CANADIAN FINISHING & COATINGS MANUFACTURING MAGAZINE

January/February 2011



On Site at Offsite Industries

Offsite Industries, a family-based powder coater, as its very name suggests, has as its principle objective of handling all its customers' needs "off site" at its modern 50,000 sq. ft. facility. This new facility is situated in St. Catharines, Niagara, in one part of a large Industrial complex, that is co-owned by Ed Baldassi and a partner, also operating from this complex. There is plenty of room for expansion, and Offsite is already planning its Phase II expansion of another 20,000 sq. ft.

Towards meeting the company's objective, it designed three custom built, highly efficient, environmentally friendly, production lines, with necessary peripherals to meet the varying customer needs.

The plant has the highest technologically sophistication in Ontario, says Baldassi. The automatic powder paint system uses Wagner spray equipment, which also ensures nine-minute color changes. This is a long way from the earlier color changes of 30 minutes or more, on its old system. The Batch spray system too was designed to accommodate a whopping 35ft by 15 ft part, also powered by a Wagner system, with distance sensing, power and powder control. Wagner was directly involved in this set-up, with representation from Germany. They use PPG and Chemfil environmentally friendly paint and chemical products.

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ALSO IN THIS ISSUE

- Low VOC Latex Additives
- Air Pollution Control
- Masking
- Decorative Plating
- Industrial Finishing **Stripping Methods**

AND MUCH MORE!

ent Chemistry

By SANDY ANDERSON

The chemistry behind pigments is interesting indeed. The pigment, a fine powdered raw material that does not dissolve in water or oil carries with it the ability to set the colour, hiding power, tinting strength, high dispersion, anti-rust and light stability of a coating. They are available in natural and synthetic versions.

COLOUR ALTERING IN UV

The effect that sunlight and heat can have on a pigment, sends formulators to their laboratories for solutions.

Gogh added to brighten the vibrant chrome yellows of his south of France Sunflowers triggered a reaction that turns the paint brown, states the study.

The chemistry behind the discolouration had the art conservationists baffled, because some paintings would change while others were unaffected. Despite slowing down the degradation by keeping it cool with air conditioning, the yellow paintings suffered most.

IN THE NEWS

Association News WMS, Canada's Woodworking Show, Has New Location and Dates

The 2011 edition of the Woodworking Machinery & Supply Expo (WMS), Canada's premier woodworking event, is moving to the state-of-the-art Direct Energy Centre with the new dates of October 27-29.

WMS had previously been scheduled to return to the International Centre in Mississauga, ON, September 29 - October 1.

Official announcement of the relocation of WMS to the Direct Energy Centre ends months of negotiations by Vance Communications Canada to find a venue that will best meet the expectations of attendees and exhibitors.

The following story is about artwork, but it also teaches us a lesson about overall paint and pigment chemistry and how the paint is going to be used and how it is going to react to its substrate or with other pigments in other paints, must be taken into consideration.

Just recently, on Saint Valentine's Day to be exact, it was published in the journal Analytical Chemistry, that the artist Van Gogh doomed his famous Sunflowers by adding white pigments to yellow paint. Sulphate-based white powders that van

Using tiny flakes of paint and an enormous x-ray machine, scientists found that sunlight kicks off a chemical reaction that ultimately turns yellow paint brown.

The sunlight oxidizes the oil in the paint, releasing electrons, which are then taken up by the yellow pigment - lead chromate – turning it green. The mix of green paint with oxidized oil produces a chocolate brown colour.

The team led by Koen Janssens at the University of Antwerp took samples of 19th century tubes of yellow chrome paint and exposed it to ultra violet light. It took three weeks for the yellow paint to turn brown.

The Direct Energy Centre, located near downtown Toronto, is Canada's largest convention facility. It is located about 1 mile away from the Toronto City Airport, hub of up-and-coming Porter Airlines. Porter offers non-stop service from throughout eastern and central Canada, plus several U.S. cities. The DEC is one of the world's most environmentally responsible exhibition and convention facilities and is recipient of numerous awards. A significant impact of the move is that exhib-

it booth rates will be reduced below those of recent WMS shows. Past and prospective

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CORPORATE PROFILES

Univar CASE 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, the Asia-Pacific region, 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 market opportunities and advanced product development, offering assistance with green and alternative formulations, including low-VOC. Our commitment to the CASE 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 — we're in the business of keeping you in business. 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 CASE 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, Rubber and Low-VOC. (If you would like to receive a copy of any of these guides, please contact your local Univar technical specialist, listed below.)

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
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- Antifoams
- Anti-setting agents
- BiocidesBlock copolymers
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- Cross linkers
- Cure agents
- Defoamers
- Dispersants
- Emulsions, UV Curable Oligomers, Acrylic, Alkyd & Polyesters
- Epoxies
- Functional Extenders and Fillers
- Flame retardants
- Flexibilizers
- Monomers, reactants and intermediates
- Pigments, opacifiers and colorants
 Plasticizers
- Polvols
- Resins, rosins and tackifiers
- Rheology modifiers
- Rust inhibitors
- Solvents
- Surfactants
- Thickeners
- Urethanes
- Vinyl esters
 Wax additives
 - Wetting agents

INNOVATION = VALUE



CUSTOMERS DEMAND ENVIRONMENTALLY FRIENDLY PRODUCTS. LET UNIVAR CANADA SHOW YOU HOW YOU CAN GO GREEN.

We partner with world class suppliers to connect you to new products and the latest technologies, while supporting "green" initiatives. Our CASE Specialties group supplies a comprehensive line of sustainable raw materials and products that include solvents, resins, dispersions, de-foamers, biocides and many more.

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 SentryTM 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 valueadded 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 the processes that support them.

In the Quality Improvement Process, quality means one thing – conforming to and exceeding requirements.

For more information, speak to a Univar CASE Specialties technical specialist: Dorval Stella Psaradellis +1 514 421 0303 Toronto Hollis Jailal +1 416 740 5300 Vancouver Hugh Andrews +1 604 273 1441

Our industry-focused specialists have the experience and training to promote technically differentiated products. Consider Univar Canada your partner, helping you succeed in sustainable, innovative product development. Technical expertise, quality, knowledge — it all adds up to value.

