, and UTG probes easily converting from a coating thickness gage to a dew point meter, surface profile gage or ultrasonic wall thickness gage with a simple probe change



offering secure centralized management of thickness readings

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CORPORATE PROFILE: AKZO NOBEL WOOD COATINGS LTD.

AkzoNobel is the largest manufacturer of coatings globally and is proud to be supplying "Tomorrow's Answers Today" in all applications of coatings. At AkzoNobel, we take pride in our core values of focusing on our customer's future first, embracing entrepreneurial thinking, developing the talents of our people, the courage and curiosity to question, and integrity and responsibility in our actions. Being part of a global leader in coating technology we have been able to combine the high level of service and technology with an even greater amount of expertise that can be drawn from the global presence of AkzoNobel. The Chemcraft brand has not disappeared and continues to be the brand of choice throughout our strong distribution network. Throughout our history, we have pioneered the latest technologies and delivered them with unrivaled service, always treating our customers as partners and this is a unique position in the market that will not change.

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.

In 2012, AkzoNobel introduced its new Chemcraft branded Chemlife® 24. Chemlife® 24 is a post catalyzed conversion varnish with a true 24 hour pot life which reduces waste for the end users. The quick cure and the silky feel of the Chemlife® 24 have made this product launch a real winner. The Chemcraft branded "Waterborne Complete" line of waterborne coating systems continues to evolve with new products added with cost, application and performance being the main drivers for this product launch. This new water base line of products is available to both OEM and distribution customers and covers is now able to cover all your coating requirements in a water base alternative.

With the emergence of L.E.E.D. and GREEN-GUARD® 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. In 2012 AkzoNobel added to the Airguard™ line of products which are GREENGUARD® certified and or certifiable coatings and systems. The Airguard™ line includes a 1K water base self seal topcoat as well as pre-catalyzed self seal topcoat. In late 2012 AkzoNobel added to the Airguard™ line by introducing a post catalyzed product as well as a conversion varnish both product being formaldehyde free.

Choose from our complete line of stains, lacquers, catalyzed coatings, urethanes, polyesters, and UV-cured wood coatings through the channel that best suits your needs directly from our factory, or through extensively trained distributors who offer local service and delivery.

Your production line has unique requirements. Our field technicians and chemists will work together to customize our top-quality formulations for your existing finishing equipment, meeting or surpassing final product specifications while reducing your costs by improving efficiency. Explore our Web site 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. As your partner, our success depends upon yours.

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 developed a full line of 275 VOC g/l coatings in anticipation of regulation changes. Our carefully tested, fully compliant coatings enabled our customers to keep producing without delays when the stricter standards will 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

We have a strong distribution network, which has trained staff to help you with all your finishing requirements and applications. This network allows our technology and local expertise to be available to all businesses. To find a distributor near you along with information and tools regarding the Chemcraft[®] brand products please use our distribution website.

www.chemcraft.com

Facilities

We have manufacturing facilities across Canada to serve each geographical area.

Akzo Nobel Wood Coatings Ltd.

Ontario

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

Quebec

274, rue St-Louis #6 Warwick, PQ JOA 1M0 Ph. 819-358-7500

Winnipeg

1450 Willson Place, Winnipeg, MB R3T 3N9 Ph. 204-452-7943

www.akzonobel.com





Visit chemcraft.com to locate your nearest distributor.



CORPORATE PROFILE: THERMA-TRON-X, INC.

Therma-Tron-X, Inc. designs, fabricates and installs custom paint finishing systems for contract shop coaters and OEM's. Founded in 1971 as a manufacturer of custom-built industrial ovens, our capabilities today include complete automated finishing systems. TTX builds E-coat, powder, liquid paint and auto-deposition systems for industrial clients worldwide. We are a full service supplier, meaning when you purchase a system, you get complete engineering support, evaluation testing, design, fabrication, installation, start-up, field service and spare parts.

TTX Environmental (a subsidiary of Therma-Tron-X, Inc.) has been working since the 1980's to develop wastewater treatment systems that minimize operational costs and environmental impact. TTX Environmental focuses specifically on water and wastewater treatment products, paying close attention to changing regulations and new environmental concerns.

At TTX, innovation is the driving force for continued improvement. Our experienced, committed team is qualified to meet your specialized needs. The TTX staff is made up of talented individuals that consistently bring fresh ideas and well-honed skills to the table. The TTX engineering department employs more than 40 people, each uniquely suited to meet the requirements you set forth. At TTX, dedication and pride ensure quality, reliability and energy efficiency.

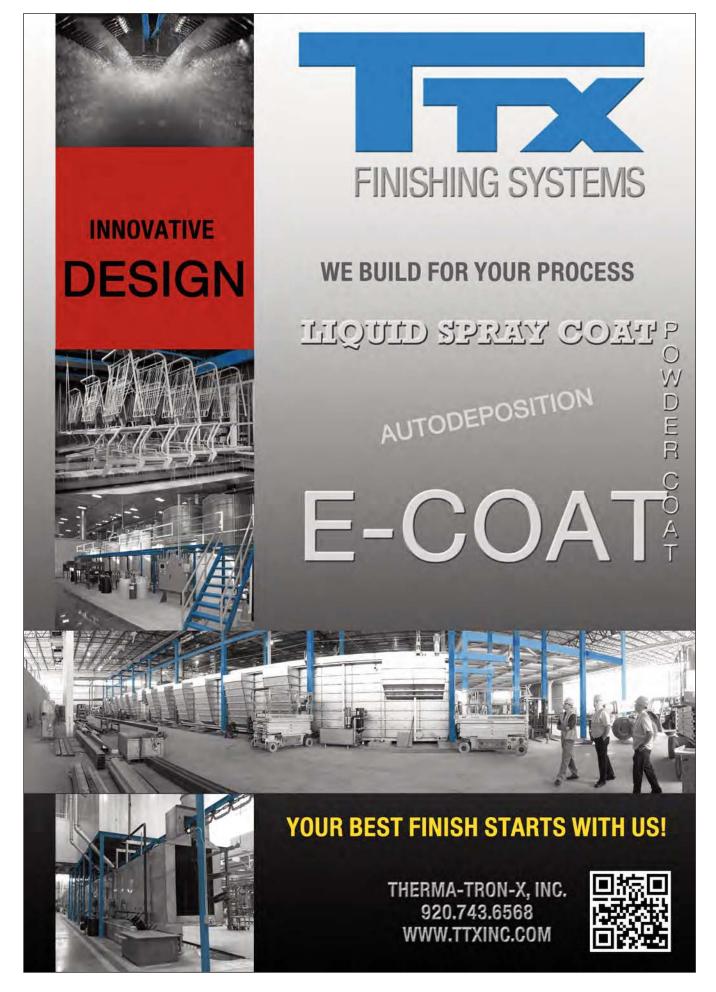
Cutting edge technology and modern facilities allow TTX to fabricate 90 per cent of the equipment needed for a system in house. Both design and manufacturing facilities are located on-site to ensure seamless communication through all project phases. In addition, TTX Air has a spacious hangar and offices nearby, making it easy for employees and clients to travel to and from Northeastern Wisconsin.

The Therma-Tron-X, Inc. facility is located in beautiful Sturgeon Bay, Wisconsin. Our fabrication bays and plant space total more than 160,000 square feet, and the main office has grown to more than 30,000 square feet. In addition, TTX has a sales office in the Chicago area, creating even more opportunities for the successful Door County based business. TTX believes in developing partnerships with its customers. After your system is installed, we get you up and running smoothly, making adjustments to ensure that all system components will perform with peak efficiency. We also train your personnel, giving them the ability to better troubleshoot and maintain your equipment. We're available by phone or email, and will visit your plant to service your system.

TTX's capabilities are listed below.TTX finishing system components are integrated into finishing systems or are stand-alone units.

Multi-stage pretreatment equipment prepares your product for finishing. Using spray, immersion or combination pretreatment methods, dirt, oils and contaminants are removed from the product's surface and phosphate or conversion coatings are applied to help prevent corrosion and increase paint adhesion.

Batch ovens, conveyors ovens, infrared equipment, convection curing ovens, dry-off ovens and various custom heat processing solutions are at the heart of Therma-Tron-X's capabilities. We are



experts at designing industrial ovens that fit your spatial needs and utility requirements.

Therma-Tron-X environmental rooms are designed to provide ideal powder paint application conditions. They include air conditioning and humidity control equipment that balances airflow and minimizes overspray in addition to maintaining ideal humidity and temperature conditions.

TTX liquid spray booths provide the ideal paint application conditions that balance airflow and minimize overspray. Features include recirculated air systems, side-draft, cross draft, down draft, multi-level, man-lifts, conservative air flow, high efficiency water-wash, dry filter, high intensity lighting, sludge separation, and more.

In 1987, Therma-Tron-X built the first SlideRail Square Transfer™ (SST) material handling system. The revolutionary SST system performs high volume finishing operations using a fraction of the space required by traditional monorail systems. All paint system components are contained in one compact unit and managed by a PLC. Because flexibility is one of the strengths of SST technology, each system is built from the ground up to meet your individual needs.

Therma-Tron-X Econ-E-Coat systems offer the same high throughput as the SlideRail Square Transfer™ systems, but in a smaller work envelope. Specifically designed to be portable, the modular unit can be moved as often as needed.

Monorail systems carry different sized parts through the paint application process in a continuous motion.TTX monorail electrocoating systems feature a unique tank design that enhances paint circulation and helps prevent clumping, settling or foaming.

TTX power and free conveyor system will fully automate your manufacturing process and efficiently transfer product between manufacturing, finishing and final assembly/shipping areas. It can allow the load/unload to be stationary while the rest of the products remain in motion and can also direct carriers onto different conveyor lines, making power and free conveyors extremely versatile.

Every Therma-Tron-X conveyor system is unique. TTX conveyors, featuring PLC's, automate any finishing operation and seamlessly link existing plant conveyors to assembly, shipping and manufacturing departments. Conveyors significantly reduce the amount of manpower needed to move parts around a plant.

Therma-Tron-X programmable hoists are custom designed and built to serve a wide variety of industrial finishing processes and can be integrated with multiple styles of conveyor systems. They are designed to handle the heaviest workloads and are fabricated, programmed and tested before shipment. PLCs monitor hoist systems and make sure all operations meet your exact specifications.

Many of our clients are now opting for combination coating systems that offer the outstanding corrosion resistance and coverage provided by E-coats, as well as the multi-color flexibility implicit in powder or liquid coating technologies. TTX Environmental wastewater treatment systems use wastewater minimization technologies and process bath reclamation to help bring your plant into compliance with federal, state and local discharge standards. We specialize in chemical precipitation, metal sorption, ion exchange and membrane separation.





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AmeriMold, & OMTEC With over 100 exhibitors focused on the surface finishing industry and free access to three co-locating shows there are plenty of ideas to go around in 2013. SUR/FIN exhibitors represent the world's top companies and offer solutions in all aspects of your business. Make your tradeshow experience go farther. Register today at NASFsurfin.com.

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- Multiple networking lunches and receptions
- Presentations by the top minds from around the world
- Free access to three co-locating shows









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Dr. Roland Peter, up until now President Division BYK Additives & Instruments, will take over the management of ACTEGA Coatings & Sealants from Dr. Guido Forstbach, who will now head ELANTAS Electrical Insulation. The latter division's previous president, Dr. Wolfgang Schütt, will now assume the management of ECKART Effect Pigments, whose former president, Dr. Christoph Schlünken, will take over the management of BYK.

This measure is not connected with structural or strategic changes within the Group or the four divisions. The company will maintain important continuity in the specialty chemicals business and further pursue its sustainable growth course.

ALTANA Acquires the Business of the Wax Additive Manufacturer ChemCor, USA

The specialty chemicals group ALTANA has signed a contract to acquire the business of Chemical Corporation of America Inc. (ChemCor), a U.S. manufacturer of specialty wax additives. The family business headquartered in Chester in the state of New York generates yearly sales of around 17 million USD. By way of an asset deal, ALTANA will acquire the production site in Chester, NY. The business will be integrated into BYK USA Inc., which is based in Wallingford, CT and belongs to the ALTANA Additives & Instruments division. ChemCor produces water-based wax products and specialty additives for a wide range of industries including floor finishes, exterior paint and deck stains, graphic arts coatings and inks as well as mold release products.

Dow Coating Materials to Expand Dispersants Production to Meet Increasing Worldwide Customer Demand

Dow Coating Materials, a global business unit of The Dow Chemical Company, has announced plans to expand production of its Dispersants product line in response to rapidly increasing demand from customers across the globe. Additional production of TAMOL and OROTAN High-Performance Hydrophobically Modified Copolymer Dispersants from Dow is slated to begin during the first quarter of 2013, following a rigorous scale-up and qualification process. The additional TAMOL Dispersant will be produced for Architectural and Industrial coatings manufacturers, Hygiene and Medical applications, and Personal and Home Care products.

TAMOL Dispersants from Dow offer formulators a diverse selection of poly-acid, hydrophilic copolymer, and hydrophobic copolymer dispersants to meet a variety of formulation demands. Performance benefits to coatings include excellent efficiency, gloss enhancement, pigment wetting, stability and color acceptance.

Clariant divests businesses to SK Capital

Clariant, a world leader in specialty chemicals, has signed an agreement to divest its Textile Chemicals, Paper Specialties and Emulsions businesses to SK Capital for approximately 502 million Swiss francs (CHF), out of which approximately 460 million in cash, equivalent to 6.3 times the estimated full year 2012 recurring EBITDA of those businesses. Subject to regulatory approvals, the transaction is expected to close by the end of the second quarter of 2013. Repositioning the company's portfolio is an essential part of Clariant's profitable growth strategy. To achieve the targets set for 2015, Clariant will focus on markets with future perspectives and strong growth rates, and on businesses that have a competitive position, resulting in strong pricing power.

SK Capital is a private investment firm with a disciplined focus on the specialty materials, chemicals and healthcare sectors, located in New York, NY (USA) and Boca Raton, FL (USA). The company has a strong track record in chemicals investing, in transitioning non-core divisions of larger corporations to standalone entities and in acquiring global businesses.

Birchwood Casey Metal Finishes Changes Brand & Logo to Birchwood Technologies

Birchwood Casey Metal Finishes announced today that it has changed its brand and logo to Birchwood Technologies. Mark Ruhland, vice president of Birchwood Technologies, made the announcement and said that the change reflects success the company has experienced with its broader range of products and services.

Birchwood Technologies is an advanced developer and manufacturer of turnkey metal finishing systems and processes including low temperature black oxide, antiquing, rust preventives, cleaners and surface preps.

Plasmatreat has Moved

Plasmatreat North America (PTNA) has moved to a new location in Ancaster, ON, about 45 miles west of Toronto/Pearson International Airport.

The 6000 sq ft sales and technical center, under the direction of PTNA Vice-President Tim Smith, incorporates sales offices, technical service, and spare parts as well as equipment for atmospheric plasma cleaning, activation and coating processes. Customer support and maintenance are also on site, being dispatched to all of the Americas from the Ancaster location.

CORPORATE PROFILE: NORSPEC FILTRATION



For more than 28 years, Norspec Filtration Ltd. has been a supplier of filtration products to the paint & coatings industries.

The company manufacturers a full range of air filtration products for crossdraft, downdraft, prep stations and exhaust style paint booths. No matter what the application, intake air filters, ceiling media, prefilters, extraction bags, or paint exhaust filters, Norspec has the filters to meet customers' needs.

New Winnipeg address

To further meet customers' needs the company has a new facility at 348 Keewatin Ave., Winnipeg, MB, R2X 2R9 Tel: 204-694-6444, Fax: 204-694-3259.

Intake Air Filters

Intake filters are as important to a great paint job as the booth itself. The intake filters are the primary defense against foreign particles landing on the painting surface. Any particle larger than 10 microns can cause a defect on a paint job. With four different intake filter panel styles to choose from, Norspec has the best selection in the industry.

Exhaust Filters

Exhaust filters play an important role in maintaining proper air flow balance, increasing cleanliness of exhaust stacks, reducing maintenance of the exhaust system, and controlling volatile organic compound (VOC) emissions. The purpose of any exhaust filter is to capture over-spray particles and remove them from the airstream as air is removed station, there are a variety of diffusion styles that can be used. Each style has a different air flow characteristic, but is capable of stopping and capturing all dirt particles that cause paint defects. Norspec offers the finest diffusion media produced and provides it in pads, blankets or rolls.

Powder Coat Filters

Norspec offers a full range of powder filter cartridges in all media styles and sizes to fit any powder coating system, including all the major OEM brands. Media styles include pleated paper, 80/20, fire resistant 80/20, spun bond polyester, moisture resistant polyester, anti static aluminized polyester, nano fiber and PTFE laminated membrane cartridges.

Final Filters

In addition to one of the widest selections of replacement powder cartridge filters, Norspec also stocks a wide variety of final filter replacements for all major OEM brands. High-temp filters, ASHRAE, Mini-pleat, and carbon cell final filters are all available in the full range of configurations to match the performance and fit of the OEM filter. All are available in standard and custom sizes.

Total Filter Management

Finally, for large scale operations Norspec Filtration Ltd. developed its "Total Filter Management" system program. The "Total Filter Management" programs brings together Norspec's team of product specialists customer service representatives account managers and upper management to work together to help reduce overall cost. Norspec's buying power, experience and expertise enables customers to benefit through economics of scale, reduced administrative costs and increased efficiencies leading to lowest Total Cost of Ownership. In today's ever changing marketplace, customers need a company who understands their needs, and has the expertise and experience to understand the process, troubleshoot the problem and then offer the best products for any particular application. Norspec understands that customers may not know the best filter product for their application, that is why the company's team of trained sales professionals are available to be on site within 24 hours to assist with all filtration needs. One of the leaders for the Canadian paint & coatings industries – Norspec Filtration Ltd. celebrating 25 years.

<section-header>
 Diffusion Media - Diffus or recirculated back into the booth.

Norspec offers the largest selection of weights, thicknesses, densities, sizes and constructions available in the industry. The company continues to offer the right product at the right price, with new products being developed everyday. From custom cut blankets to standard size pads, special care is taken in proper product selection to insure providing a tailored filtering system with respect for all variables present in a finishing environment.

Diffusion Media

Diffusion media is used to filter the final air found on both downdraft booths and prep stations. Their function is to spread the air flow evenly over the piece being painted, and to filter out any dirt particles that may get past the primary filters. Depending on the make of the downdraft booth or prep



Plasmatreat North America Inc. 1480 Sandhill Dr., Unit 8, Ancaster, ON L9G 4V5, Canada Phone: 905-304-5200 Fax: 905-304-5260. www.plasmatreat.ca

International Paint Protective Coatings Centers Now Open

International Paint LLC, an AkzoNobel company, has openned International Paint branded Protective Coatings Centers in strategic locations across the U.S. and Canada. The launch represents the first phase of what will eventually become a larger network of free-standing Protective Coatings Centers servicing customers in all major markets.

The new customer-direct distribution model is designed to help increase access to International Paint and Devoe Coating's full-range of high-performance protective coatings, linings, and fire-protection products throughout North America, and provide a more streamlined, customer-centric process for product procurement—all in a single visit.

The company explains that by leveraging the strengths and synergies of International Paint and Devoe High Performance Coatings under one consolidated location, industrial customers will have a variety of personalized services at their disposal.

DuPont Powder Announces New Rebar Market Segment Leader

DuPont Powder Coatings announces the assignment of Robert R. Phillippi, area manager, as rebar segment leader. In addition to his sales role, he will be leading DuPont's efforts in this market segment. Phillippi has been in both technical and sales roles with DuPont Powder Coatings for 15 years, bringing years of experience and devotion into this new responsibility.

DuPont has a strong history with the DuPont Nap-Gard brand of fusion-bonded epoxy (FBE) products. The recent launch of a new rebar coating – that provides improved wet adhesion, faster application rates and best in class cold weather flexibility – lays the groundwork for aggressive growth in the rebar market.

Watson Buys Delta

Effective December 3, 2012, Watson Standard has acquired certain assets of Delta Coatings Corporation, a privately-owned coatings company that specializes in the development and manufacturing of coatings for the general industrial and packaging industries. Acquiring Delta allows Watson to re-enter the general industrial coatings marketplace and add to its existing portfolio of coatings and adhesives for the packaging industry. The acquired business will operate as Watson Standard Industrial Coatings.

Vencorex and Polyurethane Chemistry

Vencorex is a newly formed joint venture between PTT Global Chemical, Asia-Pacific's leading integrated petrochemical and petroleum refining company and the Perstorp Group, a world leader in specialty chemicals market.

The company has a wide range of isocyanates and solutions to develop more environmentallyfriendly technologies such as:

- Tolonate aliphatic polyisocyanates crosslinkers for high-performance polyurethane coatings & adhesives, which offer exceptional durability and non-yellowing properties upon ageing, with high solids, low volatile organic compound (VOC) options
- Based on a unique patented technology, the Easaqua grades are self-emulsifiable polyisocyanates, used as cross-linkers of effective environmentally-friendly waterborne polyurethane alternatives to conventional solvent-based coatings
- HDI and IPDI isocyanate monomers, essential building blocks for polyurethane dispersions (PUD)
- Scuranate TDI aromatic isocyanate for CASE applications

Vencorex aims to develop alternative environmentally-friendly technologies and new materials to yield savings in energy, time and money through improved productivity.

The company has recently invested in new production capacity in HDI derivatives (Tolonates and Easaqua ranges), and the increase of its global manufacturing capacities, research and development and commercial presence. www.vencorex.com

Lonza Spotlights New Innovation & Technical Center

When Lonza and Arch Chemicals, Inc. joined forces in late 2011, it created the world's leading Microbial Control business. Led by Dr. Valcke, Lonza recently consolidated most of its U.S. based research and technical customer support operations at a new Innovation and Technical Center in Alpharetta, Georgia. In addition, the Company also has key research and technical centers worldwide to serve its global customers, including many in developing regions.

"This consolidation of R&D and technical support personnel will encourage greater intellectual collaboration and cross-fertilization across businesses that will result in faster development of exciting new products for our customers and consumers," Dr. Valcke said. He added that, "The high

CORPORATE PROFILE: EXEL NORTH AMERICA, INC.

EXEL North America, Inc. - Manufacturer of Kremlin Rexson, SAMES, & Johnstone brand products. We offer Automatic and/or Manual Paint Spray Guns, Rotary Electrostatic Bell Atomizers, Fluid Dispense & Mixing Systems, Turnkey Automotive Robotic Systems, and Turnkey General Industrial Systems.

We are a World Leader in "Making Manufacturers More Competitive" with expertise in Finishing and Dispensing Systems. Our history spans over 75 years of providing optimum solutions using high quality innovative and reliable equipment. We are made up of employees with a "Mission-to-Serve and a Sense-of-Urgency" philosophy. Our product ranges are among the widest, starting with our Kremlin Rexson Airmix[®] spray guns, to Sames Technologies Electrostatic Rotary Atomizing Bells, to "state of the art" Johnstone and Kremlin Rexson pumping and proportioning systems.

EXEL North America makes manufacturers more competitive with precise applications of liquids, powders, sealants, adhesives, mold release agents, oils, paints, sealers, primers, waxes and any other flowing powder or fluid product.

As the industry has been pounded by economic times, we have chosen to grow and develop ourselves faster and larger than ever. We've got great products, and even better people. Kremlin Rexson manufactures spray guns, bells, pumps, metering systems and all the accessories that go along with them.