INNOVATION > TECHNICAL EXPERTISE > MARKETING > SALES > LOGISTICS > DISTRIBUTION

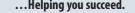


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A Tough Winter

In this picture I am "out standing in my field" at Off-Site Industries, a powder coat facility and more in St. Catharines, ON. On the left of me is Plant Manager Cletus Benedict, who has been with the company 19 years, and on the right of me is their IT guy Rob Parsons. Offsite Industries just finished a 50,000 sq ft expansion and we wanted to go and see it. See the story in the Industrial Finishing powder coating section of these pages.

I had all kinds of things I wanted to talk about this issue. Such as the parity of the Canadian and US dollar, give or take 2 cents, and how it might effect the coatings and finishing industries, but I am not an economist and would just be quoting other economists who have been quoted before.

Then I thought I would talk about intriguing new technologies, such as a bad bacteria Dalhousie University in Halifax found eating away at the Titanic wreck faster than expected, creating a new problem for manufacturers of Marine coatings, but if harnessed, the bacteria could help dispose of old wrecks. Also in the marine coatings environment, scientists are looking into the sticking power of mussels and trying to develop their own version of the sticky byssal threads that mussels generate, to aid in paint adhesion.

Then I thought I would talk about the new paint shop that the Brampton, ON, Chrysler Canada assembly plant needs in a bad way and is being rumoured to appear this coming fall to the tune of \$600 million, but they have yet to issue any official news release and in researching this it was difficult to get a straight answer.

Then I thought I would talk about car paint colours, because PPG came out with their list and others are soon to follow. But, I have talked about this before and the top colour is always silver.

Then the Canadian Surface Finishing Industry was dealt a real blow loosing three key players practically at the same time. Our newsroom was thrown for a loop as two favourites, brothers to the industry and to each other died this winter literally within 6 weeks of each other. Co-owners of Kuntz Electroplating inc (KEI) in Kitchener, ON, Paul (72) and Bobby Kuntz (79) both passed due to illnesses and will be greatly missed. Although they were both retired from day to day operations for several years, they ran the family business until their health prevented them from doing so, but it is their forward thinking when it comes to the environment and technology that has helped put the company where it is today. Kuntz is left in very good hands and since both men had large families, their children grew up in the business and continue to run it and be a part of the industry. Michael Kuntz, son of Paul and VP of KEI is currently co-chair of the CASF. Both Paul and Bobby got involved in the business after the death of their brother David (31). Bobby the elder of the two was currently busy being a football star in the CFL and retired to devote himself to running the family business. The league couldn't part with him long though and lured him out of retirement. Bobby was a Toronto Argo and a Hamilton Tiger



On site at Offsite.

Cat and a two time grey cup winner in the 60s, but when that was done he came home to KEI. Paul didn't play pro football, but was a star in his own right, always putting people first and devoting himself to the CAMF/CASF serving as its president for 7 years. The employees at Kuntz describe them as true father figures. Donna Kiebel, Public relations and human resources for KEI says, "Kuntz prides itself on employee loyalty, so we have many, many employees who have been with the company over 20 years and literally new Bob and Paul personally. That's why employees are so loyal, because they were good people. We all knew they were unwell, but it is so hard on all to lose a loved one and so close together."

Then there is Marc Sider (51), of Montreal, QC, who strangely enough died the same day as Paul Kuntz. Sider, an engineer and all round nice guy, worked tirelessly in his field and was very big on the environment and energy efficiency. He was a frequent speaker at association events for the CAMF/CASF and he penned several articles for the industry. I remember him as very helpful and very patient when it came to explaining what he was trying to get across. He wrote in English for me too, which is an accomplishment since his first language is French.

They say things happen in threes, but this is ridiculous. CFCM sends its deepest condolences to the Kuntz and Sider families. See tributes to all three men in these pages.

Meanwhile, if you have a company expansion or installation of state of the art equipment that you would like to brag about and it happens to be within a reasonable driving distance of Toronto, please let us know and Pete and I will come and see you with cameras and pen and notepads in hand. Also if you are considered an expert in your field and would like to try your hand at writing for us, please contact me and I will provide you with the topics in our editorial schedule.

Sincerely, Sandy Anderson

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IN THE NEWS

exhibitors can expect to receive 2011 space applications soon from Hall-Erickson Inc., show management of WMS.

Steve Reiss, vice president of Vance Communications Canada, owner of WMS, said, "We are extremely excited at the prospect of bringing WMS to the Direct Energy Centre. The move not only allows us to offer exhibitors lower booth rates but to provide exhibitors and attendees all of the comforts and amenities afforded by a worldclass convention facility."

Industry professionals are invited to share their knowledge through seminar presentations. Topics should relate to your area of expertise and must be non-commercial in their presentation. Submissions will be reviewed by the Woodworking Conference Committee. Applications are due by March 18, 2011.

WMS will attract thousands of furniture, cabinet, millwork and other secondary wood product manufacturers to view displays by leading international manufacturers and Canadian distributors of woodworking machinery, supplies, components, materials and more. The biennial event is supported by several of Canada's best-known trade groups, including the Architectural Woodwork Manufacturers Association of Canada, Canadian Kitchen Cabinet Manufacturers, Wood Manufacturing Council and others. In addition to the expo, plans are underway to present 2011 WMS attendees with the most extensive educational conference in the show's history.

"We are committed to offering a timely and most comprehensive seminar program ever," said Rich Christianson, conference director."Our goal is to provide woodworking executives with the information that will help them improve their current operations while keeping an eye to potential growth opportunities for their businesses."

To learn more about WMS, visit Woodworking-Expo.ca. For information of exhibit sales and sponsorship opportunities, contact WMS Show Management at (800) 752-6312 or wms@heiexpo.com.

FABTECH Changes Dates

Increased automation and demand for floor space fuels date change.

Show management announces that the opening of FABTECH - North America's largest metal forming, fabricating, welding and finishing event has been moved back one day to now open on Monday, November 14 and run through Thursday, November 17, 2011 at Chicago's McCormick Place.

The shift is due to a number of positive factors, including an increase in exhibitor participation, demand for larger booth spaces and exhibitor's plans to display highly automated machinery on the show floor. Additionally, due to factors beyond our control, the show is subject to having a shortened move-in period for 2011.

"We feel the date adjustment is necessary in order to accommodate our exhibitor's needs," notes John Catalano, FABTECH co-show manager. The additional move-in day will improve exhibitors' ability to present never-before-seen machinery, high-tech equipment and elaborate displays. Chicago has proven capabilities of handling machinery expositions and we are confident FABTECH exhibitors will experience a high level of service and cooperation from everyone involved. Furthermore, the new work rules at McCormick Place are going to save exhibitors time and money on their set-up and dismantle and improve their overall exhibiting experience."

New Vision and Mission for the **Electrocoat Association**

"VISION: We are the leading authority dedicated to improving the business of our members in the electrocoat industry.

MISSION: Our mission is to drive electrocoat growth by providing access to information, education and networking with industry leaders," states a recent press release.

The Electrocoat Association met for a Strategic Planning Session in Lima, Ohio on November 30 and December 1, 2010."We took a very focused look at our past, present and future to assess the different needs of our industry and membership," commented Executive Director Karen McGlothlin. "We have been successful in the past in supporting our membership, but we operate in a different environment today with different needs. We needed to focus on those needs to determine a direction for our organization to continue to support our members and our industry and to meet those

needs. We are very excited about our direction and our commitment to the success of our members."

During the 2-day session, the Association's Board of Directors built on the founding values and directives initially designed for the organization, setting a course for the future with new vision and mission statements. As part of the strategic assessment, the Board measured the industry through a timeline of events and trends reviewing the past, looking at the present environment and projecting into the future. The group evaluated opportunities and threats, strengths and weaknesses and performed a stakeholder analysis to determine interests and influences of those involved with the organization.

Out of these activities came the development of the New Vision and Mission Statements backed by strategic initiatives that will get priority attention. The Association will still provide most of the products and services as in the past, but will align them with current technology and provide new offerings as needed. The six (6) top initiatives for the next 1-3 years are:

- 1. To assess our technological needs and procure necessary tools to achieve our Vision and Mission Statements.
- 2. To globalize the website and expand the audience we reach.
- 3. To implement social networking tools to encourage the sharing of information among membership and the electrocoating community.
- 4. To incorporate online technology (webinars, live meetings, etc) into our educational and promo-

CORPORATE PROFILES

FMP Coating Thickness Instruments

The Flexible Solution for your Measurement Applications

- Optimum accuracy
- High precision probes
- Instant base material recognition
 - USB communication
 - Ultra shock resistant case
- IMO-PSPC and SSPC-PA2 specifications



Fischer Technology

FISCHER TECHNOLOGY OFFERS A FULL LINE OF COATING THICKNESS MEASUREMENT AND MATERIAL TESTING INSTRUMENTS

Fischer offers a complete range of hand-held coating thickness gauges ideally suited for measurements of paint, powder coating, plating and anodize. Fischer also provides certified calibration foils and other standards.

The FMP Series instruments are designed with builtin measurement reporting to meet the requirements set forth by SSPC PA2 and IMO PSPC. These gauges measure over ferrous, non-ferrous, or both ferrous and nonferrous substrates and have an easy to read, bright graphic display with an extremely durable shock resistant casing. The large selection of Type 2 interchangeable probes are extremely accurate and have a wide measurement range designed for hard to reach areas, curvatures, surface roughness and even underwater measurement. The FMP30/40 gauges are available with Bluetooth® capabilities. In addition to the FMP Series, Fischer also offers the MPOR Series which is a small handheld unit with an internal probe, two large displays, automatic substrate recognition, and like the FMP Series, the MPOR is precise, robust, and easy to use.

Other products offered by Fischer include the PHASCOPE® PMP10 for measurements according to the phase-sensitive Eddy current method, ideally suited for measuring the non-ferrous metal coatings on steel fasteners and other small plated parts. In addition the PHASCOPE® DUPLEX measures individual thickness values of multi-layer coatings used in the automotive and appliance industries. The SR-SCOPE® RMP30 measures the thickness of copper coatings on pc-boards. The SIGMASCOPE® SMP10 is for measurement of the electrical conductivity of metals such as aluminum or copper. The ANOTEST® YMP30-S is for testing the sealing quality of anodic coatings on aluminum (a quality feature for the weather resistance of the coating.) The FISCHERSCOPE® HM2000 and PICODENTOR®HM500 are measurement systems to determine the Martens Hardness in the micro- and nano- ranges. The universal measurement system FISCHERSCOPE® MMS® is designed for coating thickness and materials testing according to the magnetic, magnetic induction, Eddy current, beta backscatter and electrical resistance measuring methods. The MMS® BETASCOPE® uses the beta backscatter method and is a proven test method and is ideal for most coatings applied to any substrate



material. Other MMS® modules available are the PERMASCOPE®, SIGMASCOPE®, SIGMASCOPE® DUPLEX, and NICKELSCOPE®

Fischer's new generation X-ray fluorescence instruments utilize an energy dispersive X-ray fluorescence analysis (EDXRF) method. The measurement and control software allows for the simultaneous thickness measurement and analysis of even complex coating systems. with or without calibration standards. Fischer has instruments for the analysis of jewelry and precious metals and also the analysis of hazardous substances in electri-

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ship and the electrocoating community.

- To incorporate online technology (webinars, live meetings, etc) into our educational and promotional offerings.
- To communicate the value of membership to members and those interested in the electrocoating industry.
- To develop and strengthen alliances that can benefit membership and the electrocoating industry.

"We are moving forward into the future and have a renewed commitment to our members to provide products and services that will improve their business." states McGlothlin. "We welcome any member suggestions, contributions or volunteers to support these tasks."