Listed below are some very important links to our company and how we can help you excel in the finishing industry.

Links to Other Media from EXEL North America, Inc.

EXEL North America Advanced Technology Group Scientists, Engineers and Paint and Dispense Application Specialists. Those are the people that make up our Advanced Technology team. From analyzing a paint system for a wood manufacturer to aerospace / defense to automotive, these guys do it all. We've picked up the best of the best.

http://www.kremlinrexsonsames.com/fichiers/Literature/English/EXEL_Advan ced_Technology_Group_brochure_web.pdf

Success Stories from Customers

Find out why customers choose us over our competitors and why they continue to do business with us. EXEL North America is just a different and unique company to do business with. Paint Guns, Bell Applicators and fluid dispense pumps are what we make. But solutions are what we provide.

http://www.kremlinrexsonsames.com/en/usa/infos/103-success_stories.html

EXEL North America Blog

Success Stories, tips and tricks, announcements and business ideas... Candidly, written to highlight our wins, updates, and our philosophies. http://exelna.wordpress.com



The SAMES e-Jet2 has been specially designed for companies looking to improve their powder coating application and overall efficiency of that application.

Ergonomic, Reliable, and

High-Performing.



We have a large Advanced Technology team that has 30 years of experience applying every kind of material, to any kind of part you could think of. If it's painted or sealed, we've probably done it before - by hand and/or with a robot. We supply turn-key manual, automatic, and robotic paint and dispense systems for automotive and general industrial markets. We integrate turn-key paintshop and bodyshop dispense systems for Sealer, Mastic, and Adhesive applications. We also have three Application Labs: General Industrial Paint, Automotive Paint, and a Sealant/Dispense Lab. EXEL North America has 100+ Distributors located throughout North America Our Beginpal

located throughout North America. Our Regional Sales Managers have 20+ years of experience. It's a great place to work and a great company to do business with. To learn more about EXEL North America and all the products and services offered, please email us at exelnasolutions@exel-na.com or call us at 1.800.573.5554 (US) and 416.431.5017 (Canada). We look forward to helping you provide the best equipment and solutions for your needs! Call us today!

Same

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level of enthusiasm among the summit participants underscored the value of what we call 'TCcubed' — which stands for Transparency, Communication, Cooperation and Collaboration among our businesses and research communities."

Industry News

Toyota Cambridge Plant Government Funded to Build Lexus

Toyota Motor Manufacturing Canada, Cambridge has received close to \$34 million for expansion from the federal and Ontario governments.

Toyota announced this past summer that it would invest \$100 million to boost production of its Lexus RX350 and begin producing the RX450h, a hybrid electric version, with the plan to create 400 new jobs.

Ottawa and Ontario are each contributing half of the nearly \$34 million.

The federal portion is to come out of the \$250 million Auto Industry Fund, created during the auto industry crisis in 2008.

The provincial funds are coming out of Ontario's Strategic Jobs and Investment Fund.

Building the first hybrid Lexus outside Japan requires new technology, exacting standards and tight timelines, according to the company.

The auto industry provides close to 485,000 jobs in Ontario.

GM Will Keep Promises

Despite plans to move Chevrolet Camaro production from Oshawa, ON to Lansing, MI General Motors says it will not break any of its government-mandated production promises.

GM recently announced the next-generation Chevrolet Camaro will not be built in Oshawa. The CAW says the shift will likely occur in late 2015, early 2016, coinciding with the expiry of GM's legal requirements.

They must maintain at least 16 per cent of its total North American production in Canada; according to the deal struck in 2009's auto crisis in exchange for over \$10 billion in financial aid. The company says moving the Camaro to Michigan won't affect those agreements.

General Motors Oshawa built 99,798 Camaros in 2012, representing 14.6 per cent of its Canadian vehicle manufacturing.

Canada currently owns 10.3 per cent of GM's stock. In its most recent quarterly financial report, the shares were valued by the Canada Development Investment Corporation at \$3.5 billion. Because of its contributions to the bailout package, Ontario would receive one-third of the proceeds of any sale.

The federal government recently renewed the \$250 million Automotive Innovation Fund over the next five years, as a means of enticing auto companies to stay in Canada.

CSA Group Announces Canada's First Standard on Nanotechnologies

Recently at the Nano Ontario 2012 Conference in Waterloo, ON, the CSA Group, a standards development, testing and certification organization, announced Canada's first adopted ISO standard on nanotechnologies. CSA Z12885, Nanotechnologies - Exposure control program for engineered nanomaterials in occupational settings provides guidance for the safe use of nanomaterials in the workplace.

It is the first in a series of standards on nanotechnologies being adopted in Canada, resulting from international and Canadian contributions to the continued activity of ISO/TC 229, the ISO Technical Committee on nanotechnologies.

This follows recognized approaches to risk management with a focus on information and issues specific to nanotechnologies, including hazard identification, risk assessment procedures,

training requirements and worker engagement. CSA Z12885 contains revisions to ISO/TR 12885 and additional guidance to reflect Canadian practices and safety considerations.

Canadian Apprenticeship Forum to Continue Operations

The Canadian Apprenticeship Forum's Board of Directors is pleased to announce its intention to continue operations beyond March 31, 2013, when operational funding through the federal Sector Council Program ends.

Following news that the Sector Council Program was being wound down in July 2011, the Canadian Apprenticeship Forum (CAF-FCA) took steps to assess support among the apprenticeship community to continue operations. Feedback overwhelmingly indicated that skills shortages across Canada warrant a renewed mandate to promote careers in the skilled trades, conduct research to inform apprenticeship stakeholders, and facilitate connections across trades, across sectors and across Canada.

"Our June 2012 conference in Regina was a great opportunity to connect with the apprenticeship community and identify champions for continuing our work," said Dave Suess, CAF-FCA's Chair

CORPORATE PROFILE: ALBERDINGK BOLEY INC.

Alberdingk Boley is a global manufacturer of waterborne emulsions, polyurethane dispersions, water base UV dispersions, castor and linseed oil as well as modified polyols.

For over 180 years Alberdingk Boley has been providing innovative, sustainable and environment-friendly solutions to the coating industry.

The US manufacturing facility in Greensboro, NC, produces a variety of products including acrylics, styrene acrylic, epoxy acrylic hybrid emulsions, polyurethane dispersions and water base UV dispersions

Alberdingk Boley's vision is to make a significant contribution to environmentally sustainable technological progress. We believe in being an innovative partner to our customers worldwide. We pride ourselves in being flexible, responsive and creative.

In addition to the company's core competence of the development of water-based products, Alberdingk Boley has invested in the development of eco-friendly characteristics of its products including zero and low VOC formulation capability, solvent and NMP free as well as renewable source PUDs.

Alberdingk Boley, Inc. offers a full line of waterborne emulsions and dispersions including:

- Acrylics and Styrene Acrylic Emulsions
- Polyurethane Dispersions
- UV Curable Dispersions

Product Showcase:

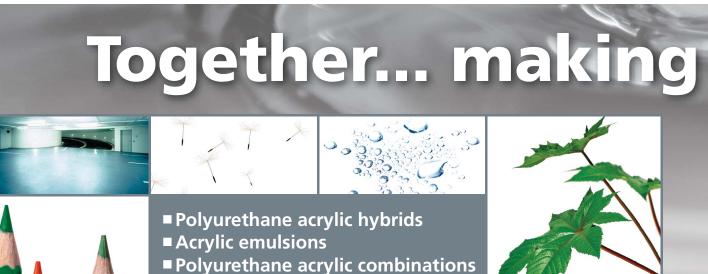
AC 2739 is a multiphase, self-crosslinking acrylic polymer designed for clear and pigmented exterior wood and industrial joinery applications. It has outstanding block resistance and excellent early water resistance. Zero VOC formulations are possible.

AC 2742 is a multiphase, self-crosslinking acrylic polymer designed for 1K and 2K furniture and

floor coatings. Clear and pigmented formulations show excellent stain resistance and hardness.

AC 2782 is a multiphase, self-crosslinking acrylic polymer designed for industrial wood coatings that require very early block resistance. It has high gloss potential and low water absorption.

U 9380 is a solvent-free aliphatic polyester polyurethane dispersion designed for 1K and 2K wood and plastic coatings with excellent hardness, chemical resistance and flexibility. It can be used for both interior and exterior applications.





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Our water-based emulsions and dispersions are designed for coatings over a variety of substrates:

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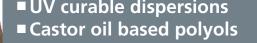
Plastic

Metal

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www.cfcm.ca

and Apprenticeship Learning Advisor at Suncor Energy. "Since then, our membership list has expanded, showing that stakeholders are willing to make a financial contribution to keep CAF-FCA doing the work we value."

Over the next year, CAF-FCA will continue to engage members, pursue project funding to continue its research and promotion activities, and streamline its governance structure. Members will help establish a new strategic plan and priorities, as well as identify a new Board of Directors, which is being reduced to 15.

"We have a busy year ahead and fully realize the challenges involved with engaging new members, revisiting our Board structure, and developing initiatives of substance for apprenticeship stakeholders," says Ray Massey, CAF-FCA Director and Chair of the Apprenticeship and Industry Training Board in Alberta. "CAF-FCA's collaborative, partnership approach is paying dividends. We're seeing apprenticeship authorities, labour groups, employers, educational institutions, associations, equity groups and individual members in every region of Canada step up to support us." He adds, "That will make the next year an exciting time."

CAF-FCA is a non-profit organization working with the apprenticeship community in all regions

of Canada to provide an effective national voice. Participants work collaboratively to support vibrant and innovative apprenticeship systems and policies, with a view to developing a highlyskilled, inclusive and mobile skilled trades workforce. Representatives of business, labour, educators, equity-seeking groups and the jurisdictions are among its key stakeholders. *www.caf-fca.org.*

Global TiO₂ Pigment Industry Has Strongest Year in Two Decades

The \$17 billion global titanium dioxide (TiO₂) pigment industry improved profitability in 2011, with figures that TZ Minerals International Pty. Ltd. (TZMI) believes are the strongest in two decades.

In the eighth edition of the Global TiO₂ Pigment Producers Comparative Cost and Profitability Study 2012, TZMI reported that manufacturing cost is expected to increase dramatically in the next two to three years as legacy ore contracts roll off and are replaced by contracts that strongly favor feedstock producers.

In 2008, the TiO₂ pigment industry operated in an environment of depressed profitability, with record-high raw material and energy costs resulting in an oversupply of TiO₂ in western markets.

With the onset of the global financial crisis, inventories were drawn down, and capacity idled, making it difficult to restart the supply chain when the market recovered.

The tight supply situation started in 2010 and continued through 2011, with price increases announced regularly during the two-year period. As a result, global pricing increased by 8 percent in 2010 and almost 40 percent in 2011. The EBITDA margin for the industry increased from a level of 11 percent entering 2010 to 32 percent exiting 2011 (based on reporting companies).

In 2011, production (pro forma basis) increased 3.5 percent after demand increased with the improved economy, consumers restocked their supply chains, and some producers – due to lack of available product – bought ahead of needs to de-risk availability in future months. Chinese producers led the production growth with a very bullish 14.5 percent year-on-year increase in output.

Growth during the last five years has been led by major emerging economies (most notably China), the emerging economies of Asia-Pacific (Indonesia, Thailand, Vietnam, Philippines, etc.), Brazil, Turkey, Russia and India. The mature economies of Western Europe and North America have remained flat or declined slightly in consumption.

Profitability gains in 2011 resulted from improved sales pricing due to strong demand, limited supply and low inventories. In 2011, all chloride plants were profitable according to TZMI's independent analysis. DuPont held the lowest cost position with its 340,000 tpa plant in DeLisle, MS. Plants operated by all five of the major global producers (DuPont, Cristal Global, Huntsman Corp., Kronos Worldwide and Tronox Inc.) were among the 20 lowest-cost facilities. Half of the 20 lowestcost plants were located in China. *www.tzmi.com*

Growth Forecast for Antimicrobial Coatings Market

Antimicrobial coatings demand was worth \$1.6 billion in 2012 and is estimated to reach \$3.3 billion in 2018, growing at a CAGR of over 12 per cent from 2012 to 2018 according to a new market analysis titled Antimicrobial Coatings Market - Global Industry Analysis, Market Size, Share, Trends, Analysis, Growth and Forecast, 2012 – 2018 by Transparency Market Research, Albany, NY. The report notes that North America is the global revenue leader in antimicrobial coatings and dominates demand.

CORPORATE PROFILE: ANDICOR SPECIALTY CHEMICALS

Andicor was founded in 2002 on the strengths of its original supplier partners for the Coatings and Ink market in Canada, and has built on that strong foundation by adding complementary product lines that meet the needs of an increasingly demanding marketplace. Now entering its 11th year of operation, formulators can continue to count on Andicor for cost-effective products from world-leading suppliers that improve performance,

meet regulatory or environmental challenges, and

are available for immediate delivery from local

warehouses across Canada.

Andicor is **BWAY Corporation's** only distributor in Canada able to offer their complete range of steel pails, plastic pails, and tin containers - from 1/4 pint general line paint cans up to 15-gallon plastic open-head drums - from local inventory. Buy all your packaging needs from one location and save!

Bway's plastic hybrid cans are made with 70% post-consumer recycled resin and offer an alternative to tin containers for water-based paints, providing an attractive package while eliminating the potential for dents and rust. Southern Clay Products, a leading manufacturer of both solvent and water-based rheological additives, offers a full range of OPTIFLO® VOC-free associative thickeners, including the recently launched APEO-free OPTIFLO H7500-VF for VAE binder systems.

Huntsman Advanced Materials is a worldleading producer of thermoset resins for the structural composite, adhesive, electronic, coating and construction markets. Huntsman offers Araldite[®] waterborne epoxy resins that can be used with a variety of Aradur[®] waterborne epoxy curing agents to formulate coatings with low VOC content and a wide range of end properties.

OPC Polymers, one of North America's leading producers of conventional alkyds and oil-modified urethanes, also offers a broad range of High Solids, Eco-Alkyd[™] Exempt Solvent, and Water Reducible/Emulsion resins to meet VOC regulations.

WPC Technologies Inc. offers the innovative Wayncor[®] line of non-toxic corrosion inhibitive pigments, and the VOC-free Waynflash 111 for in-can rust protection and flash rust inhibition.

RÜTGERS Group specialty NOVARES® resins can be used as co-binders to increase solid content and reduce solvent content. NOVARES® modifiers can be used as a substitute for nonylphenol and benzyl alcohol, and RUETASOLV® DI, with its low viscosity and high boiling point can be used to substitute conventional solvents in epoxy and PUR systems.

Cardinal Color offers a complete line of earth-friendly colour dispersions that are VOC-free, APEO-free, phthalate-free, formaldehyde-free, and silicone-free. Perfect for any aqueous application, the ZVOC-line comes in 23 standard colours/concentrations (custom colour-matching is also available).

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

waves in the pond

Andicor Specialty Chemicals is a full-service national distributor of specialty chemicals and packaging. Our mission is to be a seamless extension of the suppliers we represent, offering: Alberdingk Boley www.AlberdingkUSA.com Acrylics and Polyurethane Dispersions

BWAY Packaging www.bwaycorp.com Round Paint, Cone Top, Oblong and Aerosol Cans, Steel and Plastic Pails

Cardinal Color www.cardinalcolor.com Huntsman Advanced Materials www.huntsman.com Epoxy Resins & Curing Agents

OPC Polymers (ON and Western Canada)

Www.opcpolymers.com Alkyd and Oil-Modified Urethane Resins

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Evonik Goldschmidt www.goldschmidt-is.com Masonry Water Repellents

Fuji Silysia www.fuji-silysia.co.jp Silica Gel Flatting Agents

Georgia Industrial Minerals www.gimmica.com Mica Shamrock Technologies www.shamrocktechnologies.com PTFE and Wax Additives

Southern Clay Products www.scprod.com Rheological Additives

U.S. Metal Powders www.usbronzepowders.com Aluminum Pigments

WPC Technologies www.waynepigment.com Anti-Corrosion Pigments Andicor complies with CACD Responsible Distribution: 2008 Code and is also a member of CPCA (Canadian Paint & Coatings Association).

ANDICOR SPECIALTY CHEMICALS CORPORATION

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There is a growing demand for antimicrobial coatings in medical applications such as catheters and other medical devices. With the realization that indoor air pollution can cause more harm to health, there has also been a noticeable rise in the use of antimicrobial coatings in improvement of indoor air quality. Increased use of plastic packaging in food applications has resulted in growing demand for additives and coatings in the food packaging industry. However, factors such as questionable efficacy of coatings used in apparel, health issues associated with the use of active silver as the main ingredient and stringent regulations governing the antimicrobial coatings market are restraining growth.

Active silver has emerged as the most widely used raw material for antimicrobial coatings, as it is believed to show the highest efficacy levels compared to other compounds. Antimicrobial powder coatings demand is expected to grow at a CAGR of 9.1 percent by volume from 2012 and 2018. Surface modifications and coatings are expected to show steady growth rates at CAGR of 8.8 percent by volume and CAGR of 12.2 percent by revenue from 2012 to 2018.

Demand for antimicrobial coatings for indoor air quality is expected to grow at a CAGR of 12.8 percent from 2012 to 2018. Demand for antimicrobial coatings in the medical/healthcare market is expected to grow at a CAGR of 12.6 percent from 2012 to 2018. In case of mold formation, various coatings and products containing antimicrobial substances are being put to use as an aftercare method. The market for these products is expected to grow at a CAGR of 13.1 percent from 2012 to 2018.

The study provides in-depth analysis of the global antimicrobial coatings market, with the market segmented on three levels. In addition, the report provides a cross-sectional analysis of the application sub-segments with respect to the following geographical markets: North America, Europe, Asia-Pacific and the rest of the world.

www.transparencymarketresearch.com/antimicrobial-coating-market.html.

People **AkzoNobel Management Changes**

AkzoNobel has appointed Graeme Armstrong Managing Director Surface Chemistry and Country Director for North America. Armstrong is currently the executive committee member responsible for research, development and innovation (RD&I). He succeeds the retiring Bob Margevich.

Armstrong will assume the position on April 1, 2013, and will work alongside Margevich during the first two months to ensure a smooth transition. A process to find a successor for Armstrong in RD&I is ongoing. Armstrong will continue his RD&I responsibilities until a successor is announced.

Armstrong joined AkzoNobel in 2008 follow-

ing the acquisition of ICI, where he led the company's RD&I function. Prior to joining ICI, Armstrong spent 19 years in the detergents industry for Unilever and JohnsonDiversey.

Jason Maupin Promoted to **Vice President, Enthone Americas** Jason Maupin has been promoted to Vice

President, Americas by Enthone Inc. Maupin has over fifteen years experience in

sales management and business development. Prior to his promotion, Maupin was the Vice President Sales, Enthone North America, where he was instrumental in working with the company's regional sales managers and business development teams to grow market share by leveraging Enthone's technical and market expertise at new and existing key accounts. Most recently, he also was appointed General Director for Enthone Mexico.

Maupin proudly served in the U.S. Navy for six years from 1991 - 1996. After graduating from the Naval Nuclear Propulsion Program, he served on a Los Angeles Class fast attack submarine, where he was on a team responsible for the chemical control of the nuclear reactor and its support systems. He will be relocating to Connecticut in the coming months.

In a related move, Terrence Copeland, previously Vice President, Enthone Americas, has been appointed Vice President, Commercial Business Development. In this new role, Copeland will be responsible for identifying new business opportunities supporting current Enthone business, as well as develop new strategic opportunities.

Dr. Dean Webster to Deliver 2013 Mattiello Lecture at ACA's CoatingsTech Conference

The American Coatings Association (ACA) is pleased to announce that Dr. Dean Webster, chair of the Coatings and Polymeric Materials Department at North Dakota State University (NDSU), will deliver the Mattiello Memorial Lecture at its CoatingsTech Conference, March 11-13, 2013, at the Hyatt Regency O'Hare in Rosemont, III. The CoatingsTech Conference is the coatings industry's leading technical event, and will embrace the theme,"Leaps and Bounds: Re-energizing the Coatings Industry," underscoring the importance of continued innovation in

the coatings industry through education and networking.

Dr. Webster joined NDSU's Department of Coatings and Polymeric Materials in 2001, becoming chair of the department in January 2012. Prior to arriving at



continued on page 34

CORPORATE PROFILE: DEBRO CHEMICALS

You Can Relax with **DEBRO** Chemicals Looking After You.

Your # 1 supplier of performance minerals in Canada

 Aluminum oxide
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 Borate
 Wet & dry ground, precipitated and coated Calcium carbonates • Air floated, hydrated, calcined, delaminated kaolin clays • Diatomaceous earth • Feldspar Glass • Iron oxide • Mica • Micaceous iron oxide • Perlite • Precipitated silica • Talc

Proud to be recognized as the 2011 Imerys distributor of the year



Debro Chemicals Inc. was first established in Canada in 1921 as a distributor of raw material used in the manufacture of paints and coatings. Today, Debro is recognized as one of the industry's most respected organizations, able to attract, and retain long-term relationships with many of the world's top manufacturers of coatings raw materials, from pigments, resins and additives to performance minerals from among its valued principal partners. Part of Nova Capital Inc., a private equity company based in the UK, Debro Chemicals is positioned to provide coatings manufacturers across Canada with a competitive source of many key products.

With industry veterans like Bert Papenburg in Eastern Canada, Vernon Lo and James Andru in Western Canada, Gagan Jain and Yvonne Heise in Ontario and Paul Proulx in Montreal, Debro can boast having one of the very best Technical Sales and Product Management groups serving the coatings industry in the country.

Facing Challenges

Debro is keenly aware of the challenges facing their customers in today's economic environment, especially those that rely heavily on exports. Through innovative programs to improve internal operations and by using the latest in supply chain management techniques, Debro is doing its best to increase service and yet keep costs to a minimum and, wherever possible, pass savings along to its customers.

Where is Debro heading?

Debro Chemicals has long been a pioneer in the distribution business in Canada. Key to the company's continued longevity is tailoring our services to meet the demands of the ever changing economic landscape.

Debro News

DEBRO

Promindsa, producer of natural iron oxide has expanded their color pallet to include more shades of red, and now also includes shades browns, yellows, blacks and gold.

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CPCA Celebrates 100 Years:

A Strong Legacy Supporting a Vital Sector

The Canadian Paint and Coatings Association started as the **Canadian Paint, Oil and Varnish Association in 1913.** It became the **Canadian Paint, Varnish and Lacquer Association in 1941**, the Canadian Paint Manufacturers Association in 1966 and adopted its current name, the **Canadian Paint and Coatings Association in 1980.** A French equivalent was added in 1966 (and continued in 1980) in order to recognize the truly national scope of the association.

Achievements of the fledgling group between 1913 and 1920 included adoption of standard size containers and the establishment of a committee to deal with government on all matters affecting the industry. During the busy 1920s, paint clubs were established across the country, a varnish section was formed, cooperative advertising procedures were examined and a survey was made of cost accounting methods. At the end of the 1920s, the association was active in the 'Canadian Home and Community Beautiful Association'' forerunners of the 'Clean Up paint Up Campaign.''

By 1935, the industry was beginning the long climb out of the depression. The "Make a New Home With Paint" program was introduced in 1936 and continued for the next two years.