The Electrocoat Conference Steering Committee, with the approval of the Board of Directors, has announced Orlando, Florida as the home of Electrocoat 2012. The Conference had been held in Florida for many years before moving to the Midwest in 2008 to be closer to its attendee base. Recent conference surveys have indicated that many participants wish to return to Orlando. "We've listened to our attendees and suppliers and are returning to Orlando, Florida in 2012," states Karen McGlothlin, The Electrocoat Association Executive Director. "Orlando is beautiful in the Spring and has been a great location for the conference in the past. We are excited about our venue and look forward to a successful event in 2012."

Conference Speakers will focus on a multitude

of topics within keynote addresses and basic sessions. The program will emphasize the efficiencies of electrocoating, from its cost saving advantages through precise film build and transfer efficiency to its environmentally friendly attributes for our industry. It will also contain topics of interest to the manufacturing industry as a whole.

The Conference Steering Committee is soliciting abstracts for papers to be presented at Electrocoat 2012. Speaking at this prestigious industry event is an opportunity to showcase your company's new innovations or technology or share your experiences with Electrocoat in your facility.

Important Date...Your 100-200 word abstract must be submitted to The Electrocoat Association by February 15, 2011. Written papers are a MUST and will be submitted by January 5, 2012 for inclusion in the Conference Proceedings.

For more information, go to www.electrocoat.org, or contact Karen McGlothlin, Conference Manager, at 800-579-8806; e-mail kmcqlothlin@electrocoat.org.

Company News

Anti Corrosive Pigments In Paint For Outdoor Conveyor Pipeline Steel company ArcelorMittal Montreal Inc., Contrecoeur, QC have used a special anticorrosive

exterior paint for a huge outdoor pipe enclosing a conveyor system hanging over road 132 in Que-

bec. The conveyor transports iron ore from the port to the steel mill. The paint job took place in November 2010 using a Prolux two coat paint system developed with Ferrinov pigments.

The paint system has been formulated and manufactured by Prolux, using Ferrinov polymetallic pigments as an active anticorrosive agent.

"It is a two coat paint system, which outperforms the conventional three coat zinc rich paint system," says Ferrinov's Louis Archambault.

Ferrinov has developed a new generation of active anticorrosive pigments using an industrial steel dust residue generated by electric arc furnaces. To do so, Ferrinov worked in close collaboration for many years with Arcelor Mittal



People driving along Route 132 at Contrecœur have noticed that the "yellow pipeline" has been given a facelift to proudly display ArcelorMittal's colours. This huge pipeline, which was laid in 1973, contains a conveyor that carries metal iron pellets to the Company's plant. From left: Jacques Beaulieu, Prolux; Louis Archambault, Ferrinov; Jean Lavoie, Director Environment, ArcelorMittal Montreal; Nicolas Legault, Aluma; and Marcel Michon, Engineering Director, ArcelorMittal Montreal. Montreal and Arcelor Mittal Dofasco. ArcellorMittal is a world leading steel company, with opera-



tions in more than 60 countries. www.ferrinov.com.

WAGNER Receives Product Innovation Award

Wagner Systems, Inc. was selected to receive the Sherwin-Williams Product Finishes Division (formerly the Chemical Coatings Divison) 2010 ProVisons Marketing Innovation Award. The award was given in recognition of the new PrimaSprint Manual Powder Coating unit introduction to the Product Finishes Division and for outstanding performance in product sales through their facilities. WAGNER experienced the highest sales ever for manual units in 2010 due to the superior per-

The Wagner PrimaSprint manual powder coating unit offers users flexibility, performance and ease of operation. The new control unit provides up to 50 recipes with precise settings for voltage, current, curve characteristic and powder

formance of the PrimaSprint unit.

ITW Finishing Equipment – Americas

One company. Four brands. A complete finishing solution.

The Binks, DeVilbiss, Ransburg and BKG brands from ITW Finishing Equipment – Americas are among the global leaders in industrial finishing equipment. Always in the forefront of the most advanced, most innovative finishing technology, our brands comprise a group of proven finishing equipment that offers comprehensive capabilities to meet your toughest quality and productivity challenges. Backed by a network of resources and support, Binks, DeVilbiss, Ransburg and BGK brands lead the way.

Binks spray finishing equipment can be found in virtually every industry around the world – for a very good reason. A pioneer in the development of the first spray guns more than a century ago, Binks continues to set the standard in finishing technology. Binks product line is unmatched for its comprehensive selection of spray guns, pumps, tanks, filters, outfits and more. [www.binks.com] BGK electric infrared curing equipment does what it's designed to do – increase production, reduce costs and improve product quality. If your industrial finishing operations include the curing of liquid, powder or other coatings, you know about production issues. So does BGK Finishing Systems. Where coatings productivity is a challenge, BGK has the cure. [www.itwbgk.com]

Want to conserve resources and reduce costs in your finishing operations? Ask your distributor about Green-Works, our support program for end-user spray finishing customers. It provides helpful information and solutions from a green perspective. We're using technology to make our products, facilities and operations more conservation conscious and eco-friendly – and GreenWorks will show you how to do the same for yours.

Binks and DeVilbiss distributors also offer a very helpful 3-step program for industrial finishers. Called the Finishing Tuneup, it's custom designed to help you examine productivity, quality and profitability. Step 1 is a review of your production area operations. Step 2 is assessment and evaluation. Step 3 is a plan of recommendations. The Finishing Tuneup is a great way to get expert input that can help you meet your finishing challenges.

CORPORATE PROFILES

FLUID HANDLING, ATOMIZATION, ELECTROSTATIC & CURING

Now ... ONE SOURCE for finishing solutions

ITW Finishing Equipment - Americas now brings together the global leaders in innovative finishing solutions with:

- World-wide resources and support
- Knowledge and expertise to meet your specific production challenges
- Technology and equipment to fit your changing nee

Visit our websites for more information and to locate Diamond distributor near you.



The single source for industrial spray finishing equipment.



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DeVilbiss is always on the leading edge of spray finishing technology and it's no surprise. When ultimate quality and productivity are the objective, DeVilbiss delivers. No matter how or what you spray, you can count on DeVilbiss spray guns and finishing equipment for the finest, most consistent atomization performance available. [www.devilbiss.com]

Ransburg electrostatic spray finishing takes less time, saves coating material and reduces solvent emissions. Ransburg invented this time-proven process and is the world leader in electrostatic finishing equipment and technology. For every surface, there's a complete Ransburg system or equipment package to help you spray it with optimum transfer efficiency and atomization. [www.itwransburg.com] We've joined our brands together in a new group, but our focus remains the same: meet your finishing production needs today; anticipate tomorrow's changes and be the first to respond with solutions; use our resources and technology leadership to deliver the best finishing equipment; make finishing easier and more efficient. ITW Finishing Equipment – Americas. One company. Four brands. A complete finishing solution. [www.itwfea.com]



www.binks.com



Ransburg,

BGK.

The global leader in fine atomization for industrial spray finishing. *www.devilbiss.com*

The inventor of the electrostatic process and still the world leader today. www.itwransburg.com

Curing equipment to increase production, reduce costs and improve product quality. *www.itwbgk.com*

IT W Finishing Equipment

A M E R I C A S ONE COMPANY • FOUR BRANDS • A COMPLETE FINISHING SOLUTION

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IN THE NEWS

allows toggling back and forth between 2 different recipes. The user friendly controller allows for easy adjustment of powder delivery. The Wagner Prima-Sprint uses an improved PEM-C4 ERGO manual powder gun. As with all Wagner equipment, the new controller and powder gun are compatible with any previous generation of application equipment.

www.wagnersystemsinc.com

GFS Announces Release of 'Aerospace Training Module' in the **Finishing Academy**



GFS is proud to announce the launch of a new section of educational material on the Finishing Academy training website that is dedicated to Aerospace finishing. This new training module provides detailed information on the different types of aircraft painting facilities, including the advantages inherent in each design, as well as the keys to producing a top-quality finish on aircraft of all sizes. The Aerospace Training Module currently contains three sections, titled 'Crossdraft vs.

Downdraft,'The Use of Inserts for Painting Aircraft', and 'Paint Booth Pressure Levels'. Visit http://finishingacademy.com or http://globalfinishing.com for more information and to explore the new site.

Ferrinov Pigments has Moved

Ferrinov's Main Office has moved. The new coordinates are:

1418 avenue Victoria, bureau 105, Greenfield Park, QC, J4V 1M1, tel: 450-812-3811, fax: 450-812-5093. Email address and cell phone numbers are unchanged.

Cinic America High Performance Organic Pigments

Andicor is pleased to announce that it has teamed up with Cinic America throughout Canada to market, distribute and service requirements for these high performance organic pigments.

Cinic America is the world's largest single site producer of Diketo-Pyrrolo-pyrrole (DPP) Red with a name plate of 4.5 million lbs at their Shanghai, China plant and will expand as required to take care of customer needs.

Cinic America's high performance organic color palette includes the following pigments:

- Cinilex DPP Red SR1C
- Cinilex DPP Red SR2P • Cinilex DPP Orange SJ1C
- Cinilex Yellow SY1H
- Cinilex DPP Rubine SR5H

- Cinilex Red SR3C
- Cinilex Red SR4C

Please talk to your Andicor Sales Representative for samples and full-colour brochures, or visit the Cinic America website: www.cinic.com

ALTANA Acquires Polymer Modifier Producer Kometra

The specialty chemicals Group ALTANA has signed an agreement to acquire Kometra Kunststoff-Modifikatoren und -Additiv GmbH. Kometra produces polymer modifiers in Schkopau, Saxony-Anhalt, Germany. These modifiers are specific surface-active copolymers which are used as impact modifiers and adhesion promotors in many applications. Polymer modifiers are applied in the refinement of standard plastics and are particularly used in technical applications, for example in the automotive industry. The company will be integrated into ALTANA's BYK Additives & Instruments division.

"The acquisition of Kometra underlines our strategy of value creation which includes both organic growth as well as targeted acquisitions in order to expand our market leadership in technologically demanding markets," stated Dr. Matthias L. Wolfgruber, CEO of ALTANA AG.

"With Kometra's technology there are new fields of business which ideally complement and expand our existing activities," said Dr. Roland Peter, President Division BYK. He added that BYK's global sales network is particularly well suited to open up new market potential for the polymer modifier technology worldwide.

Ashland Helps Customer Achieve EPA Environmental Award

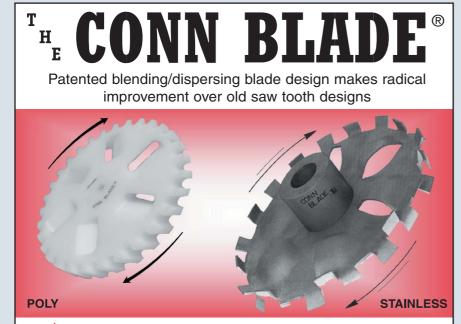


Franksville WI wins Environment Award. From left to Right: Rich Knipe (US Polychem), Patti Rogers-VP (Fiber-Tech Inc.), Shawn Strasburg (Ashland Distribution).

Fiber-Tech Inc. of Franksville, Wis., recently received the U.S. Environmental Protection Agency (EPA) Design for the Environment award for switching to an acetone-free working environment. The switch was made as part of a program established by Ashland Distribution, a commercial unit of Ashland Inc.

The award recognizes initiatives that create a safer working environment. Using U.S. Polychemical Corp.'s Acrastrip cleaning fluid instead of traditional acetone meets the criteria as outlined by the EPA. Acrastrip cleaning fluid is available exclusively through Ashland Distribution, and provides a safe non-flammable option for industrial cleaning in composite applications. The program designed by Ashland helps customers achieve EPA recognition for environmental stewardship. It was through this program that Fiber-Tech, a custom molder of fiberglass composites for national and international OEM markets, received recognition

CORPORATE PROFILES



- Most efficient and aggressive blending/dispersing blade available
- Provides proper combination of pumping action and shear/ dispersion essential for fast consistent results.
- Built in pumping action cuts processing time.
- onger life due to heavier gauge construction

Conn and Company

Meeting Mixing And Blending Needs For More That 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 tank. 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

high pumping, low shear, blending blade and is excellent for mixing micro spheres or flakes or other fillers that need to be well mixed, but not destroyed. The ITC CONN Blade is an 8-vane open style blade providing excellent material flow, with more shear than the IT, but is not as aggressive as the ITT. The patented P-ITT CONN Blade is of UHMW Polyethylene and is excellent for highly corrosive or highly abrasive mixing. The P-ITT CONN Blade is the most efficient and aggressive 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.