In 1941, CPVLA was officially recognized as the channel for communication between industry and government. Indicative of the confidence and foresight that has characterized the association throughout its existence was the formation in 1944 of a post-war planning committee to chart policy for the years ahead. By the early 1950s, the immediate post-war problems had been solved and new challenges were arising.

The industry moved rapidly into a period of spectacular technological

change and rapidly increasing sales volume. Association programs in these years included the paint power retail sales training courses, which graduated about 4,000 evening and home study students and worked closely with the federal government on specification and purchasing procedures.

The 1960s and early 1970s brought increasing government activity in areas that impacted upon the industry and its products. The first of these related to the protection of the consumer, which brought about the "Hazardous Products Act" and its "Hazardous Substances Regu-

CORPORATE PROFILE: GEMA

Gema – The Global Leader in Powder Coating Technology

Gema is a pioneer in powder coating equipment technology, offering customers the confidence and expertise that comes with being the industry's global leader.

Equipment from Gema is durable, flexible and engineered to last, providing increased performance, greater efficiency, and a better return on investment. Gema sets the industry standard, developing the finest powder coating equipment available.

Gema is leading the way in color change solutions, offering the latest product innovations designed to maximize productivity and color change flexibility.

The OptiCenter[™], with its quick and dust-free powder management, enables excellent coating results. Short suction tubes, new injectors, and optimized pneumatic connections ensure a higher powder flow rate with less air consumption, resulting in reduced wear and tear. The overall design allows extremely quick color change. The compact design forms an ideal basis to integrate gun, axis and booth control.

Gema's OptiColor™ performs color changes in a matter of seconds, while managing multiple colors at one time and eliminating the risk of contamination. Designed to work in XTreme Color Change Environments[™], this easy to use and cost effective solution allows you to save time and money when changing from one color to another. OptiColor is designed for manual spray operations using multiple hoppers set up to spray various colors. Gema's MagicCylinder[®] quick color change booth is designed to handle a large variety of colors. The round booth with a patented central suction system guarantees extremely quick and clean color changes. All of this without any mechanical cleaning tools or entering the booth...you can work in a clean, quick and economical way! With Gema's OptiFlex® Series, you've got all you need to power up your productivity! Gema's Automatic and Manual powder coating guns integrate the most advanced powder charging technology available. Every component is designed for total reliability, convenience, and performance. Using 100,000 volts of FirstPass Power[™], you can coat it right the first time – every time!

Gema manufactures spray application equipment and recovery systems used to apply powder coatings in a variety of markets including pipe coating, automotive, appliance, office furniture, lawn and garden, and other general industrial market segments. Gema's product offerings include manual & automatic spray guns and booths, fast color change equipment, cartridge & cyclone recovery systems, gun movers, control systems and other ancillary equipment. Gema North America utilizes a modern application laboratory at its Indianapolis headquarters. Equipped with fully automatic powder coating lines, designed for both manual and automatic coating, the ability to demonstrate a wide spectrum of powder coating needs is easily accomplished.

The Gema North America office offers direct sales and distribution support in Canada, the

United States and Mexico. To learn more about product offerings or obtain assistance in determining which equipment is best for your operation, visit www.gemapowdercoating.com or call 800-628-0601.



For more information contact Gema at: Gema North America 4141 West 54th Street Indianapolis, IN 46254 Phone: (800) 628-0601 Email: powdersales@gema.us.com Website: www.gemapowdercoating.com



OptiCenter™ fast, clean and superb coating results

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CPCA CORNER: BY GARY LEROUX

lations" governing the sale of hazardous products to consumers. This heralded a new age for the association in dealing with the government at all levels. Throughout the 1970s, Provinces became active as issues relating to the protection of the environment and occupational health and safety began to arise. The association responded and new committees were formed to address these.

While the association was doing the job in representing the industry, it also

continued to provide forums for members to get together. Unfortunately, through the 1970s, due to the nature of the organization, it was viewed largely as a bit of a "social or closed club". As the 1970s closed out, two large members decide that the benefits of association membership were not there. This was a problem for an association that seeks to be the voice of the industry and must be perceived as so by many stakeholders.

A number of steps were taken to

reverse a decline in membership. A name change was instituted in 1980 to better reflect the scope of the association, and the 'Canadian Paint and Coatings Association' conveyed to all that the organization truly represented the entire industry in Canada. A precedent setting November 1980 board meeting initiated what was to be a dramatic reversal of the organization. Throughout the early 1980s, more focus was placed on: better communications with members, direct programs and services for member companies and acknowledging the needs of different sectors in the industry.

The middles of the 1980s showed a significant turnaround in the Association's fortunes and membership increased dramatically and the two larger companies that had left returned to the fold. Despite many mergers and acquisitions over the past decade, CPCA continues to grow and expand. Again in the 1990s, federal government legislation and regulations related to the environment re-emerged as the public increased demands for sustainability under the

CORPORATE PROFILE: UNIMIN

Brilliant Additions^{**}

Formulators searching for solutions turn to Brilliant Additions: the industry's most comprehensive portfolio of functional mineral fillers. Whether your objective is brightness and color development, transparency or hiding power, chemical and UV stability, green formulating or cost management, we can provide a solution.

Unimin Corporation is a worldwide supplier of engineered mineral fillers to the paint and coatings industry. Our broad product range provides a matrix of physical, chemical and functional properties, and offers paint and coating manufacturers easier access to more formulating solutions. Whether your objective is brightness and color development, transparency or hiding power, chemical and UV stability green formulating or cost management, we can provide a solution.

Brilliant Additions:

The Brilliant Additions portfolio represents our industry's largest selection of reinforcing silicate fillers and extender pigments. These products are proven performers in architectural paints, original equipment manufacture (OEM) and powder coatings, wood finishes, and industrial and marine coatings.

Unimin employs advanced production technologies and quality management systems to insure product consistency and uniformity. From mining to product delivery, our goal is to exceed responsible care guidelines while delivering products and services that help our customers satisfy their regulatory and sustainability objectives.

As reduction of organic solvents and volatile organic compounds becomes an increasingly important objective, the Brilliant Addition portfolio can be a valuable formulating tool. Our fillers and extenders add functional performance in waterborne, high solids and powder coatings to produce environmentally friendly coatings. In oil, alkyd and solventbased systems these products provide the low viscosity properties needed to meet high solids and low VOC requirements.

Key Products Include:

• MINEX[®] Unique and distinctive properties deliver premium performance in architectural, decorative, clear and powder coatings. Low oil absorption, excellent tint strength, and optimal refractive index protect the resin system from UV attack for improved binder stability and longer service life.

- IMSIL[®] Offers superior chemical / corrosion resistance, and intercoat adhesion in industrial and OEM primers, with flatting and abrasion resistance properties in marine and industrial topcoats.
- SIBELITE[®] Delivers low tint strength to preserve deep tone color intensity and an octahedral crystal structure adds light reflectance properties to energy efficient "cool" coatings.
- SILVER BOND[®] Adds abrasion resistance, structural reinforcement, non-conductive and non-reactive properties to a complete range of industrial, chemical and marine coatings.
- SNOBRITE[®] An excellent multi-use filler and extender to provide semi-reinforcing and chemical resistance properties in emulsion primers, maintenance coatings and building products.
- HIFILLTM Cost effective hiding power with excellent brightness, gloss and color integrity in styrene acrylic and vinyl acrylic emulsion white and pastel colored paints.
- HIWHITE™ Unique synthetic mineral fillers recycled from a post-industrial waste stream, offers flatting efficiency and titanium dioxide extension.

Canadian Environmental Protection Act. This led to first ever regulations for Volatile Organic Compounds (VOC) emissions from coatings resulting in new VOC regulations, which has led to increased technological innovation with low and no VOC paints on the market. New and more stringent regulations came on the health and safety side with new legislation such as the Canadian Consumer Safety Products Act (CCSPA); the robust Chemical Management Plan (CMP) seeking to assess all chemicals in commerce over a 10-year period; Extended Producer Responsibility policy to recycle paint; and a number of initiatives such as the Globally Harmonized System (GHS) are soon to be implemented. These, and other initiatives, make the paint and coatings sector a highly regulated sector of the Canadian economy.

Today CPCA represents paint manufacturers, suppliers and distributors with production and administrative staff in 261 establishments across Canada. This represents direct and indirect sales of approximately \$6 billion annually, and directly and indirectly employs approximately 32,800 people in Canada.

The Association is well served by the volunteers on its board and committees. The CPCA addresses issues that would have been unheard of when the association was originally formed in 1913. From healthy and safety in the workplace to the management of waste household paint, environment and sustainability issues now take centre stage. The Association and the industry it represents have stepped up to the challenges. Paint manufacturers operating in Canada now lead the world in post-consumer paint recycling with a program in every Province of Canada and produce safe and effective products for the consumer. The industry continues to produce benefits for the consumer: reducing life cycle costs on major commercial projects; enhancing interior and exterior design; preserving the past for future generations; and protects valuable assets for all.



For more information and our complete product portfolio visit: www.BrilliantAdditions.com



Customer Service:

Complementing the Brilliant Additions product portfolio is a global support system of technically proficient sales representatives, research personnel, and production and transportation professionals.

Technical teams from regionally established "Centers of Excellence" work in partnership with customers to focus research and development to fulfill both current and future performance and compliance expectations. By actively listening to our customers, and with continuous reinvestment in product development, our objective is to supply the paint and coatings industry with proven, performance oriented industrial minerals.

Contact Information:

Unimin Specialty Minerals, Inc. Tel: 203-442-2319; Fax: 203-264-8473 E-Mail: ContactUs@brilliantadditions.com Website: www.brilliantadditions.com One thing has not changed in 100 years – the industry needs a strong voice to represent its interests. That has truly been the CPCA's legacy.

Gary LeRoux is the president of the Canadian Paint and Coatings Association based in Ottawa, ON.

 $18\,$ canadian finishing & coating manufacturing $\,$ January/February 2013 $\,$



Yorke Towne New Location Great Things Come to He Who Waits

"I have been working on this new location for 4 years," says Yorke Towne's Michael Harrison.

Yorke Towne has moved from Scarborough to their new 37,500 foot facility near the 407 and Leslie St. in Richmond Hill, ON. Harrison says a key reason for the move is to support their wood industry and automotive Tier 1 and 2 customers.

A prime feature of the new location is a dedicated, 1 hour rated, explosion proof, colourcorrected, tinting room for industrial coatings and wood stains, glazes, spray stains and finishes.

The warehouse holds 100,000 litres of wood and industrial finishes that can be custom tinted and delivered in 24 hours in Southern Ontario. The company supplies AkzoNobel/Chemcraft, Rustoleum, Benjamin Moore and import Melisi specialty wood finishes directly from Italy.

Yorke Towne also carries Columbus Industries, Freudenberg and Claricor Filters in stock and can manufacture custom filters on-site.

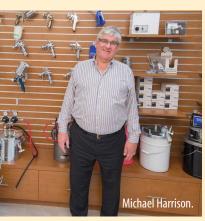
The company is also a pumping and spray distributor, and repair centre for Graco, Finishing Brands (Binks, DeVilbiss, Ransburg, BGK), Anest Iwata, Sata, Meiji and stock HOSCO paint system components.

The new address and contact information is: Yorke Towne Supplies Ltd. Phone: 905-762-1200, 888-321-8222 Fax: 905-762-1202 1235 Reid St. Richmond Hill, ON, L4B 1G4 www.yorketowne.com











CORPORATE PROFILE: CONN AND COMPANY

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.

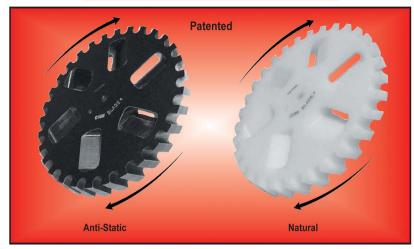
pumping, low shear, blending blade and is excellent for mixing micro spheres or flakes or other fillers that need to be well mixed, but not destroyed. The ITC CONN Blade is an 8-vane open style blade providing excellent material flow, with more shear than the IT, but is not as aggressive as the ITT. 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 poly 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. Contact Richard C. Freeman at rcfreeman@connblade.com, call 814-723-7980 or fax 814-723-8502. Web site: www.connblade.com

MIXING - BLENDING - DISPERSION THE CONN BLADE

**** NOW AVAILABLE OF U.H.M.W. POLYETHYLENE ****

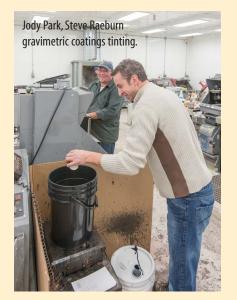


- Most efficient and aggressive Poly Blade available.
- Provides combination of pumping action for material turnover and shear/dispersion.
- Low shear without teeth also available.

The IT style has the louvers providing superior pumping action, but without the teeth. It is a high

- Gives much longer life than typical metal blades.
- When leading edges are worn blade can be turned over to start like new.
- Also available of polyurethane, nylon, teflon, polypropylene and other materials.
- Traditional stainless Conn Blades readily available.
- Call or e-mail: info@connblade.com for pricing and availability

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CORPORATE PROFILE: A.S. PATERSON COMPANY LIMITED



Formulation Performance and Problem Solving



Strong technical expertise complemented by exceptional customer service.

A.S. Paterson Company provides customers with access to the technical expertise of our sales representatives, as well as, many leading material suppliers from around the world. Customers gain access to formulation assistance and product testing through supplier laboratories. Finally, we offer assistance in understanding and complying with Canadian regulations.

A.S. Paterson Company Ltd. is a proud member of the Canadian Association of Chemical Distributors and adheres to the Responsible Distribution[®] Code of Practice. A.S. Paterson is also a supporter of You Be The Chemist[®] Canada, a program designed to inspire the next generation of scientists, engineers, and chemical industry leaders as well as enhance science education, and effect long-term change in the general public's understanding of chemistry and the chemical industry. Over the past 85 years, A.S. Paterson has assisted customers solve problems and improve efficiencies by matching the best products for the best application.

For more information, please contact A.S. Paterson Co. Ltd. at: Tel.: 416.222.3333 www.aspaterson.com



A.S. Paterson distributes pigments, waxes, resins and other chemical materials right across Canada from multiple warehouse locations. We pride ourselves on being a National distributor with over 85 years of experience serving our customers.

As a result, you will find that A.S. Paterson is a reliable and responsible chemical distribution company who firmly stands behind all of the products we represent.

A.S. Paterson Company Limited

ASP

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www.youbethechemist.ca



SATA GmbH & Co. KG. and its Canadian Distributor Eurotech Spray Products Ltd.

With more than one hundred years of professional expertise, SATA has a rich history thriving through some of Europe's most detrimental economic eras. From its origin in 1907, as a small light-engineering firm, SATA has evolved into a modern and innovative manufacturing company.

In the beginning, SATA (then named " Sanitaria") manufactured medical equipment. Top quality engineering led to a continuously growing demand for the products and enabled the company to expand its operations. From the outset, quality and precision were the main driving factors behind the company's philosophy.

A chance meeting between the owner of the paint manufacturer "Lechler", and a director of Sanitaria, seeded the idea of the company we know today. They spoke about Henry Ford's mass production of cars in America and the use of air atomizing spray guns for the application of paint materials. After discussing the new "sprayable" paint, the two gentlemen concluded that all that was missing was equipment to apply this new material. The ideas from this original discussion quickly became reality, in 1925 the "Lechler" spray gun was launched, manufactured by SATA and distributed by Lechler. This was the first step on the route to success, SATA registered their first patent in 1926 and by 1931 the first range of spray guns were made available.

In 1954, SATA reached another milestone with the introduction of the SATA GR, with its ability to provide a wide fan pattern and consequently coat larger objects more quickly than ever before. The economic growth of the post-war years and the upturn in production of consumer goods, housing and motor vehicles, brought about an increased demand for paint spraying equipment in every industry along with an unprecedented upturn in quality requirements – which led to new paint technologies which could be perfectly applied with newly developed paint spray guns.

In 1981, the company then revolutionized the industry with the introduction of the first "SATAjet" technology: the now legendary high performance spray gun the SATAjet B. This specially designed gun met the requirements of the new materials being introduced to the market, and made the company a technological leader in the industry.

In 1984, SATA completed the SATAjet family with the launch of the SATAminijet. The SATAminijet offered a new aspect of the spray painting industry, with a gun that met a larger market niche, and the best finish results for small difficult to reach areas.

The continuous development process saw SATA lead the way in HVLP and RP technologies. The new atomization technologies have conquered the hearts of the painters who wished to work with increased profitability, but at the same time wanted to retain their favoured working methods. According to the motto "Two ways – one aim," our worldwide customers may now choose between two high-performance atomization systems, depending on their preferences.

Today, SATA builds what many regard as the finest Paint Spray Equipment globally. For nearly 90 years SATA has been developing paint spray guns, and thereafter, compressed air filters and supplied air respirators, all while meeting market demands the world over. Currently SATA is sold in over 100 countries, Canada included.

SATA works closely with major paint companies

automotive industry. Starting out small and expanding, not only into car refinishing, but paint sales as well, Lengsfeld went in search of the very best in paint spray technology. In 1983 he returned to Germany and visited the SATA factory. Seeing the production processes and quality controls in place at SATA he quickly decided to become a Canadian importer of SATA spray equipment. At this time, the SATA trade name was relatively unknown to bodyshops in Canada. However, Lengsfeld was determined that such good quality products should not go un-noticed, so he contacted sales agencies in different provinces to start distributing the equipment through jobbers and warehouses. At the same time, efforts were made to contact all the paint companies and their affiliates. Programs were set up to make SATA spray equipment visible in all paint companies training facilities, while encouraging all instructors to learn and train with SATA products.

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

In 2002, Eurotech decided to move away from regionalized sales forces in favour of a national unified team. To accomplish this, Eurotech sought out the services of Caruk & Associates Ltd, an agency well known throughout all Canadian provinces, as sales representation in the PBE aftermarket. They were appointed as the exclusive sales agency with the assurance to provide uniform and consistently high quality service and sales support to all existing and potential customers throughout Canada.

CORPORATE PROFILE: EUROTECH SATA

Eurotech was founded with the sole purpose of providing the Canadian market with the very best in paint spray technology. As the exclusive Canadian importer and distributor of SATA equipment, Eurotech works closely with a mass of warehouses and distribution centres across Canada to encourage sales, and ensure our end-users are receiving the very best equipment, with the best support available.

In house – Eurotech's expert staff handle all facets of SATA training, technical, repair and warranty issues to provide the highest customer service and satisfaction. With numerous, large customers ranging from warehouses supplying the automotive industry sectors to well known manufacturers such as Toyota and Ford, Eurotech has easily found a prominent home in the Canadian Automotive Industry.

However, now, with a steadily growing product range from SATA, and higher market demands for a broader spectrum of coating needs, Eurotech is becoming an expert in the industrial markets. With a huge array of customizable pumps, from dual diaphragm, to air assist airless, pressure tanks, varying in size and power, and material delivery equipment from SATA, the Canadian industrial markets are becoming more and more reliant on Eurotech to supply their needs. Partnered with SATA's extensive range of robotic and automatic spray equipment to gravity and pressure fed spray guns offering flawless finishes, Eurotech is able to supply nearly every imaginable market in the coatings, craft, fleet, and

wood industry. Eurotech has continuously cultivated and nurtured an effective liaison between SATA, the paint manufacturers, the sales agencies and the marketplace. Eurotech Spray Products Ltd. takes pride in distributing the best paint spray equipment available, along with its commitment to customer satisfaction and service. Canadian customers have come to rely on SATA equipment for consistent, high-quality, German Engineered, professional results, and Eurotech meets these needs on every level.





SATAjet[®] 1000 B Lignum



First Choice for Industrial Applications

SATAjet 1000 B LIGNUM: Durable and easy to clean, this universal

gun is customized for industrial applications.

With nozzle sizes from 0.8 to 5.0 along with a large range of accessories and nozzle extensions, this gun is outstanding at applying any material: from thin liquid wood stains to colour and clear coats to protective coatings, adhesives and thixotropic materials.

around the globe to produce paint spray equipment to meet the present and future needs of painters. Their products have been carefully researched and developed in close co-operation with these paint companies, so that the solutions to today's problems and tomorrow's challenges are already being met by SATA.

Currently, SATA produces over 3,300 parts and products, and employs more than 250 staff, five percent of which, are in research and development. As a result, SATA is one of the world leaders in the manufacturing of spray paint equipment, filtration technology and worker health protection systems. SATA maintains top class quality standards, state-of-the-art production facilities, continuous innovation and close co-operation with the paint industry, crafts and trades.

In 1958 Hans Lengsfeld emigrated from Germany to Alberta and started to work in the



INDUSTRIAL FINISHING: POWDER COATING CASE STUDY



Nutone has pioneered many of the product innovations now established as standards of the industry.

In addition to their ongoing commitment to the development of Energy Star and increasingly efficient products, they also work aggressively to maximize energy, water and waste management in our Canadian manufacturing operations.

They are proud to be a Business Partner and Ambassador in "Partners in Project Green".

CORPORATE PROFILE: WALTHER PILOT North America

Renowned Results

Top Quality Spray Equipment Innovative Accessories



Realize longer cycle lives and lower repair costs with top quality equipment from WALTHER PILOT

- Manual Spray Guns
- Automatic Spray Guns
- Non-Contact Marking
- Adhesive Application
- Complete Specialized Systems

WALTHER PILOT North America is the North American agent for WALTHER Spritz-und Lackiersysteme GMBH. WALTHER PILOT is well respected for its top quality, precision equipment in the spray finishing, adhesive application, and dot marking industries. WALTHER PILOT's high quality tools and innovative solutions enable our clients to realize longer cycle lives, lower repair costs, significant efficiency gains, and immediate ROI.

We at WALTHER PILOT North America have been in business for over 10 years and represent WALTHER PILOT products throughout the United States, Canada, and Mexico. Our broad network of distributors and in-house staff are dedicated to providing the best products and service available. We are not simply equipment dealers. We are information specialists that can partner with you and offer acute advice on the best type of equipment for your spraying task at hand. Whether your project is for adhesive, paint finishing, dot marking, or any other project requiring spray equipment, our 30 years of engineering experience will ensure that you get the right product the first time, every time.



WALTHER PILOT's complete suite of coating equipment includes manual and automatic spray guns (conventional pressure, HVLP, and HVLPPlus), nozzle extensions, pressure tanks, mixing tanks, diaphragm pumps, and piston pumps. We specialize in cutting edge, innovative products such as our HVLPPlus air cap system (HVLP material savings paired with conventional atomization that results in a finer finish with up to 88% transfer efficiency). With spray guns as small as 46mm x 30mm, and nozzle extensions for 450, 900, and even 3600 spraying patterns, you can rest assured that we have the right equipment for even your most difficult spraying needs.

WALTHER PILOT marking equipment is currently used for many different applications including:

- Marking weld seams and sheet metal
- Marking engine blocks
- Marking blow holes during glass production
- · Cutting and bending lines for cardboard packaging
- Line marking for manufacturing
- Paint marking to aid in assembly
- Paint markings for logistics

In the adhesive industry, WALTHER PILOT offers manual and automatic spray guns for solvent based, dispersion, 2-component dispersion and extrusion adhesives. The equipment is matched exactly to the characteristics of the adhesive in order to offer the perfect application techThe company offers vast distribution channels across Canada.

They are also proud to be the last manufacturer of their type in Canada.