- Less heat due to shorter required running time.
- Excellent for high or low speed and high or low viscosity.
- Supplied with hubs or mounting holes required to retrofit and upgrade present equipment.
- Pumping blades without teeth are available and are excellent for gentle blending and agitation.

DESIGNERS AND MANUFACTURES OF INDUSTRIAL MIXING EQUIPMENT



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

The ITT style blade has a combination of louvers and teeth. It is a high pumping high shear dispersion blade and is the most efficient and aggressive dispersion blade available. The IT style has the louvers providing superior pumping action, but without the teeth. It is a

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

"Conn believes in keeping it simple, durable and functional"

CANADIAN FINISHING & COATING MANUFACTURING JANUARY/FEBRUARY 2011 6

www.cfcm.ca

2011 Will be Another Challenging Year for the Paint and Coatings Industry

By Jim Quick, President

Canadian Paint and Coatings Association

As we look back, 2010 was certainly an interesting and challenging year. With the country and the globe recovering from the greatest economic slowdown since the Great Depression, we saw the paint and coatings industry emerge from an extremely challenging year on the regulatory and legislative fronts.

2010 saw the implementation of a new VOC framework for AIM and ARC. It also saw the conclusion of the Challenge Phase of the Chemical Management Plan. Both required significant resources from members. As I reported last year at this same time, industry veterans tell me that this is an unprecedented level of activity.

2011 will not be much different. Economists are predicting that we are not out of the woods and our economy remains fragile.

Our 2011 environmental scan tells us that we can expect increased regulatory and legislative activity in 2011, compared to 2010. At the federal level, solvents continue to be a focus. We have been invited to work with government on a new Federal VOC Framework. In 2011, will be at the table negotiating with government new VOC limits for aerosols as well as adhesive and sealants. Other federal initiatives include consumer product regulations, GHS preparation, other product labeling requirements, a CEPA review, air quality, and toxic reduction programs, to name a few.

On the chemical management front we will see a focus on the 500 medium priorities through the CMP, phase II. While this phase will differ from the previous Challenge Program it will require the same amount of diligence and work from member companies. The CPCA will be working with government on the next CMP phase through its chemical management sector working group, which proved to be so successful during

the Challenge Phase.

At the provincial level we will continue to see Ontario move forward on its environmental agenda. Over the last two years the Government of Ontario has introduced more than 17 programs, regulations, legislation and policies with impacts on the paint and coatings sector. Many initiatives, such as the Ontario Toxic Reduction program, will continue in 2011. Other provinces will be focusing on issues such as air quality, product stewardship, climate change; toxic reduction programs, OHS and others.

As we enter 2011, claims of the impact of humans on the global climate supported by sound science continue. Canadians continue to see a direct link between environmental sustainability and quality-of-life, and they are demanding governments develop strong public policy frameworks to protect it.

As we have done in previous years, the CPCA will approach its relations with government in a proactive and cooperative manner. Programs such as CMP and the Federal VOC Framework will happen with or without industry. We will be proactive—and help frame outcomes for the sector.

Marketing safe products is not only the responsible thing to do, it makes good business sense. How we work with governments on these critical public policy matters is part of how we market and brand the sector with consumers, the public and governments. The paint and coatings industry has made significant investments over many decades in the quality of our products and the reputation of our brands. It only makes good business sense to ensure continued consumer and public trust in the products they use and enjoy.

Companies that wish to review the environmental scan should contact Jim Quick at jquick@cdnpaint.org or 613-231-3604, ext. 1.

CORPORATE PROFILES

Northspec Chemicals Corp.

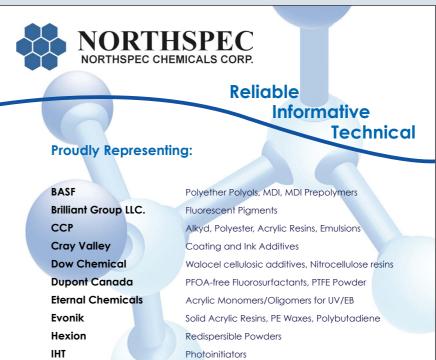
Recently celebrating their 10th year anniversary, Northspec Chemicals Corp. has grown into one of the most innovative providers of specialty raw materials and high performance chemistry solutions to the Canadian Coatings, Graphic Arts, Floor Care, Composites, Adhesives and Construction related industries.

Proudly, Northspec Chemicals Corp. represents many specialty lines from various industry leading suppliers including BASF, Cook Composites & Polymers, Cray Valley, Dow, DuPont Canada, Eternal Chemicals, Evonik, Kukdo Chemicals Co. Ltd., Sachtleben, Solutia and other complimentary manufacturers of additives, monomers, resins, pigments, and specialty products.

renowned program means that customers and suppliers can be assured that when they work with Northspec, they're dealing with a reliable raw material distributor that consistently provides quality products to the Canadian market place.

Contact Information:

Ontario Region Noel Shahnazarian Cell: 416-432-7788 Fax: 905-508-3952 noel@northspec.com John MacLean Cell: 416-434-5986 Fax: 905-428-8609 jmaclean@northspec.com Joe Loncar Cell: 647- 680-0093 Fax: 416-4960128



Known for their technical expertise and commercialization ability, Northspec's sales and marketing team continue to offer valueadded solutions for both the current and next generation requirements of their customers. Due to continued success in this area, and in order to meet growing demand, Northspec has expanded their sales & distribution infrastructure across Canada and will be moving into new offices early in 2011.

Northspec Chemicals Corp. is a member of the Canadian Association of Chemical Distributors, and as such adheres to the codes of the CACD's Responsible Distribution product stewardship program. Being part of this worldjloncar@northspec.com

Western Canada and Prairie Region Al Green: Cell: 604-649-0219 Fax: 604-858-6717 al@northspec.com

Quebec and Atlantic Region Gary Chaks: Cell: 514-928-6363 Fax: 514-783-1272 gchaks@northspec.com

NEW Administrative Mailing Address: 2 Lansing Square, Suite 300 Toronto, Ontario M2J 4P8

Jeco Kerneos **Kukdo Chemicals** Munzing Plasticolors Inc. Sachtleben

Organic Pigments Superplasticizers and Additives Epoxy Resins and Specialities Rheology Modifiers and Defoamers Pigment Dispersions and Additives TiO2, BaSO4, Lithopone specialities

Call For The Chemistry! Your VOC compliance sourcing solutions/

Northspec Chemicals Corp. 2 Lansing Square, Suite 300, Toronto, Ontario M2J 4P8 Order Desk: 416-496-0128 Fax: 416-496-0453

www.Northspec.com

IN THE NEWS

from the FPA

The EPA recognizes Acrastrip cleaning fluid as a "Design for the Environment" product, and as such, customers who have successfully implemented a program with Acrastrip cleaning fluid can be recognized for that achievement.

Established in 1956, U.S. Polychemical Corp. provides the electronic, aerospace, metal working, plastics, military, recreational and automotive industries with hazardous solvent replacement chemicals and equipment. More information about U.S. Polychemical Corp. is available at www.uspoly.com.

Founded in 1987, Fiber-Tech specializes in the custom molding of fiberglass composites. For more information on Fiber-Tech visit their website at www.fiber-techinc.com.

Arkema Emulsion Systems Sees Accelerated Growth in Green Market Products The sales of emulsion polymer products designed to help coatings formulators meet strict environmental regulations have grown faster than anticipated, according to Arkema Emulsion Systems. The company's EnVia certification program, first introduced in 2009, now includes ten products that meet specific standards set by the company related to regulatory compliance in finished products. Beginning in 2011, every new latex product introduced by Arkema Emulsion Systems will be EnVia certified.

"The quick market acceptance of our EnVia certified products is gratifying," said Eric Kaiser, global marketing director for Arkema Emulsion Systems."While our standards for EnVia certified products are strict, our customers tell us that we have targeted the issues that are critical to helping them meet their regulatory and sustainability goals."

Products that meet EnVia self-certification guidelines include 100 per cent acrylic, styrene acrylic, vinyl acrylic and vinyl acetate ethylene binders, as well as the company's new SNAP™ 720 Structured Nano-Acrylic Polymer.

- The company's EnVia certified products meet the following requirements:
- Have no added alkyl phenol ethoxylate (APEO) surfactants
- Have no added formaldehyde or formaldehyde donors1
- Have total latex VOC < 5 g/L
- Are below regulatory reporting limits for carcinogens, reproductive toxins and ozone depleting compounds2
- Have low residual monomer levels Total Monomer < 500 ppm
- Minimize use of Hazardous Substances
- Green Seal[®] hazardous components < 0.01% per component3
- California Prop 65 substances are minimized and documented with data available upon request
- Hazardous Air Pollutants (HAPS) < 0.1%
- No known added phthalates, triphenyl or tributyl tins, 1,2-dichlorobenzene

www.arkemaemulsionsystems.com

CORPORATE PROFILES

Arkema to Acquire Total's Coatings-**Resins Business Including Cook Composites and Sartomer Lines**

Arkema announces a project to acquire the Coatings Resins (Cray Valley and Cook Composite Polymers) and Photocure Resins* (Sartomer) businesses of Total's Specialty Chemicals activities for a €50M enterprise value. Fully in line with its strategy to bolster its specialty product activities, this project would establish Arkema as a leader in the global coatings resins market. It would further increase the downstream integration of its acrylics chain, while offering major potential for growth and synergies. The sale is expected to be completed in the first half of 2011.

The businesses concerned by the project comprise the coatings resins (paints, adhesives, etc.) of Cray Valley (Europe, Asia, South Africa) and Cook Composite Polymers (United States), as well as the photocure resins of Sartomer (Europe, United States, Asia). These make up a coherent group of specialty products used in the high value-added paints and industrial coatings markets, which combined employ nearly 1,750 people in 13 countries. These aligned businesses produce specialty products for the paint, adhesives and industrial-coatings markets and earned revenue of around 850 million euros in 2010, an increase of 20 per cent from 2009.

The acquisition will continue Arkema's expansion program for coatings raw materials. The company early this year completed the acquisition of The Dow Chemical Company's Acrylic Monomers and Acrylic Latex Polymers (UCAR Emulsion Systems) business in North America.

BASF and Cognis Close Deal

BASF has completed its \$4.1 billion buyout of Cognis.

It is expected that Cognis will be fully integrated into BASF by the end of 2011.

The deal offer customers of the Performance Chemicals and Dispersions & Pigments divisions an expanded product choice including BASF's products based on renewable raw materials.

BASF acquired Cognis from GS Capital, the private equity arm of Goldman Sachs, Permira Funds and SV Life Sciences.

Curtiss-Wright to Buy BASF's Surface Technologies Business

Curtiss-Wright Corp. has signed a definitive purchase agreement for the assets of BASF's Surface Technologies, a leading supplier of metallic and ceramic thermal spray coatings primarily for the aerospace and power generation markets.

BASF's Surface Technologies business generated sales of approximately \$29 million in 2010 and has approximately 150 employees at its three operating facilities located in East Windsor, CT, Wilmington, MA, and Duncan, SC.

Univar Completes Acquisition of **Basic Chemical Solutions**

Univar Inc., a global chemical distributor, announced that it has completed the acquisition of Basic Chemical Solutions, L.L.C. (BCS), a global distributor and trader of commodity chemicals. Concurrent with the close of the acquisition, Mark Byrne, President and Chief Executive Officer of

ANGUS Chemical Company

Since its original patent application in 1936, ANGUS Chemical Company (ANGUS), a wholly owned subsidiary of The Dow Chemical Company (Dow), has developed and manufactured nitroalkane-based chemicals. This understanding of nitroalkane technology has enabled us to successfully deliver a range of nitroalkane-solutions for customers in the paint and coatings market.



people.