Broan-NuTone has 193 employees at its 110,000 sq ft facility in Mississauga, which houses its administration center, manufacturing plant, manufacturing and product engineering, customer service, logistics and distribution and is one of 12 divisions worldwide.

As an example their commitment to the environment, the company has managed to reduce their energy use by 40 per cent in the last 6 years and their water use by over 75 per cent in the last year. The official bottom line is that, since 2006, BNC has reduced its:

- Natural Gas use by 43.6 per cent
- Electricity use by 47.0 per cent
- Total Profit Improvement of \$311,457 compared to 2006
- Reduced water use per day by 73.6 per cent compared to 2011
- Increased waste diversion rate to 93.7 per cent.

"More is still possible through improved employee awareness," says Martinovic.

The company launched the BNC Green Team to address their Energy saving strategy.

Their slogan is, "The Difficult will be done immediately, the impossible may take awhile." This is also the slogan of the US army Corps of Engineers. Broan-Nutone interprets the slogan to mean, "If you never stop doing 'the difficult' you may eventually achieve what was once thought impossible."

Martinovic says, "For example, the work we have right now with Rona and Home Depot, won't be there in 10 years if we were polluting the planet." They also provide products for Canadian Tire, Sears, Home Hardware, Lowe's and many more. "The consumer these days is far more environmentally knowledgeable than ever, the market is growing, the need for energy efficient products and the need to walk the talk on the environmental sustainability is stronger than ever," says Martinovic.

The Broan NuTone team as been recognized by the GTAA Partners in Project Green, Green People Challenge as number one in waste reduction and number one in energy efficiency and are pushing towards increasing their energy management certification. BNC has recently passed their ISO50001 (Energy Management) Certification Audit becoming only the third company in Canada, and the 8th in North America to achieve this.



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COATING

Eighty per cent of what BNC powder coats is white, but they also coat black, grey, red, and almond. They use low film AkzoNobel paint and they end up using less paint and less energy. The spray guns used are Nordson and Gema.

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"We incorporate several energy savings initiatives into our paint process," says Martinovic.

The product is heated with air blowoff above the oven. There is no natural gas used in the wash process at all. Only heat from the welding process is used in the wash.

THE "GREEN" WASHING PROCESS

A big part of the company's energy saving and Green commitment is its washing and pretreatment process, which goes through five stages and is entirely non-phosphorous. For this BNC enlisted the help of Chemetall, whose support, Martinovic says, was "incomparable."



The five stages include a cleaner, rinse, pretreatment and two more rinses.

Gardoclean S 5068 is a new product from Chemetall, a premium heavy duty highly concentrated liquid alkaline builder for cleaning ferrous substrates by spray or immersion. Broan-Nutone uses it in Stage One of their cleaning process. Gardoclean S 5068 can also be used to clean and etch aluminum and zinc. It is used with a separate surfactant additive and is highly concentrated and does not contain phosphorous or silicate. It has not EDTA chelates that can interfere with precipitation waste treatment systems. The product is used in spray washers at between 1 and 3 per cent by volume. Exact concentration temperature and exposure time depend on soils, extent of soil build-up in solution and conveyor line speed. Use Gardoclean S 5068 in immersion tanks at between 1 and 10 per cent by volume. Exact concentration, temperature and immersion time depend on degree of agitation, soil and extent of soil build-up in solution.

Also used in Stage One of the process is Chemetall's Gardobond Additive H 7302, a low-temperature cleaning additive for use in spray processes where supplemental cleaning is needed. This additive is

CORPORATE PROFILE: CANLAK

Over 30 years of evolution.

Since its inception in 1982, CanLak has grown to become one of the largest Canadian owned/based industrial coatings company in Canada.

Through their "Evolutionary Systems for the enhancement of woodworking", they have become an important partner to the woodworking industry. These systems confirm that CanLak is listening attentively to the needs of its customers. The development and start-up of a new product can be quite challenging. CanLak can help you reduce the risks and accelerate the process with its Evolutionary Partnership program, a unique approach in the woodworking industry.

The company headquarters in Daveluyville, Quebec, house the offices, factory, R&D lab and application lab. CanLak also has a significant presence in Ontario and Western Canada, with an office and distribution center in Mississauga, and strategically located distributors covering all of the Canadian provinces. The company sells and promotes its products with the help of a seasoned team of Technicians and Technical Reps and with its Distributors. The company employs over 100 people.

If you are facing some challenges, there is no need to worry; CanLak will specially develop the formula that corresponds precisely to your requirements.

The company invested 1.5 million in a new application lab and uses it to simulate the clients' line with the use of robot automation and spraying of UV, water based and solvent based products. This way, the use of products on customer lines can be fine-tuned before going on site reducing costly down times for their customers. CanLak also has a

complete line of customized lab ovens that can reproduce any type of drying process. The parameters are programmed into the computer simulating exactly what happens at customers' plant. CanLak is also equipped with automated UV hardwood flooring machinery.

CanLak products are designed using the latest available technologies and customers are continually updated on new upcoming developments. CanLak prides itself at offering quality products and service that are second to none.

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Over the years, CanLak has developed a wide range of products that meet the industry's highest standards, and they are very proud of this. With constant efforts in research and development, CanLak provides industrial finishing products including solvent-based, water-based and UV coatings that are low in VOC, as well as polyester and polyurethane products to meet your needs.



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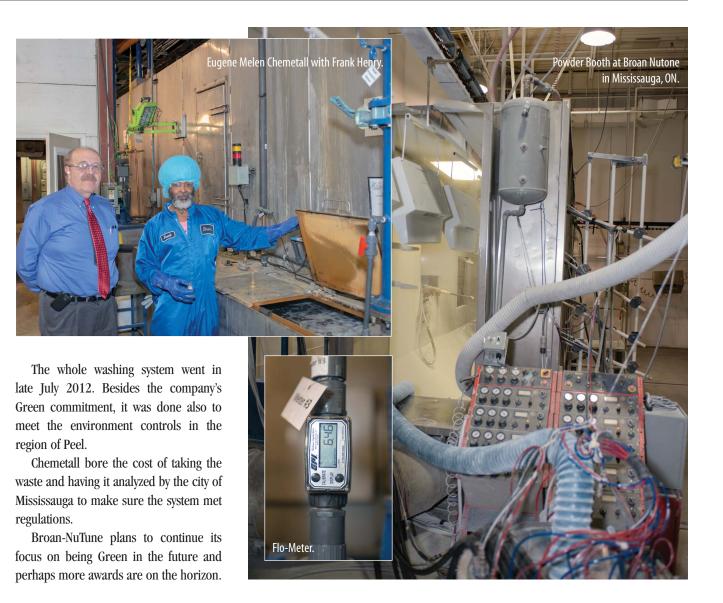
INDUSTRIAL FINISHING: POWDER COATING CASE STUDY

a neutral pH, liquid product that supplements the cleaning ability of low-temperature alkaline cleaners, low-temperature applications where supplemental cleaning is needed. It is effective and lowfoaming at temperatures as low as 70 degrees F (21 degrees C). It is used in spray processes.

Another Chemetall product, Gardobond AP 9811, is used in Stage 4 of BNC's non phosphate pretreatment process. It is a liquid, phosphorous-free, dry in place, pretreatment that enhances the performance of subsequentlyapplied organic liquid and powder coatings. Multi-metal Gardobond AP 9811 reacts with steel, aluminum and zinc substrates to enhance paint adhesion and corrosion resistance properties. It is free of any regulated heavy metals. Substrates must be cleaned and thoroughly rinsed prior to processing. It is used at energy-saving ambient temperature by spray or immersion. Minimum of three stages are required.

Chris Ellen of Chemetall stresses the importance of a flowmeter in the process.

"If you can't measure it, you can't control it."



CORPORATE PROFILE: ELEKTROPHYSIK

ElektroPhysik is a leading manufacturer of measuring instruments used for advancing surface technology, research and quality control. Being a pioneer in the field of non-destructive coating thickness measurement, ElektroPhysik, in cooperation with national and international standardizing institutes and universities, has successfully advanced new product developments along with international standardization for coating thickness measurement.

As a privately held company, ElektroPhysik is owned and managed by the Steingroever family. It is headquartered in Köln Germany near the famous Rhein River. ElektroPhysik still occupies the original building since 1952 though it has gone through many expansions over the years to facilitate growth. ElektroPhysik maintains branch offices including in the U.S.A. and is represented by distributors and agents globally in almost every country and market in the world. It is this network and partnerships that enable ElektroPhysik to service its customers and provide the support required in today's competitive global marketplace.

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

To better serve the North American markets,

ElektroPhysik maintains a North American website which is: www.ElektroPhysikUSA.com.

ElektroPhysik is perhaps best known for the MikroTest coating thickness gauges utilizing the magnetic attraction principle. This gauge has been called the 'banana gauge" because of its shape and is strictly for non-magnetic coatings applied over steel. The MikroTest is perhaps agreeably the most widely utilized coating thickness testing gauge in the world.

Other brands include the MiniTest, eXacto, GalvanoTest and PoroTest which are electronic platforms for measuring coatings over both ferrous and non-ferrous substrates.

ElektroPhysik prides itself on its "sensor" technology and continually strives at advancing

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products in this area and recently developed SIDSP® digital sensor technology.

SIDSP® is an ElektroPhysik exclusive which took years of research and development. SIDSP® stands for Sensor Integrated Digital Signal Processing and the way that works is that the entire coating thickness measurement is processed in the sensor at the point of measurement. SIDSP® is unlike previous conventional techniques where an analog signal is generated by the sensor and then sent to a host gauge to processing. The vulnerability with that technique has always been that the analog signal is susceptible to environmental influences such as strong electro-magnetic fields and other signal disturbances that could affect the analog signal and therefore the reading.

 $\mathsf{SIDSP}^{\textcircled{B}}$ is available in the MiniTest 70, 700 and 7000 Series.

The future for ElektroPhysik holds many challenges driven by globalization and increasing demands in the marketplace by customers to achieve even higher levels of quality in their products. There is no doubt ElektroPhysik will be able to stand up to the challenges as it always has. Driven by the passion for the pursuit of new technologies and implementing them wherever possible is why it is often said; ElektroPhysik....advancing with technology.

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The **GREEN** Strip

It is all about the environment, and the industrial finishing stripping process is one area that gets targeted for using harsh chemicals that may eventually damage the ozone. Manufacturers have embraced this challenge.

Green technologies are becoming more desirable as most every paint/coating stripping method has some sort of environmental impact.

ENVIRONMENTAL CONCERNS

When it comes to environmental concerns in stripping practices: there are Burn-Off Ovens and their emissions, as well as Chemical stripping and its potential for hazardous pollutant content and vapours. There are also the abrasive methods such as media blasting, carbon dioxide/dry ice, ice crystal, high pressure water and others. These are methods that could be deemed better for the environment, but they usually have slower stripping times and may require more elaborate equipment and, therefore, more labour time.

All stripped materials need to be recycled.

OVENS

Damaging the hooks and racks through over heating or allowing them to catch fire is a common concern when using this method. But heat-cleaning ovens have no exposure to toxic chemicals, no disposal of chemicals or contaminated sand/salt. They are also less labour intensive compared to other stripping methods. Oven manufacturers have stepped up to the plate and provide products that stop fires, before they happen with things like top down heating and a grill system.

Temperature uniformity prevents warping and damage to larger hooks and racks. There is an ash to be removed after this type of stripping. Power spray, wiping or blasting can accomplish this.

Most oven manufacturers have engineers who work closely with the customer to ensure the oven meets all governmental emission guidelines. Ovens that control the afterburner temperature at the halfsecond point can meet the most stringent environmental requirements.

Design of the heat stripping system is important to curb operating costs. Labour and utilities, for example, can be minimized by racking the hangers so they can be stripped without unloading and reloading. The design should also minimize hot air going directly up the chimney.

All ovens must meet the inspections standards TSSA-CSA for gas, but many other safety features are important to allow controlled operation.

CHEMICALS

All painters and coaters do some amount of stripping even if it is just to strip the hooks from which they hang their work. With chemical paint stripping, customers desire speed, simplicity, effectiveness and low cost. Chlorinated solvents were commonly used for both cleaning the metal before painting and for stripping of defective painted work, but are now heavily regulated due to environmental concerns for volatile organic compounds (VOCs) and hazardous air pollutants (HAPs). Manufacturers now offer Green stripping products.

The chemical products used must match the substrate. Selection of the appropriate process and product for stripping cured paints will be determined by:

- What paint or coating must be removed?
- From what substrate (metal) must the paint(s) be removed?
- What equipment (tanks, availability of heat and agitation, ventilation, etc.) is available for the operation?
- What special environmental or industrial hygiene restrictions are in place?

A chemical stripping mixture must remove paint and other finishes and also clean the underlying surface. The principal active ingredient is usually dichloromethane. Formulations with orange oil (or other terpene solvents), Nmethylpyrrolidone, esters such as dibasic esters (often dimethyl esters of shorter dicarboxylic acids, sometimes aminated, for example, adipic acid or glutamic acid), aromatic hydrocarbons, dimethylformamide, and other solvents are used. The formula differs according to the type of paint and the character of the underly-

CORPORATE PROFILE: MOCAP

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 the 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 include 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:

Polyester/Polyimide Tapes and Discs - We offer both materials in both styles for masking of flat surfaces. Polyester material will resist up to 425° F 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 excellent as a custom mask. The tape will stretch up to 300% and has no adhesive, so the tape is safe for temperatures over 500° F.

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ing surface. Nitromethane is another commonly used stripper. Dimethyl sulfoxide is a less toxic alternative used in some formulations. Various co-solvents are added to the primary active ingredient to help with penetration into the paint and its removal. Ethanol is suitable for shellac., Mmethyl ethyl ketone is used for cellulose nitrate, and phenol and cresols are employed in some industrial formulas. Benzyl alcohol is used as well.

Activators are used to increase the penetration rate; for dichloromethane water is suitable, other choices are amines, strong acids or strong alkalines. The activator's role is to disrupt the molecular and intermolecular bonds in the paint film and assist with weakening it. Mineral acids are used for epoxy resins to hydrolyze their ether bonds. Alkaline activators are usually based on sodium hydroxide. Some cosolvents double as activators. Amine activators, alkalines weaker than inorganic hydroxides, are preferred when the substrate could be corroded by strong acids or bases.

Surfactants assist with wetting the surface, increasing the area of where the solvent can penetrate the paint layer. Anionic surfactants (e.g., dodecyl benzene sulfonate or sodium xylene sulfonate) are used for acidic formulas, cationic or nonionic are suitable for alkaline formulas. Paint strippers containing surfactants are excellent brush cleaners.

Thickeners are used for thixotropic formulas to help the mixture form gel that adheres to vertical surfaces and to reduce the evaporation of the solvents, thus prolonging the time the solvent can penetrate the paint. Cellulose-based agents, such as hydroxypropyl cellulose, are commonly used for mixtures that are not extremely acidic, because, with acidity, cellulose undergoes hydrolysis and loses effectiveness., so Thus, fumed silica is used for these instead. Another possibility is using waxes (usually paraffin wax or polyethylene or polypropylene derivates), or polyacrylate gels.

Corrosion inhibitors are added to the stripping formula to protect the underlying substrate and the storage container from corrosion. Sequestrants and chelating agents are used to 'disarm' metal ions present in the solution, which could otherwise reduce the efficiency of other components, and assist with cleaning stains, which often contain metal compounds. The most common sequestrants used in paint strippers are EDTA, tributyl phosphate, and sodium phosphate. Colourants are added in order to make the substance look different from the competitors', and to make it easier to see where the stripper has been applied.

Customers are strongly encouraged to contact their chemical supplier for an onsite survey to determine the best approach for their needs. Usually some laboratory work is necessary to verify the chemical product selection and stripping parameters to achieve the expectations.

LIGHT STRIPPING

One paint stripping technique uses intense pulses of light to vaporize the paint, a microlayer at a time. The repetition rate of the flashlamp, the intensity level of the light pulsed from the lamp, the pulse duration or width, and the spectral content of the lamp's light output all contribute to how fast the paint or coating is removed. A hybrid technique to flashlamp stripping can involve a robot crane that carries a lamp head and CO2 pellet blast spray head along with sensors on its arm. The flashlamp process removes and paint, and the pellet wash completes the surface stripping. This method provides no physical contact with the treated surface and uses no chemicals or abrasive materials.

ON LINE

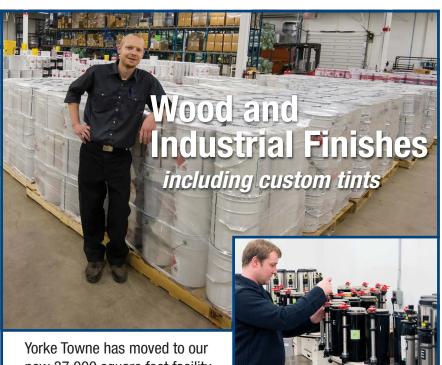
No, not the internet. On line striping is available in two methods.

Hot caustic stripping is rather costly to operate, and there are safety precautions needed due to very high temperatures. Replacement of the caustic is considered hazardous waste and has to be dealt with accordingly. Environmental approval is needed and will most likely require stack emission testing.

Induction heat is a process where the induction heat is used to soften the paint and brushes to strip the surface without emissions. This system would be most suitable where there is one style of rack. This is a simpler system than the caustic and does not require Ministry of the Environment or Gas approval, just electric. Operating cost is fairly high but should save money over time.

Although environmental concerns are a prominent trend when it comes to most stripping methods in industrial finishing, Green stripping is still possible as manufacturers step up to the challenges with highly energy efficient ovens, environmentally friendlier, less toxic solvents and more.

CORPORATE PROFILE: YORKE TOWNE



new 37,000 square foot facility conveniently located near the

407 and Leslie St. in Richmond Hill, ON. Our extensive inventory of wood and industrial finishes are available for timely custom tinting and delivery.

For nearly four decades, Yorke Towne Supplies Limited has been a leader in the supply of coatings, finishing equipment and filtration solutions, working innovatively with customers and suppliers to meet the needs of industry.

Yorke Towne distinguishes itself from other distributors who simply pick, pack and ship products. Working diligently for the customer and with the support of manufacturers, the company provides extensive product knowledge from its long-term staff base and unique solutions. Whether the customer needs two-component paint finishing equipment, custom-size filters or a special lacquer to match an existing kitchen, Yorke Towne has the facilities and staff to get the job done.

Located in a new 37,000 square foot facility in Richmond Hill, Ontario, the company's 30 employees provide knowledgeable service and unique solutions to meet the customer's specific needs.

Michael Harrison opened Yorke Towne in 1974 with a 2,000 square foot location in Toronto and two employees, a vision that quickly outgrew that location and necessitated a move to a much larger facility in Scarborough. The company continued to grow dramatically and now resides in a state-ofthe-art facility three times the size of the previous location. This provides opportunities for more efficient production and business expansion. Michael explains that the additional space has allowed for growth of the company's custom colour tinting facility, which has five experienced full-time employees combining 120 years of unique knowledge and experience available to assist customers. "The state-of-the-art tinting room is climate controlled and light corrected to provide an optimum colour matching facility," Michael explains. "Stains are one of the most difficult products to match, and we have very experienced tinters, who are knowledgeable in directing customers on the

proper application techniques to achieve the results they need."

"Solid-colour paint is matched by computers at our facility. All lacquers, stains and opaque coatings are custom matched by our tinters. Once the custom match has been achieved, we are able to reproduce these results by means of computerized dispensers, which give exact, reliable results." This reproduction is both computer and spectrometer analysed for accuracy.

Yorke Towne sells and services paint application equipment, designed to spray, meter, mix, filter, transfer and dispense fluids. Creation of our new facility has resulted in expansion of the equipment service department, which is staffed by factorytrained personnel.

Yorke Towne provides industry with an extensive line of air and liquid filtration products, including spray booth filters and bag filters. When customers require a custom-sized filter to meet a specific need, the in-house filter manufacturing facility can custom-fabricate the filter to the exact specifications.

In addition to knowledgeable in-house customer service staff, Yorke Towne has 10 experienced outside sales representatives, who work closely with the customers to improve their process operations and provide expert guidance when requested."When our customers are successful, we are proud to have helped them achieve their goals." With a pledge to providing quality products and services, Yorke Towne implemented its Quality Program in 2004 and is ISO 9001:2008 certified. Yorke Towne is committed to working with its suppliers to bring innovative products to the marketplace. The company's portfolio includes well-known brands such as Chemcraft, Rust-Oleum, Milesi, Benjamin Moore, Graco, Binks, DeVilbiss, Iwata, Hosco, and Columbus Industries.



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FabTech 2012 A Success

FABTECH, hosted by the Chemical Coater Association International, has become the largest trade show and conference serving the industrial finishing marketplace in only three years. The event took place at the Las Vegas Convention Center, Las Vegas, NV, Nov. 12-14, 2012 and CFCM was there.

Photos by Pete Wilkinson



Douglas and Michelle Milburn, Protocare, Sidney, NS.



Caleb and Verlynda Simonyi-Gindele, Saskarc, Oxbow, SK.



Michael Ladouceur, Olson Fab., Cornwall, ON.







Al Newman, Gord Montgomery and Andre Singer, Nordstrong Equipment, Mississauga/Cannington, ON.

CORPORATE PROFILE: BUCKMAN CANADA

Commitment makes the best chemistry.

Buckman Canada was established in Montreal on May 12, 1948, as a sales and distribution company, providing industrial microbiocides for the pulp and paper industry. Sales grew steadily, with Buckman carving out a reputation as the top slime control provider in Canada by the early 1960s. In the 1980s, in keeping with a newly adopted market-driven strategy that emphasized hiring and training good people, local

manufacturing, and technical services, Buckman installed a local blending facility and technical service laboratory in Dorval, Quebec, in 1986. Outgrowing that facility, Buckman built a new 35,000 square foot facility housing offices, manufacturing, and technical services in Vaudreuil-Dorion in 1991. In 2002, a 30,000 square foot expansion added more room for manufacturing, warehouse, and research laboratories.

Seeing opportunities in the water treatment market, Buckman acquired the Eclipse Chemical Company in 2000 and invested in new equipment and warehouse space for the water treatment business. Today, the company offers water treatment services in pulp and paper mills, middle market industries that include food and beverage plants, hospitals, etc., and heavy industry, such as oil refineries and petrochemical plants. In addition to water treatment, Buckman's focus industries are tissue, pulp and paper technologies, leather technologies and Performance Chemicals.

Knowledge is the company's most prized asset.

"We apply our knowledge to add value to our customers' operations," says General Manager of Sales Davor Mehes."Our bread and butter is problem-solving and documenting continuous improvement in our customers' operations."

Buckman attributes its success to its Eight Business Management Standards that outline how the company conducts business on a global basis. These principles are faithfully followed in the company's core industries of pulp and paper, water treatment, leather and Performance Chemicals.

Coatings and Plastics

Buckman's coatings and plastics program started in 1957 with Busan 11-M1, a fungicide used to control mold 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:

- Corrosion Inhibitors Mold Inhibitors Wood Preservatives Flash Rust Inhibitors
- UV Light Stabilizers Dispersants Flocculants Heavy Metal Precipitants
- Defoamers
 Specialty Products
 In-can preservatives

Today's demanding regulatory and environmental requirements have driven the company's R&D and transitional laboratories to focus extensively on market-driven products and solutions. We focus on solving customer problems. Our internal Solutions Team draws from the diverse experience found throughout our application

specialty and development laboratories to assist customers with development and product concerns.

Buckman also realizes the importance of Green Technology and Sustainability. As a supplier to the chemical community, we take our responsibility seriously.

Fire Retardants

The Flamebloc GS <http://www.buckman.com/core-businesses/performancechemicals/coating-and-plastics/literature-downloads/fire-retardants> series fire retardants are clear, water-based, and contain little or no VOC designed to meet industry needs for greener, safer fire retardant technology. Look for these and other future environmentally responsible products.

Buckman Green – Our Color. Our Commitment.

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The Flamebloc GS series fire

retardants comprise Buckman's new portfolio of environmentally responsible fire retardants designed to meet industry needs for green fire retardant technology.

> Flamebloc GS products are composed of a new and novel technology based on amino functional ammonium polyphosphate chemistry.

These clear, water-based, zero VOC products do not require a halogen donor in order to provide charforming or intumescent substrate protection, meeting a host of standards and specifications required in many industries.

Alan Moon, Guspro.



Eric Lefebvre, Marmen Inc. Trois-Rivieres, QC.

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Ron Salzer, Bridges and Hans Wolf Wagner.



Stephane Girardin, CanaBlast/Eco, Steven Romer, Seneca Companies and Richard Prevost CanaBlast/Eco.



Derek Bowen, Kristy Pogue, Steve Martin and Christian Canzano, Bex Engineering.



Rhonda Joslin, Sanjay Tangri, Jean Murray, S.T. Rajan and Brent Fredrick, Exel North America.



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CORPORATE PROFILE: FISCHER

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* A new XRF instrument for the PCB industry will be debuted in February. An advanced measurement system series specifically for quality assurance and process control assessments on large PCBs.

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Gordon Stewart, Dave Stewart and MacGregor Anderson, Innovative MFG, Delta BC.



Jorge Salinas, Marty Powell, and Jeff Kloes, **Global Finishing Solutions.**

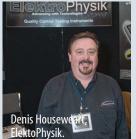


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Stephen and Darlene Went, Bandit Bar, Bluffton, AB.



Lanny Hypes Nordson Corporation.



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CORPORATE PROFILE: CHEMETALL

Chemetall has been developing, manufacturing and supplying state-ofthe-art specialty chemical products since 1909. The ISO 9001 company offers a wide spectrum of products ranging from metalworking fluids, drawing & stamping compounds to cleaners, rust preventatives and surface treatment chemistries. Chemetall's integrated products, chemical management systems, process equipment, and technical service programs deliver efficient and cost effective solutions for industrial manufacturing needs. Expect more with Chemetall.

Chemetall is a world-class specialty chemical company and a global provider of chemical technologies based in Frankfurt/Main, Germany. In addition to the North American headquarters in New Providence, New Jersey, other locations in the Americas include Jackson, Michigan, La Mirada, California; Bramalea, Ontario; Jundiai, Sao Paulo, Brazil and Querétaro, México. Chemetall is a division of Rockwood Holdings Inc., a global specialty chemical and advanced material company trader on the New York Stock Exchange (ROC).

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Chemetall's integrated products, chemical management systems, process equipment (dispensing, controlling, and monitoring), and service programs facilitate many processing needs. Our products are used in more than 30 industries, including aerospace, appliance, architectural, automotive, coil coating, cold forming, general industries and specialty markets including food, pharmaceuticals and pulp and paper to name a few. From time tested cleaners, iron, zinc and manganese phosphates to the latest in low temperature, chrome-free, and phosphate free technologies, Chemetall has the solution for your every need.

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Duane Fudge, David Gotoff and Suresh Patel, Chemetall.

Chemetall NAFTA is a member of the Chemetall GmbH Group, a renowned international corporation headquartered in Frankfurt/Main, Germany. Chemetall is a world-class specialty chemical company, with representation throughout the world.

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An Update on Ultraviolet

Even if consumers may not be familiar with UV curing technology, they are surrounded by it every day. Whether they type on a keyboard, reach for a cereal box, use a credit card, or read a magazine - all these objects have printing on them that is often "cured" using ultraviolet (UV) light.

UV curing refers to the unique way in which paint, coatings, inks and adhesives are dried using "energy" from UV light sources rather than using heat or evaporation. Ultraviolet (UV) curing technology use is increasing to meet industry challenges. Energy costs are a big concern. Over the decades, advances in raw materials, UV equipment and manufacturing processes have resulted in adoption by industrial coating applications for threedimensional (3D) parts, including directto-metal (DTM) applications.

UV technology offers direct savings, and permits the development and adoption of new techniques and finishing concepts, such as cellular finishing, that were not economically viable with more traditional finishing technology.

The earliest and widest adoption for UV-cured technology was in web-based or flat-line applications due to the ease with which the coating is exposed to minimum UV energy to achieve cure. Many of the early applications were limited to clearcoats or thinly pigmented coatings used in operations such as printing, where performance requirements were minimal but high processing speeds were desired.

The applications of UV technology in metal finishing vary widely from shafts and cylinders to complex shapes, such as portable propane gas cylinders, hydraulic cylinders, motor assemblies, oil filters, and underhood automotive parts such as damper pulleys. Key questions can help determine whether processes lend themselves to UV:

- Are the part surfaces easy to illuminate?
- Is there a large variation in the parts to be cured?
- Are the color options limited?
- How does the UV process fit with upstream and downstream processes?

DESIGNING THE PROCESS

When designing the UV curing system, the main concern is how the optics of the lamp relate to the geometry of the part, to provide the UV energy required by the curing process window. Though this may be a complex problem, standard solutions include:

- Multiple arrays of UV lamps.
- Single lamp or one array of multiple lamps.
- Automation of the lamp(s).
- Movement of the part because lamps are usually fixed.

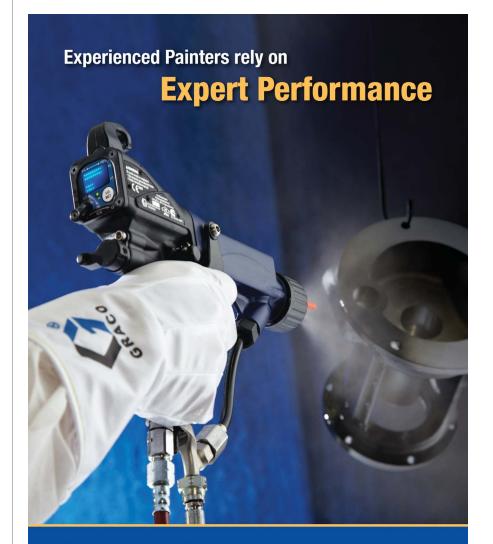
HYBRID SYSTEMS

Hybrid systems use a combination of fixed lamps with lamps that have some movement.

The curing of the pigmented systems usually comes down to using a single bulb or using a dual-spectrum cure achieved by exposure to two different bulb types.

Often with DTM coatings, using a single bulb will not meet the performance requirement, and a dual-spectrum cure is needed. In some cases, typically with whites or pastels that use a significant amount of titanium dioxide, the best curing conditions are achieved using a longwavelength bulb (most commonly a V bulb). In almost all cases, the V- or D-bulb cure is followed by an H-bulb cure. The long wavelengths more easily penetrate coatings and are used to achieve "through cure," while the H-bulb exposure enhances surface cure.

CORPORATE PROFILE: GRACO



Providing Innovative Solutions to a Diverse Global Market

Founded in 1926, Graco is a world leader in fluid handling systems and components. Graco products move, measure, control, dispense and apply a wide range of fluids and viscous materials used in vehicle lubrication, commercial and industrial settings.

The company's success is based on its unwavering commitment to technical excellence, worldclass manufacturing and unparalleled customer service. Working closely with qualified distributors, Graco offers systems, products and technology that set the quality standard in a wide range of fluid handling solutions.

Graco provides equipment for spray finishing, protective coating, paint circulation, lubrication, and dispensing sealants and adhesives, along with power application equipment for the contractor industry. Graco's ongoing investment in fluid management and control will continue to provide innovative solutions to a diverse global market.

New Product: Pro Xp Electrostatic Spray Guns

Graco's newly designed spray gun is now smaller and lighter than previous models and has a built in power supply, so painters won't be slowed down by heavy cords. Several models have also been added to the product line to accommodate a greater number of applications.

"The Pro Xp raises the bar both for overall per-

Gun, a 40 kV gun with the transfer efficiency of a 60 kv gun. A round spray gun for parts that require a slow velocity, bell-shaped spray pattern. And a high conductivity gun which is ideal for spraying lower resistivity material.

Built in the USA with durable components, the new Pro Xp electrostatic spray guns also feature a three-year warranty.

Finishing Solutions

Graco provides finishing solutions for all types of wood, metal and plastic applications. Our applicators, pumps, packages and plural component equipment improves productivity, reduces paint usage costs, lowers emissions and provides consistently better finishes.

Finishing Spray Guns

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Graco offers a wide range of pneumatic, hydraulic, and electric pumps designed for a variety of markets. The flexible nature of our pump line lets the customer easily upgrade their existing platforms to more energy efficient systems as their business grows.

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For painters like you, there's **Pro Xp**. It's smaller, lighter and delivers **expert performance**.

Visit www.graco.com/ProXpGuns for more information.

GRACO

formance and comfort," said Wendy Hartley, Product Marketing Manager, Industrial Products Division, Graco Inc."Our goal was to give painters excellent performance and a way to boost their profits, and I think we've done that."

The Pro Xp has new aircaps that use less air with the potential to lower energy costs. These onepiece aircaps are indexed for accurate positioning and were designed to improve spray performance and cleanliness.

To better analyze performance, the Pro Xp comes in a "smart" version. This model has a digital display that shows key indicators of electrostatic performance. "This means the operator can spend less time troubleshooting and more time spraying," said Hartley. "Operators can also adapt to voltage needs quickly by adjusting between low or high kV with the push of a button."

Other Pro Xp gun models include a kV Booster

Graco Spray Packages

Available in a variety of configurations including air spray, air-assisted and airless. Our packages are designed for specific materials and markets, including general metal, wood finishing and waterborne, and have unique features including, DataTrak for monitoring and protecting your pump.

Graco Plural Component Equipment

Our broad range of plural component equipment can be used for proportioning, batch dispensing, monitoring, controlling and metering for precise materials measurements. Get increased efficiency and higher quality processes, leading to a superior return on investment.

For more information about Graco Finishing products, please visit www.graco.com/finishing.



KEEP IT CLEAN

A critical aspect of the UV process is cleanliness. The UV system is optical and should not be contaminated. This can be a challenge in an environment where metalworking lubricants and general shop dust particles are prevalent. Consideration of the air handling needs such as filtration, air source (outside is preferred) and cooling exhaust is crucial in the process design. Isolating the cooling air from the shop environment is strongly encouraged.

CELLULAR

Manufacturing operations increasingly have been adopting cellular manufacturing techniques to maximize productivity and minimize waste by linking manual and machine operations. UV technology allows much smaller finishing systems to be used.

Parts are finished with a 100 per cent solids coating achieving close to 90 per cent transfer efficiency. The gun tracks up the part as is the part rotates on the turntable. The part is presented to the UV curing lamps.

Another key advantage to UV curing in cellular manufacturing is that products can be finished with temperature-sensitive components such as seals, gaskets, and plastic components already on the part. In most cases, the finishing step can become the last step of the assembled product prior to packing.

PERFORMANCE SPECS

A typical requirement for corrosion resistance is salt fog resistance (ASTM MB117) of 250 to 1,000 hours. DTM UV coatings are available that meet these requirements.

Another advantage of a UV-cured coating is that 100 per cent of the properties are achieved upon cure. UV coatings are usually harder and cooler after curing, making the part ready for packing and shipping significantly faster.

The typical film thickness ranges from 0.5 to 2.0 mils. Film thickness control is a critical process parameter for UV coatings, making it highly desirable to automate the application process. With UV coatings, the thicker the coating, the more UV energy usually is required to maintain productivity.

PROVEN TECHNOLOGY

More than 20 years ago, UV coatings were starting to be adopted by the metal

tube and pipe industry. Over the same timeframe, UV-cured coatings on 3D plastic parts have become commonplace, demonstrating that proven UV process solutions have been developed. The success of UV technology in these market sectors, coupled with the recent advances in raw materials, is accelerating the development of DTM coatings that meet market and customer performance requirements that a few years ago were deemed too difficult.

UV FOR WOOD

Each manufacturer has its own reasons to use energy-cured materials. The most common reasons include: the need for environmentally sound (green) technology, the desire to increase production speed or process optimization, the benefits of improved product performance and the development of new value-added products.

In the implementing of a UV-curing system, education is key. The must be good collaboration with the coating company, the equipment company and the finisher who all should have the same objective – to get the line producing product as efficiently and as quickly as possible.

CHOOSING A COATING

The finisher has several chemical classes from which to choose in meeting customer requirements. Each class of materials possesses different attributes. There is some overlap between classes, but by recognizing overall trends, a formulator can choose a chemical class that best fits the customer's application.

Assigning general characteristics to a class of compounds is a daunting task. Consider: urethane acrylates are the condensation product of an isocyanate (aliphatic or aromatic) and a polyol (polyether or polyester), end capped with an acrylate moiety (hydroxyethyl acrylate or hydroxypropyl acrylate). Each combination produces different physical properties in the final coating. However, focusing on one representative type, you can develop formulating rules of thumb. Aliphatic urethane acrylates are representative in this class.

Through a partnership in which all parties educate and support each other, a UV curing system can be devised that produces the maximum profit for all involved.

CORPORATE PROFILE: NORTHSPEC CHEMICALS CORP.

In a highly competitive market where setting yourself apart from your competition can be a challenge, Northspec Chemicals Corp. continues to provide innovative, high performance, specialty chemical solutions to the Canadian Coatings, Graphic Arts, Floor Care, Composites, Adhesives, Plastics and Construction industries.

Northspec Chemicals Corp. represents many globally renowned, industry leading suppliers in these areas, including: Avebe, Arkema, BASF, Brilliant, Chromaflo Technologies, Dow Construction Chemicals, Dupont Canada, Eternal Chemicals, Evonik, IHT, JECO, Kukdo Chemicals, Kerneos, Momentive, Novant, Lapinus, Sachtleben as well as other complimentary manufacturers of additives, monomers, resins, pigments and other specialty products.

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Regulatory Trends

BY DAVE SAUCIER

Last year at this time, I advised everyone to brace themselves for a wild regulatory season. This year, you need to tighten the seatbelt as the speed increases, as the regulatory front continues to be a real market driver for the coatings industry. 2013 guarantees to be another year of high speed and velocity for all involved in the chemical sector.

The Chemicals Management Plan phase 2, which is required to assess 1,500 substances using rapid screening, grouping initiatives and other tactics, is moving full speed ahead to ensure completion by 2016. Two concerns have surfaced with this strategy. The first is the amount of time allotted to each of the tactics has been significantly compressed due to the CMP2 launch delay from the last Canadian federal election. The other concern is scope creep, where planned mandatory surveys based on agreed grouping initia-

tives and data acquisition, targets that are growing beyond the original scope. This has the potential to create an additional, unexpected and unplanned for burden on both government and industry. Neither industry nor government can afford to have CMP2 fall of the rails. Letters to the Minister of the Environment from the Canadian Paint and Coatings Association, the Canadian Association of Chemical Distributors and other members of the CEPA Industry Coordination Group (ICG) have been sent, urging the government to stay focused on CMP2.

On top of CMP2, we have Canada's second planned Domestic Substances List Inventory Update (DSLIU2) covering approximately 2,700 substances. Substance manufacturers, importers and, in some cases, users are required to provide basic information so that both Environment and Health Canada can determine which of the substances appearing on Canada's chemical inventory are actively in commerce and for what types of uses. A phenomenon reported last year is the "instant non-compliance" scenario where an existing substance is taken off of the DSL virtually overnight and replaced by a Significant New Activity order (SNAc) that immediately places importers of the substance potentially out of compliance, resulting in supply interruptions. A conservative estimate is that 25% of the 2,700 DSLIU2 substances being surveyed between now, and September 2013 will result in the determination that they are "not in commerce". If the government follows their current trend, then SNAc's could be the management tool of choice resulting in overnight non-compliance issues for substances that were not in commerce during 2012.

The Regulatory Cooperation Council (RCC), formed between the United States and Canada to secure both our mutual borders and improve trade, is driving the regulatory direction for nanomaterials.

Single wall carbon nanotubes are being used as the test for regulatory alignment between both countries. The Globally Harmonized System (GHS), extensively reported about last year, is another RCC initiative geared at regulatory alignment. These initiatives make good sense and will improve efficiency for trade.

But, what about other jurisdictions? Over 144,000 substances have been registered under Europe's Registration **Evaluation Authorisation and Restriction** of Chemicals (REACH). China is now adopting their version of REACH, which gratefully looks and feels more like Canada's New Substances Notification regulations. Canada uses the combination of New Substances Notification and CMP to strategically manage the assessment and risk control of toxic and substances of concern. The United States is on the fence about how to tackle their national inventory assessment to determine which substances require risk

CORPORATE PROFILE: CHEMROY CANADA INC.

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Products distributed by Chemroy to the **Canadian Coatings Industry include:**

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- cross linkers
- high solid resins
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distributed chemicals or additives are safely delivered and in accordance with the highest standards established by the association and governmental laws. The company is also ISO 9001 certified.

Chemroy is a customer-focused distributor with a collaborative approach to the marketplace. An engaged and passionate staff that is looking to help customers find the right product for their specific application and technical and cost need.

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

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management or elimination.

One of the challenges we all face with this obvious lack of global regulatory coordination is that a substance deemed to be toxic or restricted in one jurisdiction gets moved to a jurisdiction that has not yet regulated the substance. An example is Cadmium which, for all intents and purposes, is likely to be "eliminated" from coatings but will get diverted to battery manufacturing where Cadmium is actually projected to increase in demand.

What about flame retardants that are now under the microscope? More importantly, what will be the assessment outcomes for these substances? What risk management tools will be put into play? How different will Canada's approach be to that of other jurisdictions?

Another item on the US regulatory agenda this coming year will be exposure limits, specifically crystalline silica with a final rule on exposure limits expected in 2013. Crystalline silica is found in varying concentrations in calcium carbonates and talc, both used extensively in coatings as extender pigments. Impact will be on raw material handling and potentially on paint users who must sand the coating.

Just like safety controls must work well

with environmental controls to be effective, the global coatings industry needs to take a strong position advocating regulatory cooperation, not just between Canada and US, but amongst all jurisdictions. The current state of in-coordination is unnecessarily expensive, is inefficient and creates an uneven playing field for paint manufacturers and their clients.

In closing, another regulatory initiative that will capture those coating manufacturers who produce and ship flammable paints in bulk (flash points below 23°C) is on the horizon. We anticipate a potential Canada Gazette I publication this year from the Surface and Intermodal Security directorate of Transport Canada, which is working closely with industry on developing Transport of Dangerous Goods Security Regulations. Although this program is not one of the initial 23 RCC projects, it is anticipated that Canada's draft regulation will be very closely aligned with the existing US regulations. Tighten the seatbelt, because here we go at high velocity into the 2013 regulatory landscape.

Dave Saucier is Vice President, HDTS Chemicals Inc. www.hdtschemicals.com

Calendar of Industry Events 2013

April 11, 2013: Oil and Colour Chemists Association of Canada, Annual General Meeting and Technical Meeting, location TBA, *www.occacanada.org*

June 10-12, 2013: SURFIN, Stephens Convention Center, Rosemont, IL, www.nasfsurfin.com

September 30-October 3, 2013: Canadian Manufacturing Technology Show (CMTS) 2013, The International Centre, 6900 Airport Road, Mississauga, ON, *www.cmts.ca*

October 8-10, 2013: Powder Coating 2013, America's Center, St. Louis, MO, *www.powdercoating.org*

October 20-22, 2013: CPCA Conference 100th Anniversary, Chateau Laurier, Ottawa, ON, *www.cdnpaint.org*

October 24-26, 2013: WMS Woodworking Machinery & Supply Expo (WMS) International Centre, Toronto, ON, *www.WoodworkingExpo.ca*

November 18-21, 2013: Finishing Technologies at Fabtech, McCormick Place, Chicago IL, *www.fabtechexpo.com*

CORPORATE PROFILE: HALOX®

Founded in 1972 and located in Hammond, Indiana, HALOX[®] began as a company designed to meet the corrosion needs of the paint and coatings industry. With environmental regulatory requirements becoming stricter, HALOX[®] quickly evolved into a streamlined organization geared toward providing customized resolutions to its customers' coatings needs.

In 2011, HALOX[®] was acquired by ICL Performance Products LP, a leading global specialty phosphate producer headquartered in St. Louis, Missouri. For 40 years, HALOX[®] has been the global leader in supplying the paint and coatings industry with organic, inorganic, flash rust and tannin stain corrosion inhibitors.

Our Products

Our expertise in solving corrosion inhibition problems extends across a full range of paints and coatings formulations including water-based and solvent-based coatings, powder coatings and energy-cure products.

Beyond our traditional role in supplying corrosion inhibitors to the paints and coatings market, HALOX[®] is actively involved in solving corrosion problems for a variety of other markets. These markets include metal pretreatments, metal working fluids, adhesives, inks and much more.

Featured Products HALOX[®] Z-PLEX 250

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Our Quality

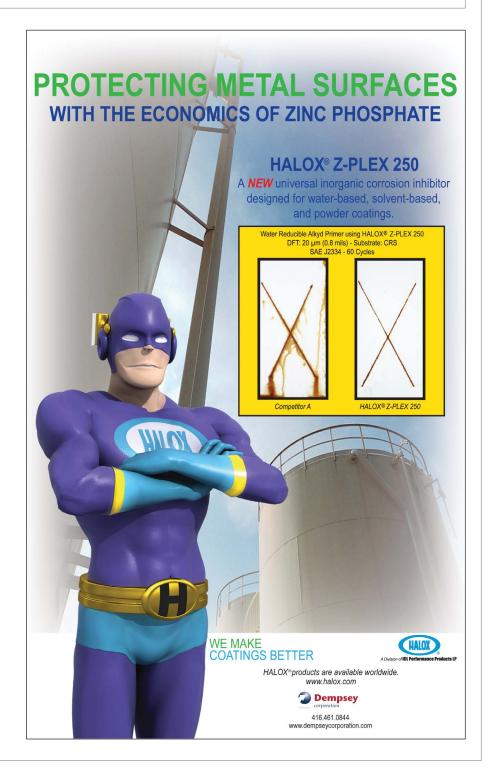
HALOX® Quality extends far beyond the manufacture of its products. Our ability and willingness to anticipate and respond to our customers every need is a distinction that has earned HALOX® a quality reputation worldwide. HALOX® Performance allows us to combine our experience, resources and strengths together to offer our clients products of exceptional performance, cost effectiveness and value for the short term and the long run.

A corporate wide commitment to quality and the environment has led to the development of products that are compatible with a broad range of resin technologies from solvent to water based and many in between. HALOX®'s quality system is ISO 9001 Certified, giving you the highest level of assurance that HALOX® products are made to exact specifications.

For manufacturers who rely on quality coatings with long-term resistance to corrosion or tannin stain, HALOX® offers proven performance, proven corrosion and tannin stain protection and proven acceptability and protection of the world around us.

Our Commitment

HALOX[®] Service involves every member of its team — from the sales and research & development to the people who package and ship your product. HALOX[®] sells its products through a distribution network of 26 distributors in over 40 locations throughout the world. We are more than just a pigment supplier; we are a solution provider to our customers. This includes delivering timely assistance to coating formulation questions, aiding formulators in achieving total system compatibility and identifying an optimum inhibitor package that addresses individual cost and performance targets.



For more information contact HALOX® 1326 Summer Street, Hammond, Indiana, USA, 46320, (219) 933-1560, techservice@halox.com, www.halox.com. Our distributor partner in Canada is Dempsey Corporation – 47 Davies Avenue, Toronto, ON M4M 2A9, Canada, (416) 461-0844, www.dempseycorporation.com.

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NDSU, he worked for 17 years in the coatings industry, beginning in 1984 at The Sherwin-Williams

Company's Central Research Laboratories in Chicago where he was involved in resin development for industrial coatings, as well as long-range research in new resins and crosslinking chemistry. While in Chicago, he helped develop the Coatings Technology program at DePaul University and taught a course in coatings resin technology. In 1993, he moved to Eastman Chemical Company in Kingsport, Tenn., where he led project teams in the areas of applications development for new monomers, new chemistry for coatings systems, and polymer development for coatings.

Dr. Webster has a B.S. in Chemistry and a Ph.D. in Materials Engineering Science from Virginia Tech. Dr. Webster's current research interests include the use of biobased chemicals in high performance materials, design of new high performance polymer and coating systems; use of high throughput methods in the development of new materials; low surface energy coatings; use of nano-reinforcements; and radiation curable polymer systems.

In addition to the prestigious Mattiello Memorial Lecture, the CoatingsTech Conference will include the Roon Award competition papers, Gordon Best Paper competition, student poster presentations, and feature a multi-track forum for all professionals in the coatings industry.

Leading the conference will be three informative Technology Short Courses, to be offered on Monday.

In addition, tabletop exhibits held during the event will feature displays of the most recent innovations in products and services offered to the industry.

Pricing Updates

DSM announces Akulon price increases As a result of unprecedented and continuing increases in the costs of its raw materials, DSM Engineering Plastics says it is required to increase prices for its Akulon PA6 polymers and compounds in Europe. It will also increase prices for Akulon PA6 compounds in North America.

Effective 1 February 2013, DSM increased prices by 200/t in Europe, and by at least \$0.10/lb in North America.

While DSM Engineering Plastics continues to pursue and implement cost savings initiatives targeted at absorbing the impact of the raw material escalations, the company says this additional increase is necessary to ensure DSM Engineering Plastics' sustainable long-term growth.

Arkema Coating Resins Announces Price Increase for Latex Products Sold in North America

Effective February 1, 2013, or as contracts allow, Arkema Coating Resins increased pricing on all latex products sold in North America.

ENCOR styrene-acrylic hard resins will increase by \$0.05 to \$0.10 per pound. ENCOR and SNAP acrylic, styrene-acrylic and styrene-butadiene latexes and NEOCAR acrylic latexes will increase by \$0.05 to \$0.10 per wet pound. Celocor® opaque polymer will increase by \$0.04 per wet pound. ENCOR vinyl-acrylic, vinyl acetate-ethylene and NEOCAR latexes will increase by \$0.02 to \$0.03 per wet pound.

This action is necessary due to escalation in the cost of raw materials and transportation.

Customers should contact their Arkema Coating Resins account representative for additional details.

Arkema Coating Resins Announces Price Increase for Solventborne and Powder Coating Products Sold in North America Effective February 10, 2013 or as contracts allow, Arkema Coating Resins will increase pricing on all solventborne and powder coating resins sold in North America. Chempol acrylics and Coroc additives will increase by \$0.07-\$0.09 per pound, while Chempol alkyds, polyesters and oils; and Synaqua alkyd dispersions will increase by \$0.04 to \$0.07 per pound.

Reafree polyester powder resins will increase by \$0.05 to \$0.07 per pound.

This company says this action is necessary due to escalation in the cost of raw materials and transportation for solventborne and powder products.

Customers should contact their Arkema Coating Resins account representative for additional details.

Brookfield Holds Pricing for 2013

Brookfield Engineering, the worldwide leader in viscosity measurement and control, has decided to hold prices for 2013. This decision is based on current worldwide economic conditions and the continuing need for manufacturers to stretch their resources. Now more than ever, manufacturers are looking for solutions that help their labs accomplish more with less.

Brookfield will also be announcing some new updates to several of their popular products early this year.

CORPORATE PROFILE: STONE TUCKER INSTRUMENTS INC.

STONE TUCKER INSTRUMENTS INC.



Canada's #1 SOURCE FOR COATING INSPECTION and TEST EQUIPMENT. *Simple. Durable. Accurate.*

Universal gauge body — all PosiTector 6000, SPG, DPM probes, 200,

Canada's Leading Supplier of Coatings Inspection and Test Equipment

Stone Tucker Instruments was incorporated in 2004 to meet the Canadian coatings industry's need for cutting-edge inspection and testing technology backed by world-class customer service and the expertise of NACE-certified staff.

Stone Tucker Instruments recognizes the importance of timely delivery in the fast-paced coatings industry. As DeFelsko's primary Canadian distributor, all standard product lines, and a wide variety of other items, are in stock at all times. DeFelsko's full range of products, including the new PosiTector SPG Surface Profile Gauge and the newly-redesigned PosiTector 200 with new D-probe for measuring up to 300 mils on non-metallic substrates, can be found online at www.stone-tucker.com.

Stone Tucker Instruments is committed to researching cutting-edge industry technology to provide the best equipment available. With our dedication to this objective, Stone Tucker distributes the TQC line of field and laboratory instruments, including TQC Curve-X2 Oven Logger, the new TQC Gloss Meter, and their new Hull Roughness Meter. They are also pleased to announce that they are now the Canadian distributor for IBIX light-weight, portable blasting units for cleaning and restoration projects. The full range of Tinker & Rasor Holiday Testers and Spectroline UV Lights have also been added to the product line. Rasor, PCWI, Montipower, TQC, Rhopoint, Salt Smart Salt Meter, and Gal Gage.

Coatings professionals will tell you that the key to good coatings application is proper surface preparation. Stone Tucker Instruments is the Canadian distributor for the MBX Bristle Blaster. Designed to clean rust and scale from industrial surfaces — including the ones that conventional sandblasting just can't touch — the Bristle Blaster leaves a surface condition comparable to an SSPC SP-10 near-white blast while generating an anchor profile between 2.5 and 3.3mil.The MBX Bristle Blaster is just one of the products recommended to ensure a quality coatings application every time.

Stone Tucker Instruments is committed to providing their customers with outstanding service, including instrument repair and calibration. Staff includes a NACE-certified coatings inspector with over 20 years' industry experience, and a NACE trained technical sales representative with multidisciplinary NDE field experience. All sales personnel have factory training on many products. The technical knowledge combined with the practical application experience ensures exceptional cus tomer service and support for all of our instrument lines. Stone Tucker Instruments has become Canada's premier supplier of quality control instruments and equipment because of their absolute commitment to their clients. To find out what Stone Tucker Instruments can do for you, call them at (905) 892-6142 or email at info@stone-tucker.com. You can also view their full line of inspection and test products at www.stone-tucker.com.

- and UTG probes; easily converts from a dew point meter to a coating thickness gauge, surface profile gauge, or ultrasonic thickness gauge.
- No software required Browse gauge readings and charts using your computer's file explorer, or upload to PosiTector.net
- Two models Standard and Advanced. Standard models now have more features
- An ergonomic design that's rugged and weatherproof

See our full line of Inspection and TONE UCKER Test Products at www.stone-tucker.com NSTRUMENTS INC. 905-892-6142 • info@stone-tucker.com Stone Tucker distributes many of the world's finest inspection and testing equipment from key suppliers: DeFelsko, Dakota Ultrasonics, Testex, Chlor-Rid, Western Instruments, Spectronics, Tinker



Cost-Effective, Energy-Efficient and ENVIRONMENTALLY-FRIENDLY

When it comes to resins in powder coating, customers are demanding innovation from manufacturers. They want high performing, cost-effective, energy-efficient and green environmentally friendly resins. They want solutions for an increasing number of application areas such as plastics or wood. That is no small order and manufacturers are embracing the challenge despite often having to raise prices to deal with rising prices on their feedstocks.

SOME SOLUTIONS

Solutions include high-performance waterborne product for topcoats and stains that offers high gloss, outdoor durability, hardness, flexibility and water resistance. There is also waterborne acrylic resins that enable paint manufacturers to cut their overall volatile organic compound emissions by up to 50 per cent. This technology delivers the same quality, performance and appearance as traditional solvent-based paints. And then there is polyester powder coating resins, with their excellent corrosion protection properties, and low curing temperatures that cut energy consumption and are easier on the environment.

POWDER COATING THE HEAT SENSITIVE SUBSTRATES

Composites and plastics: In the global automotive industry, the key trends are reducing carbon emissions and lowering fuel consumption. This underpins the search for further weight reduction in cars. Sheet molding composite (SMC), essentially a fiber-reinforced plastic with an extremely low weight-to-mass ratio and infinite freedom in design, is therefore a preferred construction material for body car parts. To date, the typical paint process has been a limiting factor: micropores in the SMC surface after molding require several layers of sealer, primer and finally topcoat to ensure a high quality finish. Some powder-in-mould coatings solve the problem in a single layer, without additional production steps. Wood and engineered wood products: There is currently a limited number of powder coating lines for MDF/wood probably fewer than 40 worldwide. Yet these pioneer coaters show that there are plenty of promising opportunities for powder-coated MDF/wood, particularly in applications where a desire for durability is matched by the need for design free-



dom, such as in furniture, kitchen cabinets and architectural solutions.

Industry has worked diligently to find optimal combinations of MDF/wood specifications, treatment prior to coating, powder coating selection, curing technology, equipment and line configurations to enable the production of high quality products. Nevertheless, the process of coating these heat-sensitive substrates is still complex and unforgiving.

Many manufacturers support powder coating on substrates such as MDF and wood and together with leading players in all parts of the value chain focus on closing some of the industry gaps.

AUTOMOTIVE

Meanwhile, the automotive industry is increasingly switching to innovative powder coating resins in line with legislative and consumer trends that call for durable, economical, attractive and eco-friendly coatings. Powder coatings are being used for exterior body intermediate coats (the primer-surfacer) for rim parts, door handles and for finishing under-hood components. By using clear powder coatings, manufacturers have a great alternative to solventborne clear coats for applications like coating alloy wheels. For these powder coating applications, manufacturers offer innovative resin solutions. Parts exposed to corrosion, such as

the chassis and suspension of cars and motorbike frames, can now be treated with a powder coating formulation created with special resins that protect against corrosion. Manufacturers also offer powder coating resins for hard-wearing components on trucks, such as the chassis and bumper bars.

MORE SOLUTIONS

There is also a range of polyurethane, TGIC and hybrid polyester resins on the market.

TGIC cure powder coatings: are based on a combination of a polyester resin and a crosslinker called TGIC (Triglycidylisocyan-urate). In the curing reaction, no volatiles are formed.

The most desirable characteristic of TGIC cure powder coatings is good color and gloss retention in outdoor applications. Depending on the polyester resin used, these coatings offer good flow properties, good wear resistance and overbake stability. tural equipment, and lawn and garden applications.

Polyurethane powder coatings provide excellent performance. Of particular note is their exceptional smooth appearance, even at low film builds. Their outstanding gloss retention in outdoor applications, combined with superior corrosion protection properties, makes polyurethane the first choice for premium powder coated products.

Hybrid Powder Coatings: Epoxy-polyester powder coatings have good flow properties, good corrosion protection and good chemical resistance. They are formulated from an acid functional polyester and an epoxy resin.

Common ratios of polyester to epoxy resin are 50:50, 55:45, 60:40, and 70:30. Polyester-rich hybrid powders will have slightly better UV-light resistance than powders with a lower polyester content. Hybrid powder coatings are ideal for indoor applications such as internal installations, white goods, and lighting fixtures.

Pretreatment can substantially improve adhesion of TGIC powder coatings to metal substrates.

The chemical resistance is good and is dependent on the polyester to TGIC ratio utilized.

TGIC - Polyester powder coatings are used for architectural purposes, agricul-

No matter what the application, the biggest collective challenge in the paint market is clear the need for cleaner, solvent-free paints. Resin manufacturers are meeting that challenge.

TOSCOT, OPA AND OCCA HOLIDAY LUNCH

The Toronto Society of Coatings Technology (TOSCOT) has officially merged with the Canadian Paint and Coatings Association (CPCA), and, as such, held the last of their annual Christmas luncheons under the TOSCOT banner in December 2012.

"In the future we hope to continue this tradition under the CPCA banner and in conjunction with the OPA," says Jake Jevric, CPCA Educational Committee Member. Also invited to the event was the Oil and Colour Chemists Association of Canada (OCCA).

The event was held at Rapini's, Brampton, ON.. Photos by Pete Wilkinson





CORPORATE PROFILE: DUROAIR AIR QUALITY MANAGEMENT SYSTEMS

Highlights

DUROCAP™ captures particulate contaminated air and exhausts VOC to the exterior

- Airflow ranging from 13,500CFM to 80,000CFM and beyond
- Variable frequency drive to allow for the perfect balanced airflow
- Built in control panel and air regulation

Juroair

- Patented two stage filtration, filtering over 99% of airborne particulate
- Portable on casters

DUROROOM™ retractable enclosure systems allow use of patented tapered-airflow technology

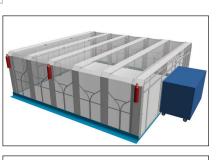
 Systems fabricated from cost competitive, fire resistant clear vinyl or light-weight metal
 Modular retractable or fixed clean rooms can range from 10'H x 14'W x 24'L to 20'H x 40'W x 100'L and beyond

- Industry focus includes Industrial, Oil & Gas, Aerospace, Automotive and Agricultural
- Applications include clean rooms, dust rooms, weld rooms, and paint booths

Originally utilizing Aerospace technology, Duroair has fast become a leader in Indoor Air Quality Management. By combining revolutionary air filtration methods with portable enclosed work spaces ranging from 300 to 2400 sq ft (and customizable beyond), Duroair gives all customers the ability to create clean work spaces that improve their own manufacturing specifications or allows customers to meet emissions standards by containing environmental contaminants. Duroair provides solutions for multiple industries including Industrial, Oil & Gas, Aerospace, Defense, Automotive and Agricultural.

Global Need

Increasingly, industries around the globe are seeking temporary or portable solutions for clean room and filtration needs either for purity of production or for environmental safety. Current alternatives are either non-existent or do not meet high specification requirements. In all industries, there is a need for sterile rooms and employee-safe environments for production, cleaning or maintenance. DuroAir provides on-site solutions at a fraction of the cost of other options without sacrificing quality and efficacy.





environmental and economical solution for just about any indoor air problem.

Retractable DuroRoom[™] enclosure systems solve many problems including not permanently taking up indoor real estate; allowing for use of overhead cranes to move large or heavy objects in place, which can be enclosed after they are put in place; and through their modular design can manufacture any size enclosure without the need to re-engineer the system. All enclosures, regardless of size, balance the air with horizontal tapered airflow, which allows for much faster drying of waterbased coatings by creating an "air envelope" that is not susceptible to contamination from dusty or dirty floors. Duroair products are also very simple to install with most installations being completed in just a few hours. One client recently called Duroair with an emergency problem on a Tuesday and took delivery of a standard size system the next day and was in full operation Wednesday evening - 30 hours from purchase order to use.



The industry's most innovative line

of retractable paint booths

Learn more at www.duroair.com or call 1.888.387.0911



Duroair has designed the industry's most adaptable line of retractable paint booths. Our goal is to help customers save time and money, while never having to sacrifice on quality or safety. Our patented airflow and filtration technology captures over 99% of airborne particulates and reduces dry times by increasing the amount of airflow during the dry cycle. The modular design allows for custom sizes without having to re-engineer the system and ensures the balanced airflow required for the perfect finish, quality and compliance. Regardless of size, the enclosure retracts to less than 20% of the extended length, enabling you to get the most value from your shop floor space while simplifying material handling.

Taper Draft Technology

The Innovative Alternative to Existing Cross Draft Technology in the Coatings Industry.

Taper Draft works by pulling a high volume of clean air through an intake filter that, once inside the clean room, creates an envelope of airflow over the work piece avoiding any contamination by environmental elements present at site. The air volume is then extracted from the enclosure through a two-stage tapered filter chamber that provides high levels of CFM and air turbulence required for waterborne coatings. A wicking process is created by the air envelope that, effectively, pulls moisture off the work piece and greatly enhances drying times and throughput.

Duroair Solutions

Through the combination of its patented, Tapered Airflow technology, Duroair has an employee-safe,

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continued from front cover

- getting the UV energy to the substrate to achieve full coating cure
- minimizing competition or interference of the UV energy with other noncuring components of the formulation
- maximizing the absorption of UV energy by the photoinitiator. Pigments and other constituents absorb some of the UV energy, making throughcure a challenge.

Several key raw material developments have helped significantly, including photoinitiators that absorb in the longer UV wavelengths, hyperbranched oligimers and nanomaterials. Photoinitiators that absorb in the longer wavelengths minimize the competition of energy with the pigments in the coating. Longer UV wavelengths penetrate deeper into pigmented coatings. Hyperbranched oligomers and monomers achieve a high crosslink density with a minimum of shrinkage, maximizing adhesion to the substrate and increasing corrosion resistance. The use of nanoparticles

improves coating performance with minimal interference with the UV energy used for curing.

TWO PLATFORMS

There are two main UV coating platforms - a 100 per cent solids UV formulation and waterborne UV systems. Both are sustainable chemistries, having ultra-lowvolatile organic compound (VOC) levels.

APPLICATIONS

Traditionally, UV-cure coatings have been used in wood applications due to performance, economic and environmental benefits. Driven by changing regulations and formulator preferences, UV is expanding into areas such as, Aerospace, Composite repair, Directto-metal applications, Site-applied polyurethane dispersions (PUDs)/100 per cent solids for flooring and Sunshine-cure coatings for decking.

WEATHERING PROPERTIES

Accelerated weathering has been a focus of the aerospace industry over the past decade and these properties are typically improved via the introduction

of UV-A absorbers and hindered amine light stabilizers.

Some scientists say these additives can interfere with the absorbance of UV-A light by the photoinitiators resulting in partially crosslinked coatings.

Based on field tests in real-life conditions, the performance of UV-A curable coatings has been shown to rival that of conventional polyurethane coatings for aerospace applications. Apparently, using a combination of hard and soft urethane oligomers and reactive diluents formulations yield a balance of chemical resistance, flexibility and hardness.

Conventional aerospace two-component (2K) polyurethane aerospace topcoats is time consuming, requiring up to 72 hours for the coatings to fully develop their physical properties. UV-cure is quicker. To meet the aerospace market's specifications, coatings must yield a good balance of physical properties including chemical resistance, flexibility, adhesion and weathering. Typically, UV-curable coatings lack flexibility but provide superior chemical resistance due to their high crosslink density. Aerospace coatings require a compromise of both chemical resistance and flexibility while maintaining hardness. These properties are primarily dictated by the filler concentrations and the resin functionality/glass transition temperature. A mixture of hard and soft resins along with reactive diluents is required to get the balance of flexibility, hardness and chemical resistance required. Additionally, raw material selection is especially critical to obtain good weathering properties.

COMPOSITE REPAIR

In composite repair, UVA-cure coatings technology can be used for in-field vehicle surface repair as well as to quickly manufacture replacement parts. Studies are ongoing to advance this application especially when using a dual-cure method. In this method, the composite is cured with UV light, followed by a reaction between dual-cure mechanisms when thermally heated. Dual-cure has a pot life and therefore, the composite and UV light must be applied rapidly.

DIRECT-TO-METAL

UV-cure coatings show good adhesion to metals like cold-rolled steel and galva-

CORPORATE PROFILE: BEX SPRAY NOZZLES

BEX Has Solutions!

Our Business

With over 50 years of experience in the design and development of spray nozzles and tank mixing eductors, BEX responds to the user's technical concerns with the experience required and the willingness to provide effective answers.

Based in Mississauga Ontario, BEX is a leader in industrial spray nozzle and tank mixing eductor technology. BEX is also a leader in providing unique and patented technology to improve spray application quality and reduce maintenance costs. For over 50 years, BEX has provided answers to tough application questions in a variety of industries. The BEX customer base includes a wide array of industries including automotive, food and beverage, the steel industry, pulp and paper, printed circuit boards and waste water facilities. Typical applications include part cleaning, food processing, cooling, misting, dust control, phosphating, rinsing,

- Color-coded K-ball[®] clip-on spray nozzles of all types in a variety of materials
- Air Atomizing Spray Nozzles JPL Series
- Hydraulic Atomizing Nozzles
- BEX Twister[™] Nozzle One-piece, anti-clogging nozzle offers larger flow rates with spiral design in both full and hollow cone patterns
- Tank Mixing Eductors in various materials
- Tank Washing/Rotating Nozzles
- Air Wisk[™] blow-off

Our Innovation

BEX is constantly expanding on its product lines whether this means adding new spray nozzles to the line of products or adding features to current product lines. BEX is committed to providing new technology and products to suit the ever-changing needs of our Customers.

Our Competitive Edge

BEX leads the way in on-time delivery and excep-



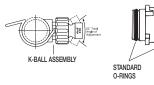
and chemical processes.

Our Products

- Injection-molded nozzles in a variety of plastics • Flat Spray "V", Solid Stream, Hollow Cone, Flooding and Self-Cleaning
- Zip-Tip® quick-change nozzles in stainless or plastic with the new easy-on easy-off Tabz® design

tional customer service.

The company prides itself on its proficient and friendly inside sales team supported by a very knowledgeable and experienced sales force. We have the solutions for your technical problems. We will get you what you need, when you need it!



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7IP-TIP NOZZLE TIP

nized iron, making them well-suited for direct-to-metal (DTM) applications such as in large construction vehicles, mass transportation, and other high volume markets. Other benefits include early water resistance, ease of application and ease of field repair.

UV PUDS

PUDs are 1K, high-molecular-weight, aqueous dispersions that develop properties without the need for additional crosslinking. 1K PUDs offer many of the features typically associated with polyurethane coatings. And UV systems have been recognized in the flooring industry for their high productivity. Combining UV and PUDs results in a UV-curable PUD system well suited to site-applied flooring.

The UV PUD is produced by a technique called the acetone process, which allows for the prepolymer manufacture in acetone and, during a later step, the removal of the acetone via distillation. The resulting UV PUD is an ultra-low VOC and VHAPS product. UV-curable PUDs good binders providing high performance in high-intensity, UV-cure flooring applica-

Some scientists say these additives can interfere with the absorbance of UV-A light by the photoinitiators resulting in partially crosslinked coatings.

tions. They can be formulated to show good gloss. They are low odor and lowVOC, light stable for resistance to weathering, abrasion resistant, chemical resistant, and have good adhesion to the substrate. Wood, vinyl and concrete substrates can all be coated with UV-curable PUDs. Typical applications for these resins include large warehouses, restaurants and amusement parks. Multiple coats can be applied, dried, and then cured at once, with just one application of UV light. The coatings can be applied and cured onsite with portable UV lamps in less than four hours. Another curing method for outdoor applications is shining through the industry: natural sunlight. For outdoor applications, the sun provides sufficient

curing when compared with artificial light sources. The sun supplies enough energy to crosslink UV-cure PUDs, providing several years of performance on applications such as exterior decking.

LOW-VISCOSITY

When it comes to UV formulation, dedicated research has refined polyurethane chemistry and offered acrylated allophanate oligomers.

The chemistry behind traditional UVcure coating formulations contains acrylated oligomers based on a polyurethane, polyether, polyester or epoxy resin. The newer acrylated products offer the advantages of low viscosity and reduced crosslink density due to the reduced isocyanate functionality, therefore allowing greater freedom in designing new highsolids systems. Low-viscosity resins are environmentally friendly, because they do not require reactive diluents or organic solvents. These acrylated allophanate resins also weather well, making them a suitable choice for use on a variety of substrates, including polycarbonate plastic and metals.

As the trend toward environmentally friendly coatings and the importance of a quick return-to-service continue to move forward, UV-formulation will expand into entirely new markets and more varied applications.

CORPORATE PROFILE: CPCA

CPCA's Diploma in Coatings Technology: **Knowledge is Power**

Not long after the CPCA was founded in 1913, the Toronto Society for Coatings Technology (TOSCOT) began in 1919. Originally named the Toronto Club of Paint and Varnish Superintendents, it developed into an important source of technical information for the coatings industry in Canada. It was concentrated in the Greater Toronto Area for the most part. TOSCOT was one of the founding societies of the Federation of Societies for Coatings Technology (FSCT) in the

United States, and contributed much to the growth and development of that organization.

In the early years, paint chemists arrived on the scene in a coatings industry that had been more 'art' than 'science' in those days. In the beginning, many felt that chemists presented a problem for the industry, when, in fact, it was their contribution – based on sound science – that led to extensive innovation in new technology that helped sustain the industry to this very day. The early days of TOSCOT focused on the many facets of coatings technology that would drastically alter the face of paint production in Canada. Although

many changes have occurred in the industry over the past 100 years, the vision of TOSCOT has remained strong.

Educational courses, award-winning technical presentations, and successful seminars have been sources of pride for TOSCOT. Proud of its heritage, TOSCOT wanted to continue this tradition into the future and felt that this could best be achieved with CPCA. CPCA is indeed the logical home for TOSCOT and all that it stands for, and it is proud to pick up the mantle and continue in the tradition of TOSCOT. The goal in the coming years is to build on TOSCOT's success and create a stronger system for

training and education in coatings technology, all of which will be online. The three semesters are as follows:

Theoretical Concepts: The course is designed to provide theoretical basics of the coatings technology for young people who are just entering the industry, or who have been working in the industry for some time but who wish to upgrade their status in the industry by earning a Diploma in Coatings Technology.

Industrial Paint Applicators: In view of the complexity of most industrial coatings, the course is recommended to industrial paint applicators who need to be able to appreciate the composition, performance capabilities and handling of the products they purchase and use.

Sales and Marketing: Other persons, involved in a non-technical capacity such as purchasing of raw materials, production scheduling, sales or marketing, who may not be interested in the Certificate as such, and do not need to sit for the examinations, are often enrolled in only one semester of particular interest to them.



Committee that will include members who were previously board members of TOSCOT to ensure a smooth and effective transition. This Committee will include other members of CPCA who will assist in providing the training, advice and development needed to help sustain the paint and coatings industry for the next 100 years. The training courses are now online and will enable people to get training from across Canada and around the world. Once the three semesters are completed, successful candidates will receive a Diploma in Coatings Technology.

Sign up for your diploma now at: www.cdnpaint.org

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OPCA HOLIDAY LUNCH



CORPORATE PROFILE: SARTOMER

Sartomer USA, LLC is the premier global supplier of monomers and oligomers for ultraviolet and electron beam (UV/EB), and specialty chemicals for peroxide and two-part epoxy/amine systems. For more than 55 years, Sartomer has pioneered the development of these advanced technologies, introducing hundreds of products that enhance the performance of coatings, graphic arts, adhesives, electronics and other materials.

Today, backed by the financial resources and technical services of Arkema, Sartomer provides a strong global approach to R&D, manufacturing, and customer support. Sartomer is headquartered in Exton, Pennsylvania, near Philadelphia. It has manufacturing in nearby West Chester, Pa., and in Chatham, Va. The company also has offices, labs and manufacturing in France, India, China and Japan

As a member of the American Chemistry Council (ACC), Sartomer has adopted the principles of Responsible Care. Sartomer has fully implemented the Management Practices (Pollution Prevention, Employee Health and Safety, Distribution, Process Safety, Product Stewardship, Community Awareness and Emergency Response, and Security) and has met ACC's external certification requirements of its Responsible Care management system.

Coating Solutions

Fiber optics

- Graphic arts and overprint varnishes (OPV)
- Optical lenses
- Packaging
- Paper coatings
- Plastic coatings
- Printing plates
- Traffic striping
- Wood coatings

In formulations Sartomer products can impart or improve performance characteristics, such as:

- Adhesion
- Chemical resistance
- Abrasion resistance
 Cure/open times
- Hardness
- Flexibility
- Viscosity
- Yellowing
- Scratch resistance
- Weather resistance

Sartomer specialty chemicals can also be used to reduce VOCs and also have the potential to limit skin irritation.

Energy-efficient coatings can be formulated from Sartomer's wide range of acrylic monomers and acrylic oligomers. Sartomer can assist you with product selection, formulating strategy and curing parameters to produce coatings with the desired properties for your application.





SARTOMER INNOVATION HELPS YOU ENHANCE THE PERFORMANCE OF YOUR END-USE COATINGS APPLICATIONS.

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New Products & Technology

Walter Surface Technologies announces NATURE BOOST

Walter Surface Technologies (WST), has developed a revolutionary and eco-friendly solution for heavy-duty industrial cleaning. NATURE BOOST— a vegetable product extract — is a powerful ingredient in new cleaning solutions.

Nature Boost is a new additive derived from vegetable extracts exclusive to Bio-Circle Environmental Solutions. This new ingredient is obtained from a by-product generated in the vegetable processing industry, thus not impacting the cost of food. This unique raw material has excellent solubility of oils, greases, inks, adhesives and even paint, thus making it a very attractive alternative to traditional petroleum based solvents. What makes the Nature Boost additive so impactful is that it is not flammable, does not emit Volatile Organic Compounds, is non-toxic and bio-renewable. No other petroleum distillate or natural solvent can boast these benefits.

3 New Bio-Circle Products Offer More Alternatives to Toxic Solvents

The addition of NATURE BOOST to the Bio-Circle Environmental Solutions product line means industrial workers now can choose from 3 efficient and green cleaning alternatives. Not only are they safer for workers, but more cost effective than toxic solvents.

CB 100 is an aqueous based micro-emulsion of NATURE BOOST additive with surfactants. Designed for bulk cleaning and degreasing, CB 100 is excellent at removing oils and greases. It will also remove ink, rubber marks, tar, wax, carbon, soot and paste. CB 100 is compatible with all metallic alloys and can be applied with a trigger sprayer, pressure washer, or heated dip tank.

GS 200 contains the NATURE BOOST additive in its undiluted form. This natural, high-performance "green solvent" is excellent at removing glue, ink, paint, sealant and wax from metallic surfaces. It will also remove oils and greases. GS 200 is NSF certified for use in food plants in the United States. GS 200 can be applied manually with a trigger sprayer or with a dip tank.

Bio-Circle ULTRA is the new heavy duty version of Bio-Circle L. Bio-Circle ULTRA is formulated from the original Bio-Circle L solution with the addition of NATURE BOOST additive. When used with the Bio-Circle parts cleaning system, Bio-Circle ULTRA removes crude oil, bitumen, heavy grease and even baked-on contaminants. Bio-Circle ULTRA is ideal for the mining, oil and gas, heavy equipment

maintenance, rubber/tire production, shipyard, and steel industries. Bio-Circle ULTRA is NSF certified for use in food plants in the United States.

Like the original Bio-Circle L solution, the new NATURE BOOST-based products are biodegradable, VOC-free, non-flammable, and NSF-certified (CB 100 is pending certification).

CB 100, GS 200 and Bio-Circle ULTRA are being officially introduced in US and Canadian markets in January 2013.

www.walter.com

Nordson Announces Major Product Line Expansion

Nordson Corporation is launching a line of new non-electrostatic guns, stainless steel pumps and plural component metering systems for liquid applications.

The newest additions to Nordson's liquid coating line include:

Trilogy Non-Electrostatic Spray Guns: Encompass air assist airless, air spray and low volume/low pressure technologies. These guns incorporate the latest in design technology, providing excellent spray quality, the durability to withstand harsh manufacturing environments and ease of handling and maintenance.

StediFlo Pumps: With pressure ratios from 3:1 to 57:1, StediFlo pumps provide versatility and high performance to meet a wide range of pressure and volume requirements.

OptiMix Plural Component Metering Systems: High-performance pneumatic and electronic plural-component mixing and proportioning units process both solvent- and water-based paints, and are designed for flexibility and efficiency.





CORPORATE PROFILE: GLOBAL FINISHING SOLUTIONS (GFS)



With a heritage spanning more than 100 years, GFS has grown to become the world leader in paint booth technology, with products and services for all types of finishing operations across the industrial, automotive, and aerospace finishing industries. In addition to an extensive product line, including spray booths, ovens, washers, and complete systems for both liquid and powder coating, GFS has also developed training programs and educational material designed to provide best-practices advice to companies looking to get the most from their

finishing equipment.

GFS products are available in standard configurations for fast shipping, as well as custom configurations built to any special requirements that your finishing operation may require. Individual GFS components function as standalone equipment, or as part of a complete system. Our team of engineers & systems specialists can develop an integrated turnkey finishing system to help take your production to new heights.

From dimensions and weight, to temperature,

timing and energy usage, GFS industrial finishing products are fully customizable. Our modular approach allows you to choose which components you need, while GFS consultants help tailor these components to your specific needs. GFS industrial finishing products can also be integrated into existing systems to replace aging components and outof-date technology.

Global Finishing Solutions is proud to work with the finest distribution network across North America. Your local GFS distributor provides technical support, sales, parts & filters, product installation, service and maintenance for all spray booths and paint finishing equipment. **Contact us today for more information:** 800-848-8738 info@globalfinishing.com Follow us online for the latest news & updates: http://globalfinishing.com http://facebook.com/globalfinishing http://twitter.com/globalfinishing http://youtube.com/globalfinishing





 $40\,$ canadian finishing & coating manufacturing $\,$ January/February 2013 $\,$



Paint Industry Seeks a New Approach to **RECYCLING IN ONTARIO**

BY GARY LEROUX,

Canada's paint manufacturers have 'walked the talk' in showing commitment to post-consumer paint recycling in Canada. Canada now leads the world in postconsumer paint recycling with a recycling program in every Province. The US is following Canada's lead and now has similar paint recycling programs, modeled on the Product Care approach, in four States. Other countries have yet to make a similar commitment to a 'cradle-to-cradle' effort for paint recycling programs. Few sectors can lay claim to such a solid commitment to sustainability with respect to their recycling efforts.

In 2009, the Canadian Council of Ministers of the Environment (CCME), comprising every Provincial Minister of the Environment, supported establishing extended producer responsibility (EPR) in every Province within three years. They achieved that target in the case of paint and coatings. It is instructive to look at how the CCME defined EPR and look at the programs that currently exist in that context. The CCME defined EPR as follows:

EPR is a policy approach in which a producer's responsibility, physical and/or financial, for a product is extended to the post-consumer stage of a product's life cycle. EPR shifts responsibility upstream in the product life cycle to the producer and away from municipalities. As a policy approach, it provides incentives to producers to incorporate environmental considerations in the design of their products. EPR also shifts the historical public sector, tax-supported responsibility for some waste to the individual brand owner, manufacturer or first importer. In order to create a harmonized approach to EPR, the Canadian Council of Ministers of the Environment (CCME) has prepared a Canadawide Action Plan for Extended Producer Responsibility with common coordinated policies and commitments for government action and common key elements for building producer responsibility through the adoption of EPR approaches to identified priority products. The implementation of The Canada-Wide Action Plan for Extended Producers Responsibility will be done within the jurisdictional authority of each government. In effect, the paint and coatings category now has a national EPR program 'within the jurisdictional authority of each government.' Unique jurisdictional authority is a fundamental fact that cannot be ignored in a federal system like Canada's. While there are unique regulatory frameworks in each Province, not all have been implemented well. There are provincial powers under which EPR programs must operate and that has created challenges in some jurisdictions, especially in Ontario.

It should be noted that the Product Care Association is the program operator for paint recycling programs in seven of the ten Provinces. The other three Provinces have different program operators, but are still achieving designated targets set for them within their respective jurisdictions. In Alberta, it is the Alberta Recycling Management Authority. Quebec has EcoPeinture, and Ontario has Stewardship Ontario (SO). For Ontario, the paint and coatings category is included in the Municipal Household Hazardous Waste (MHSW) Program along with nine other categories of waste. While there have been many challenges in the MHSW program in Ontario with respect to overall management and unexpected regulatory amendments impacting industry, the paint and coatings industry continues to surpass established program targets for waste recycling.

In Ontario, the paint and coatings industry has proven that it is strong and reliable in meeting established performance targets. In fact, paint and coatings represents more than 40 percent of the MHSW program in Ontario. Stewardship Ontario's annual report for 2011 notes that, of the nine categories in the MHSW program, only paint and oil containers exceeded their established performance targets. The paint and coatings category (including aerosols) came in at 226 percent of target. It appears as though this positive trend for the paint and coatings category has continued in 2012. In fact, without paint and coatings in the program, the MHSW program would have fallen short of established program targets.

The large majority of the stewards for the paint and coatings category in Ontario are CPCA members. Over the past several months, these stewards have expressed concerns with the changes to the Ontario MHSW program. The fundamental concern relates to the highly prescriptive nature of the program in Ontario and the command-and-control manner in which it is run. The Ontario approach seems to be in direct contradiction to what the CCME intended per its definition of EPR, as noted above, that is, "EPR shifts responsibility upstream in the product life cycle to the producer." Paint manufacturers have clearly accepted that responsibility, as evidenced by the sector exceeding all established targets since the inception of the MHSW program. One

would think that this success would be applauded rather than challenged with unexpected changes to the program in February of 2012. These actions called into question the paint industry's stellar recycling record and added further administrative burdens on manufacturers without industry consultation.

After extensive consultation with its members and Stewardship Ontario, the Board of CPCA passed a resolution to move forward with an application for an Industry Stewardship Plan. In order to do so, CPCA entered into a Memorandum of Understanding with Product Care, who has a proven track record operating paint recycling programs dating back to 1994 in British Columbia. Manufacturers are familiar with Product Care's performance in other jurisdictions and want to see it replicated in Ontario.

In concert with CPCA, Product Care has notified Waste Diversion Ontario of its intent to submit an application for an Industry Stewardship Plan, as outlined in Section 34 of the Ontario Waste Diversion Act for the designated waste "Paints and Coatings". This process will continue over the next several months, as there are many ISP Guidelines to consider. It is hoped that the end result will be an individual paint and coatings ISP in Ontario. That ISP will provide greater focus, increased transparency and better governance for paint and coatings stewards. There will still remain a requirement for the ISP to work closely with WDO as the agency charged with overseeing the implementation of the Waste Diversion Act in Ontario.

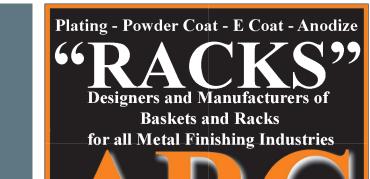
Paint and coatings stewards have

always believed in focusing on the outcomes of the regulatory framework for MHSW, as established under the Waste Diversion Act. Many have been overwhelmed by the unnecessary emphasis placed on process over outcomes. In the final analysis, the public is most interested in outcomes, as is industry. Since the inception of the MHSW Program, the paint and coatings sector has regularly exceeded expectations in Ontario with respect to outcomes and that will not change.

The intent of the Canada-wide EPR approach was for the Provinces to establish suitable regulatory frameworks and then ensure that industry complied in terms of 'outcomes' as opposed to 'process'. The paint and coatings sector believes that with its own stewardship plan in Ontario, it will re-establish a focus on outcomes over process. It will continue to achieve - or exceed - established targets with respect to key performance metrics. At the same time, it is hoped that the 'producer' will obtain greater transparency and accountability, enhanced performance measurement, effective leadership and innovation, improved efficiency of decision-making and greater awareness of the paint industry's success.

CPCA members look forward to fulfilling the mandate set out by the Canadian Council of Ministers on the Environment with a rejuvenated approach to post-consumer paint recycling in Ontario.

Gary LeRoux is the president of the Canadian Paint and Coatings Association based in Ottawa, ON.



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The Hidden Enemy of Processing High Strength Steels

BY JOE PASQUARELLI

Random, sudden and catastrophic failure of components is every engineer's worst nightmare. Depending on the nature of the application, having a critical component fail without warning, even though it is being used well within its yield strength, can be a serious risk that can lead to loss of life. The higher the cost of failure, the more concerned designers must be about Hydrogen Embrittlement. Making matters worse is the fact that only 2-3 per cent of components exposed to Hydrogen Embrittlement are likely to fail, and their failure may happen months, or even years, after processing. This gives a false sense of security to experienced processers, because improperly processed parts may never fail. Since this small percentage of

failure occurs long after processing, with no obvious cause, designers and processers are never made aware of the root cause of the failure. Nonetheless the risk factors and control measures need to be taken into consideration when developing processing parameters for high strength steels.

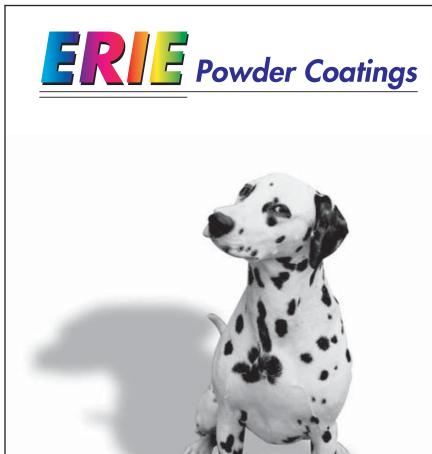
The history of Hydrogen Embrittlement begins with the development of the aerospace industry during the 1940's. As aircraft designers were striving to go faster and further, they pushed performance using lighter, stronger structures comprised of higher strength steels with an increasing reliance on the use of heat treating. Consequently, random and sudden failures started to occur. Due to the amount of development occurring with many small manufacturers, few of these

failures were recognized or well documented. The first well documented cases were several catastrophic failures of F-8 Crusader wing structures during the mid1950's. The aircraft was pushing the performance envelope and was the first to exceed 1000 mph. So it is no surprise that it was also very highly stressed. The wings used structural components made of 4340 low alloy steel heat treated to 260-280 ksi that were both chrome and cadmium plated. This is similar to materials used to this day. The Navy studied these failures to determine the root cause, which was found to be Hydrogen Embrittlement. Around this time a new phenomenon started to appear commonly called "shelf popping". Parts in inventory that are not under stress would internally fracture and break into several pieces. As a

result of these events, awareness increased within the industry and eventually the realization of the importance of controlling Hydrogen Embrittlement. Finally in 1960, they instituted control measures that are still used today. In spite of the studies and controls, we continue to find accidents caused by Hydrogen Embrittlement. Over 70 per cent of documented aircraft Hydrogen Embrittlement failures over the past 40 years have been attributed to a missed or omitted bake, extended delay from plate to bake, insufficient bake temperature or short bake times. Diligence is required to ensure procedures are correctly formulated and that they are followed closely by front line operators in order to prevent Hydrogen Embrittlement failure.

Prediction of Hydrogen Embrittle-

CORPORATE PROFILE: ERIE POWDER



Erie Powder Coatings (EPC) has been offering custom and stock powder coatings for nearly 20 years. 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 Erie's specialty.

graffiti product, the key to their use is not that graffiti can't be put onto them. Of course, unwanted graffiti from spray cans or permanent markers can be put just about anywhere on any surface. The key to these AG coatings is whether the graffiti can be cleaned from them without doing damage to the product surface.

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

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

EPC has had a strong offering in some very specialized markets such as anti-graffiti coatings, SEFA grade coatings and fast cure coatings. The company offers a very strong and varied line of anti-graffiti products. As with any anti-

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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ment remains more of an art than a science. There exists no non destructive test for Hydrogen Embrittlement that will reliably predict failure. It can only be said that as more and more of the contributing factors exist, the more likely that Hydrogen Embrittlement can occur. The reason for this is that the mechanism that causes Hydrogen Embrittlement is not fully understood and one component can be subjected to many separate processes, each of which can introduce hydrogen. Additionally the skill of the designer comes into play. By using the correct materials and doing proper analysis of the tensile loads, stresses can be reduced. The elimination of sharp corners and the generous use of radii are also to be encouraged. Control measures tend to err on the side of caution with much consideration given to the potential cost of failure.

High strength heat treated martensitic steels are the most prone to Hydrogen Embrittlement. Other steels such as the PH grade stainless steels can be susceptible to Hydrogen Embrittlement, and some austenitic grades such as 18-8 or the 300 series can also be embrittled if fully work hardened to the martensitic phase.

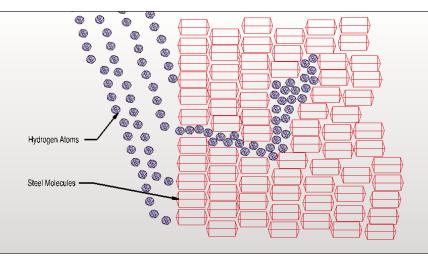


Fig. 2- Hydrogen atoms form during the plating process collecting at stress points in the metal.

Embrittlement into consideration wherever threads are incorporated into high strength heat treated components.

Common sources of the hydrogen can come from steel making, casting, forging, welding, use of spent coolants, excess use of reducing acids, pickling and electroplating. Of these, electroplating is by far the greatest source of Hydrogen Embrittlement. Fig. 2

Of particular concern to processers is the introduction of hydrogen during chrome plating. Hydrogen atoms are produced in large quantities at the surface of the item being plated and, with plating times, measured in hours to ensure there is sufficient time for hydrogen to migrate

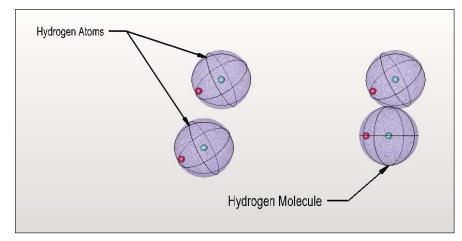


Fig. 1- Hydrogen atoms diffused in the metal will form a very stable Hydrogen molecule that is difficult to split.

How the hydrogen gets in is still under debate after 50 years of study. Fick's law defines how the hydrogen behaves during diffusion. It will always travel from areas containing high hydrogen to those containing less, always moving toward equilibrium as time increases. Therefore, with time, the hydrogen would try to reach equilibrium with the amount being produced by electrolysis. Most but not all metallurgists' think that hydrogen atoms follow faults in the metal and collect on grain boundaries at stress points. As the plating deposit seals the metal, the hydrogen atoms are driven deeper into the metal where, given enough time, they will combine into a very stable hydrogen molecule fig. 1, which is now too big to exit the metal through the same path it entered. The trapped molecules now act on these high stress points, reducing ductility and making it possible for the metal to stress crack under little or no tensile load. Because the failure mode is always in tension, high strength plated fasteners are prone to Hydrogen Embrittlement failure. Designers need to take Hydrogen

deep into the metal fig. 3. Chrome plating specifications contain guidelines for baking parts to eliminate Hydrogen Embrittlement. Comparing specifications will show that there are inconsistencies between them that stem from the lack of a true understanding of Hydrogen Embrittlement. Nonetheless, following these control measures are a processer's primary defense against Hydrogen Embrittlement.

Embrittlement Relief is the correct technical term for the operation to release hydrogen from components. However, the common practice in industry is to call it "baking". The standard temperature is 375F +/- 25. This temperature came about because the normal tempering temperature for many high strength steels is 400F. If an annealed component sees temperatures above 400F, the annealing will be affected, and the part could fail. Specification will also call out a time limit, within which the part must be baked. The reason for this is to start removing the hydrogen atoms before the formation of the very stable H2 molecules. The larger size of the H2 molecules will restrict their

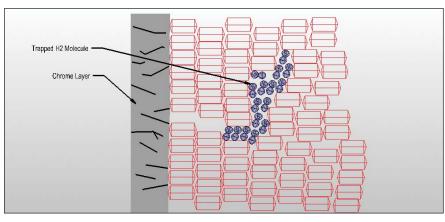


Fig. 3- After the passage of time hydrogen molecules form at stress points and are too big to escape and too stable to split back into hydrogen atoms

mobility, and they will remain lodged in the structure of the metal, where they can do their damage.

Two general rules are: get the parts into the oven as quickly as possible and bake them for at least the specified amount of time. Over baking is not detrimental as long as temperature is controlled. Both of these rules depend on factors under human control. Procedures must call out the correct bake and operators must be trained in the importance of following bake timing and procedures. Supervisors, when planning the work schedule, need to be cognizant of the availability of ovens as parts come out of the plating process. Complicating this is the additional time that might be needed to remove complex conforming anodes, unmasking, cleaning and, finally, dimenbake error. Further, it is the reason for the necessity of including bake charts with certificates of compliance.

sional inspection all within the time limits

required from plating to baking. Opening

oven doors to load additional parts or

power failures can lead to a temporary

decrease of temperature below specified

limits, exasperating attempts to control

All these factors conspire against the

plater, who is trying to stay within traveler

instructions and time limits. This explains

how 70 per cent of embrittlement failures

can occur from something as simple as a

the bake cycle.

Of course, a better option is to not introduce hydrogen in the first place. Avoid electroplating altogether as it will always introduce hydrogen. Some better choices are CVD, TiN, Nedox or Plasmadize to name a few. By including Hydrogen Embrittlement as part of the platers training and ensuring procedures and equipment are available to carry out those procedures, one can greatly reduce the risk of Hydrogen Embrittlement coming from your operations.

Joe Pasquarelli is General Manager of Aluminum Surface Technologies, Burlington, ON.

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CASF Environmental Forum 2012

"Environmental and Regulatory Update for the Surface Finishing Industry" The Canadian Association for Surface Finishing (CASF) held its Forum on November 13, 2012 at the Hilton Garden Inn Toronto, Vaughan, ON.

The event drew 70 people and 12 exhibitors and was an opportunity to network with fellow industry finishers, suppliers, government officials and environmental experts concerning government regulations and how they will affect your company and our industry.

Speakers included: Richard Thibodeau and Michael Kuntz, co-chairmen of CASF who spoke about the association's issues; Peter Paine, Environment Canada who dealt with chrome regulations, Manon Drake, Environment Canada and the PFOS Regulations Update; Laura O'Reilly, Ontario Ministry of Environment Toxics Reduction Act: Update from the MOE; Christina Labarge, Ontario Ministry of Environment (MOE) and the Local Air Quality Regulations and the Metal Finishing Sector.

After lunch and viewing of the exhibitors,

Surface Finishing Trends: A Global Perspective was dealt with by Christian Richter, The Policy Group, Washington D.C./ NASE. Then Keith Legg, Rowan Technology Group / ASETS DEFENSE

Spoke about Technical Alternatives to Nickel, Chromium, Cobalt and Cadmium and Hudson Bates, NiPERA- Nickel Institute gave a Nickel Update: Trends from the EU.

Richard Thibodeau and Michael Kuntz CASF thanked all their helpers, attendees and exhibitors and speakers and said they do plan to have another forum in the future.

The Canadian Association for Surface Finishing (CASF) is the principal surface finishing industry association in Canada established to provide business services to its members. CASF aims to provide a single unified voice for the surface finishing industry in Canada.

Photos by Sandra L. Anderson



Shawn Michajiuk from Environment Canada.



Matt Scruton, Nova Filtration Technologies.

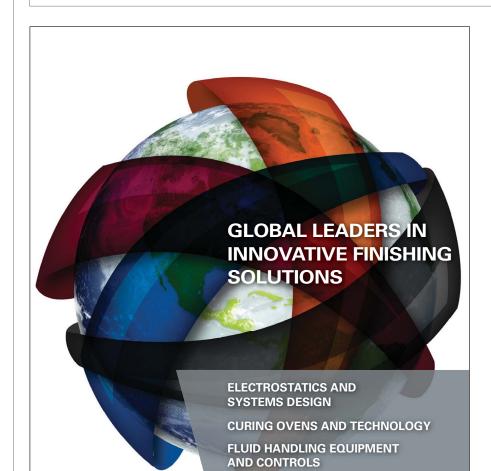


Christian Richter, NASF.



Keith Legg gave an animated talk about Alternatives to Nickel, Chromium, Cobalt and Cadmium.

CORPORATE PROFILE: DEVILBISS RANSBURG BGK BINKS...



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Michael Kuntz, CASF, Manon Drake, EC, Laura O'Reilly, MOE, Peter Paine, EC, Christrina Labarge, MOE, and Richard Thibodeau, CASF, were the morning's speakers. All speakers of the day were presented with a plaque.



Janice Jacula and Charles Morris from Dynamix.

Hudson Bates, NiPERA-Nickel Institute.



Met-Pro's Robert Teich (US) and Jim Lively (Canada) with Environment Canada's Peter Paine.





Altech's George Bennett and Alexander Keen.



Robin Brown with Pinchin Environmental.



JBC's Peter Forth and Jeff Battiston with Autum Purification Solutions.



Michael Kuntz, Keith Legg, Hudson Bates and Richard Thibodeau.





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cost-effective designs. Our product line ranges anywhere from hi-temp masking for powder coating needs to low temperature masking alternatives for lower temperature application. We have Silicone and Teflon products that incorporate High Temp Magnetics as an option. EPSI specializes in many types of standard and engineered materials including: High Temperature, Flame Retardant, and Conductive Silicones; EPDM; Viton; Teflon; Synthetic and Natural Rubbers; and plastics such as ABS, LDPE, HDPE and Nylon both for standard and custom parts. We also carry High-Temperature Polyester Tapes, Crepe Tapes, Polyimide Tapes, Kapton and are a certified 3M converter and custom die-cutter.

Masking Products from EPSI

EPSI standard masking product range includes masking caps, plugs, stoppers, masking die-cuts, masking tapes, tubing and sheeting and hooks. We welcome you to explore all the categories to find the product that meets your needs. EPSI supplies a vast range of masking products. In addition to our standard products, EPSI specializes in rubber molding for OEMs.

Global Capabilities

EPSI has 5 distribution centers strategically located across the US and Europe: Wisconsin, California, South Carolina, Indiana, Connecticut, Texas, China, and The Netherlands. EPSI is currently present in 17 countries globally.

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Military

- Industrial Finishing
- Plastics rubber
- Electronics
- Furniture

Technical Capabilities

EPSI has a state of the art engineering facility located in Franksville, WI. We specialize in developing custom masking and hanging solutions to meet our customer's needs. Our R&D continuously creates innovative and cutting edge designs that increase productivity, eliminate re-work and decrease the labor required for application and removal of masking. We have custom molding capabilities to manufacture rubber products for global manufacturing. EPSI is a progressive company, which has become a major force through its innovative products and

Vendor Management Inventory

EPSI also offers VMI for customers desiring inventory management.

Contact information:

If you can't find what you are looking for, please don't hesitate to call our experienced consultants to work out a custom masking solution based on your requirements or to learn more about our rubber molding capabilities at

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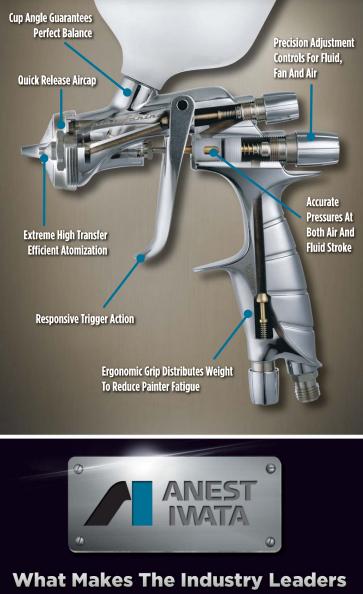
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CONTROL OF AUTOMATION

CORPORATE PROFILE: ANEST IWATA USA





ANEST IWATA USA, Inc. is the North American subsidiary of ANEST IWATA Corporation in Japan. As a part of the world-class operation, ANEST IWATA continues to produce spray equipment for every size and style of application purpose, from fluid handling to electrostatic equipment, flat line and robotic automatic equipment to hand spray gravity and pressure guns all the way down to airbrushes and marking guns for circuit boards.

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As always thank you for your continued support of ANEST IWATA products.

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Systems Used in Plating

By Joe Pasquarelli

Why don't more contract plating shops adopt automatic plating technologies? You are far more likely to see automation employed in captive shops. In a captive shop, the variety of components is lower and the scheduling more controlled. In addition, there are usually more engineering, maintenance and support services to plan and install the correct system for the application. Most contact shops are run by an owner operator, along with a couple of key employees, who have worked hard to succeed in a very competitive regulated industry. The old reasoning was that the variety of work made it impossible for contract shops to fully take advantage of automation. In a cost benefit analysis, the automation does not pay for itself, because the automation was too inflexible to the ever changing needs. The reason for this inflexibility was not so much the hardware involved but more to do with the limits put on the control system by the use of relay logic, NC controls or low powered PLC's. Programming options were limited and many employees of contract shops were uncomfortable with computers and programming languages. Most owner operators are proud of their own ability to run everything in their shops and are not comfortable with handing over control of key processes to outside entities that may not be able provide the needed services on a timely basis.

However there are now a number of factors that make automation more desirable, less risky and profitable.

Firstly computers are now everywhere. We carry more computing power in our pockets than what was used to put a man on the moon. User interfaces are more intuitive and easy to use without reading manuals and there is no need to learn programming languages. Wireless technology lowers cabling costs and ensures widespread access to servers and networks. The additional computing power available is used to allow more inputs, outputs and logic to systems thereby providing more complete control and feedback. Interface standards have gotten rid of a lot of custom components that are now replaced by off the shelf parts that are very competitively priced. Shop tough touch-screens can bring up different screens and eliminate fixed menus thus making retrieving and entering data easy. Networking your automation control system to your management PC's can allow for the downloading of parameters and instructions for the operator and equipment. Electronic controls that are well integrated into your automation system can make the difference between success and failure. It is the brains of the operation,

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and it provides you with the ability to input your parameters, remember parameters that you have saved, send signals to your equipment, receive feedback from your equipment about what is happening during processing and provide analysis and documentation about the process. A fully integrated system can even "read" a shop traveller and document each job accordingly.

In the past, data on shop travelers would be hand written by operators and stored in filing cabinets making retrieval of data time consuming. Inputting shop floor data was time consuming and inefficient, so it was rarely done. Data can now be input by scanning barcodes or by using non-contact Radio Frequency Identification (RFID) sensors. Coming on the scene now are tablets on the shop floor to eliminate paper and provide live tracking of shop floor data. The control system can be fully integrated into all the various elements of automation to create a virtual model of your plating system. It not only provides control of movement but also warns you of potential problems, upcoming maintenance requirements and can stop processes from being performed when parameters fall outside of acceptable limits.

HOIST SYSTEMS

A hoist drive system provides control for both horizontal and vertical motion. Some hoists are also able to tilt or vibrate the load in order to aid drainage. Automating the hoist saves labour, increases throughput and improves quality by providing process repeatability. Electric hoists and drives with linear position sensors or

micro-switch stops let the control system know where the hoist is vertically and horizontally. An ideal control system will condrive speeds, acceleration, trol deceleration, drainage times, time in tank and position. Most control systems work in milliseconds so there will be a vast improvement in consistency. Acceleration and deceleration speeds can be tailored to the weight of the load and accidents from hitting the tops or sides of tanks can be eliminated. Drag out can be tightly controlled to help preserve various tank chemistries. With automated hoists, you can more reliably predict completion times and create better schedules.

TANK SOLUTION CHEMISTRY

Tank chemistry can be controlled through automation. By using sensors in your tanks and using precision dosing pumps, you get rid of all the peaks and valleys of your solution concentrations, which, in turn, will give you more consistent plating results. The sensors and the pumps can report to your control system as to their operation so that any negative trends can be identified before they become a problem. SPC control of solutions is very difficult to maintain manually because of the amount of data that needs to be collected, analyzed and acted upon. A good control system will provide an SPC level of control with no additional cost once the system is setup to provide it. Most plating shops without computer control systems that attempt to implement SPC find that they are able to control one or two key parameters per process at best. An automated system can provide SPC control over several characteristics per tank.

RINSE CONTROL

All plating shops use water for rinsing. There could be a mixture of Municipal water, DI and recycled water. A system of reusing rinse water by filtering or moving water from critical to less critical rinse tanks may be in use. By adding rinse water monitoring into the control system, water consumption can be further reduced by turning off rinse waters when they are not needed. In many shops, rinse waters are turned on at the beginning of the day and turned off at the end of the day. A control system can monitor production and rinse water quality, then adjust water flows accordingly.

RECTIFIERS

Rectifiers are used in many areas of plating processes. Amperage, voltage, ramp, pulse and time all need to be controlled. In many cases, parameters are load sensitive so a calculation needs to be made to the rectifiers output. By tying in the rectifier's controls into the main control system, parameters can be optimized, calculation error reduced and optimal results achieved.

FLEXIBILITY

Modern control systems can provide the flexibility to achieve greater control at lower cost while improving your capability and quality. By selecting the right contractor and then working closely with them to ensure that they understand your needs, you can develop a control system that suits your business needs for today as well as tomorrow. Although putting enough support by key personnel into the design portion of the project may stretch resources, the payoff is that the system behaves as expected. It is as much an educational process for your team as for the contractor. With new control systems being so flexible, you need to develop in house expertise to ensure that you take full advantage of this flexibility. Once employees start to understand the control systems capability and how to adjust it, the full benefits can be achieved.

CONTROL, CONTROL, CONTROL

Automation Control Systems will monitor many interrelated variables, consider the workload, provide plating parameters and track actual outputs of each job. The more integrated the control system is with all of the devices, the better it is able provide the maximum benefits. By collecting all of this data, it can be reported, analyzed and provide information for further improvements in the future. In effect, it becomes part of your management cycle, showing you the results that a given set of parameters will provide. Costs have come down to the point where small shops can afford these control systems. They improve traceability and quality, because they remove the guesswork when doing root cause analysis and new process development. For platters, the flexibility and consistency provided by modern control systems will lower costs and improve quality.

Joe Pasquarelli is General Manager of Aluminum Surface Technologies, Burlington, ON.

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Binks MX HD (Heavy Duty)

A new series of airless and air assisted airless spray outfit; the Binks MX HD two ball piston pump

CORPORATE PROFILE: JBC LIMITED



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JBC Limited is an international company, with 25 years of experience in the engineering and design of electroplating systems. During this time, we have provided cost effective and innovative equipment for surface finishers in the fields of anodizing (Type I, II and III), non-destructive testing, acid etching, metals passivation, hard chrome plating, electroless nickel, phosphating, e-coating, aqueous cleaning, ultrasonic cleaning, coinage, metals refining and decorative chrome. JBC offers turnkey solutions for a broad spectrum of processes involved in metal finishing of metals including waste water treatment, incoming water purification, water storage and distribution, ventilation systems, floor coating systems complete process operating systems and more.

A JBC process system is designed with an engineering approach utilizing over 30 years of electrochemistry experience. Our engineering team is comprised of individuals who have worked in the industries we service. This in-depth experience allows our team to anticipate customer concerns to ensure that systems come together and operate in a user-friendly fashion. A dedicated project manager will coordinate the engineering team efforts to ensure all customer equipment and process specifications are understood and addressed.

Engineering services offered include: • Materials handling devices Our expertise in fabrication includes ability to work with most types of steels, titanium and plastics. We also offer sandblasting and coating services in either epoxy or powder type coatings. Installation services are provided for all aspects of electroplating equipment installations and process flow remodeling.

All of our turnkey systems are supplied with a comprehensive pre-start safety review and onsite training program to ensure the customers' personnel are fully trained in all aspects of equipment functions at point of line commissioning.

The customers need for DC power sources for many electroplating operations is provided through our rectifier division, North American Rectifier (NAR). Here we are able to design and fabricate DC rectifier units, both conventional and switchmode style that will meet the customers processing requirements. Our rectifier units have a proven history of stable trouble-free operation, regardless of duty cycle and their operating environment. Rectifier units are available for all electrofinishing needs, including units for electrowinning refining, waste sludge dewatering, electrodialysis, pH control, anodizing and hard chrome plating.

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 Pre-start safety reviews (PSR)

- System upgrades
- Spare parts
- Conversions to other electroplating processes

For installations of rectifier systems, we offer engineering and installation of copper bussing and cabling. Where customers are looking to have operational control of rectifier units from central or multiple locations, we are able engineer and provide a PLC system with user- friendly HMI screens.

The JBC Limited team approach ensures that products sourced through us will be built with pride to the highest quality standard. Our mission is, "to provide our customers a cost effective well engineered processing system which meets all design and products requirements in an environmental sound manner."

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line reinvents and simplifies heavy duty pumping power. It is designed for harsh environments, especially for use with protective coatings. With a quieter, low to no ice operation, the MX HD outperforms and outlasts other sprayers and operates 2.5 times longer than competitive models without interruption.

Binks Gemini II

This new line of double diaphragm pumps from Binks provides a 1:1 fluid ratio to compressed air supply. Built to pump a wide range of viscosities and volumes, Binks Gemini II delivers more fluid delivery per stroke than previous models, up to 38 per cent more in 1" pumps. Yet, the low internal velocity and

gentle pumping action will not shear sensitive coatings. Binks Gemini II is tough enough to run dry without damage or heat buildup; and no mechanical seals means no leaks.

Binks Circulating Pump

Binks expands the successful Maple horizontal piston pump line with new medium pressure models for air assist applications. Designed to efficiently and gently pump a variety of coatings and keep solids in suspension, the Binks Maple is used in hundreds of applications worldwide. The quick exhaust valve and patented air logic consumes less air versus competition, and quickly pays for itself with reduced maintenance and energy costs. www.binks.com.

New Graco Sprayer Provides Ratio Assurance for Fireproofing Coatings

When it comes to protecting structural steel from high-temperature hydrocarbon fires, it is essential that passive fire protection (PFP) materials are applied properly and on-ratio. The new Graco XM PFP Plural-Component Sprayer, built specifically for epoxy intumescent coatings, offers data reporting technology so users can confirm that coatings are sprayed on-ratio, at parameters set by the material manufacturer. With the system's control technology and USB port, the mix ratio data is available for download, as



well as other historical spraying data including fluid temperatures, spray pressure and total flow output. The system will also automatically shut down if off-ratio conditions occur.

The Graco XM PFP is easy to use, and is designed with high-performance heaters and temperature controls to spray the toughest epoxy intumescent materials.

www.graco.com

Troy Introduces Troysol 382 Wetting Additive for Surface Tension Reduction

Troy Corporation announces the introduction of Troysol 382, a multifunctional, silicone-free wetting additive that promotes strong dynamic surface tension reduction in aqueous systems, resulting in excellent wetting and application characteristics. The use of Troysol 382 also promotes foam reduction and the elimination of surface defects, such as cratering, crawling, and fisheyes. Representing a direct response to the needs of industry, the new performance wetting additive offers manufacturers of coatings, inks, and adhesives the ability to improve high speed application properties and gives them the flexibility to incorporate the product at any stage of the production process. www.troycorp.com

PosiTector 200 Coating Thickness Gage for Polyurea

Just launched, the fifth generation PosiTector 200 Ultrasonic Coating Thickness Gage from DeFelsko is ideal for measuring the thickness of polyurea and other coatings on concrete. The NEW PosiTector

200 has been redesigned with more features, additional measuring ranges and new models.

Additional features include a NEW polyurea probe for measuring thick-film coatings up to 300 mils. Importantly, the new PosiTector 200 has the ability to accept all coating thickness, surface profile, environmental and wall thickness probes.

Advanced models feature WiFi wireless technology and enhanced graphics mode with screen capture for detailed analysis of the coating system. With each successive generation, the PosiTector 200 has become more economical and easier to use. www.defelsko.com



Enthone Introduces Cyanide-free Bright Copper Process

CUPROSTAR NC alkaline, cyanide-free bright copper process has been introduced by Enthone. A cost-effective and environmentally sound alternative to traditional cyanide-containing processes, CUPROSTAR NC process is engineered for use on all commonly used base materials, including zinc die cast. The process exhibits exceptional throwing power on complex part geometries ensuring that complete, consistent and uniform coverage is achieved.

Specifically, the CUPROSTAR NC process provides high yields and significantly reduced rejects



when plated on aluminum, brass, steel and zinc die cast parts. The production-proven process is completely cyanide-free, reducing regulatory burdens and exposure to government restrictions. www.enthone.com

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

Depuis maintenant 21 ans, Inortech n'a de cesse de donner à ses clients des occasions uniques de développement par l'appui technique incomparable qu'elle seule est capable de leur offrir. Pour nos fournisseurs, il s'agit d'une assurance de visibilité et de mise en marché hors pair de leur gamme de produit.

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

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

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

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été, est et sera confrontée, Inortech est l'atout incontournable de votre réussite, grâce à son modèle unique et avant-gardiste d'entreprise . Ensemble, voyons ...







"beyond chemistry"

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

The great experience of Inortech's personnel at the customer service, sales, regulatory and technical level will, without a doubt, enable you to successfully establish new technologies. Our laboratory is always maintained at the cutting edge of technology and we constantly make sure that the latest equipment is available. As an example, this year we purchased the latest generation of Weather-O-Meter. In doing so, we ensure outstanding support to our customers and suppliers. Inortech's mission is always to push to the limit of the technologies offered by our suppliers and others for innovative and "avant garde" solutions. In order to maintain our technology expertise and the excellent interpersonal skills so well recognized by the market we serve, all Inortech's personel, without exception, are invited to go to conferences, congresses and to follow continuous formations.

For the last 21 years, Inortech has strived to help customers successfully secure new opportunities supported by the unparalleled technical team. Also, for our suppliers, we assure an outstanding visibility and an excellent market penetration. partnership with our customers and suppliers.

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Inortech's success has always been its outstanding capacity to understand new technologies and to be able to explain them to our customers. This forces Inortech's staff to always adapt and be on top of the ever-changing market conditions. Head Office 3014 rue Anderson Terrebonne, QC J6Y 1W1 Customer Service 1-800-661-2064 www.inortech.com

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

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