People are the core of our business. ANGUS offers customers global capabilities at our company headquarters and research and development facility in Buffalo Grove, IL, U.S., as well as state-of-the-art laboratories and sales and technical expertise at our customer application centers around the world. No matter where you are located,



tion processes, as well as to evaluate problems and demonstrate how ANGUS technology can help them develop new formulations and provide products to capture more value in the market and meet the diverse needs of many end-use industries.

Solutions for Paint and Coatings Market. ANGUS is the leader in multifunctional amine technology to the Paint and Coatings market, providing a range of specialty additives designed to help formulators get the most out of their formulation. We have industry standard products, are leading innovators, and have in-depth coatings applications know-how to bring you solutions.

Virtually no odor

as effective pH control and

efficient pigment dispersion

Lose the VOCs...

Lose the Odor...

Performance

AEPD[™] VOX 1000 Neutralizing Amine can

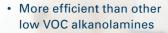
without compromising product quality.

All the functionality of industry

standard AMP^T Dispersant, such

help you formulate Zero VOC (5 g/L) paints

Keep the



Visit www.ANGUS.com for more information.



our synthesis and application specialists can help you explore the potential of nitroalkane chemistry to solve individual needs.

chemistry.

ANGUS is the world's only company dedicated to nitroalkanes and their derivatives. Nitroalkane chemistry possesses the reactivity to efficiently create complex molecules, reduce reaction steps, optimize synthesis costs and perform a myriad of useful transformations. Employing this distinct chemistry, ANGUS can produce literally thousands of nitroalkane derivatives to create potential solutions for customers.

commitment.

Uncovering innovative solutions is just the beginning. Our commitment to customers is supported by state-ofthe-art analytical laboratories around the world, highclass manufacturing facilities and the resources, global supply chain and distribution network of The Dow Chemical Company.

For more than 70 years, customers have challenged ANGUS to design efficient synthetic routes and producAMP[™] is the industry standard for multifunctional amine technology. With effective pH control and efficient pigment dispersion resulting in lower dispersant levels, AMP contributes significant benefits to the overall performance of the coating. There is no alternative to the comprehensive performance of AMP.

AEPD[™] VOX 1000 Multifunctional Amine provides paint formulators with the ability to formulate no (<5g/L) VOC, no odor paints with the same or better performance characteristics as today with AMP. When taking odor, VOC, wet paint and dry film properties into account, AEPD VOX 1000 Multifunctional Amine delivers the best all-around performance.

ANGUS also provides a range of specialty additives for paint and coatings, including DMAMP-80[™], ALKATERGE™ and ZOLDINE™ product offerings. ALKATERGE products are used as corrosion inhibitors, emulsifiers and dispersants. ZOLDINE MS-PLUS Moisture Scavenger is used as a fast-reacting, low-viscosity oxazolidine-based water scavenger.

www.cfcm.ca

BCS, was appointed Executive Vice President and Chief Operating Officer of Univar. Terms of the acquisition were not disclosed.

Univar provides a broad product portfolio, a global distribution network and industry expertise in a wide variety of end-markets. BCS focuses on some of the most broadly used chemicals in the world and provides a unique integrated distribution model, combining bulk and mini-bulk chemical distribution with a global procurement and trading platform.

BWAY Holding Co. Acquires Phoenix Container

BWAY Holding Co., a North American supplier of general line rigid containers, has acquired Phoenix Container Inc., a U.S. producer of steel pails, in a stock purchase transaction.

Phoenix Container, headquartered in North Brunswick, NJ, operates one plant in New Jersey that produces a wide range of steel pails used for packaging industrial and consumer products. The company generated net sales during 2009 of \$34 million. The acquisition was funded with available cash on hand and borrowings under the Company's revolving credit facility.

Commenting on the acquisition, Ken Roessler, BWAY's President and Chief Executive Officer, stated that, "This acquisition represents a continuation of BWAY's strategy to invest in growth within our core markets where significant synergies exist. Phoenix Container serves to expand our geographic coverage in the North American steel pail market, provides opportunity for manufacturing optimization and investment, and will allow the Company to more effectively serve a wider range of customers."

Paintbooth training



Global Finishing Systems (GFS) is proud to announce the launch of the paint booth educational resource site, the Finishing Academy. GFS has always placed a great deal of emphasis on the importance of best practices in the operation and maintenance of your paint booth. This resulted in the development of the Finishing Academy, a place for new painters and spray booth operators to learn the mechanics of how booths work, and the essentials needed to produce perfect paint jobs in a contaminant-free environment. It also serves as a refresher for veteran painters looking to brush up on their knowledge of contamination control and proper usage of paint booth equipment.

The Finishing Academy currently contains three training 'modules', titled 'Spray Booth Basics', 'How to Finish in the Money', and 'Building the Perfect Shop'.

Visit http://finishingacademy.com or

http://globalfinishing.com for more information and to explore the new site (see attached image). Questions: info@globalfinishing.com

Oerlikon Balzers Acquires the Hartec Group

Oerlikon Balzers, the world's leading manufacturer of PVD (Physical Vapour Deposition) coating equipment, has acquired the hartec Group. The acquisition will open many new doors for hartec. Synergies between the two companies will help achieve ambitious goals and further strengthen their respective leadership positions in each market. Innovation, green technology and the challenge to conquer new PVD markets are at the focus of this venture.

As of January 1, 2011, the hartec Group's systems engineering and contract coating divisions became part of Oerlikon Balzers, a member of the Oerlikon Group.

For Oerlikon Balzers, the leading provider of functional PVD coatings on metal, joining forces with the hartec Group represents a step into the decorative high-end plastics market.

Buhler Acquires the US Company Draiswerke, Inc.

The Buhler Technology Group acquired the US company Draiswerke, Inc. just before the end of the year 2010 and is thus strengthening its position in the North American market. In the long term, this move especially stands to offer promising prospects as a supplier to the trend-setting

Cleantech industry.

Draiswerke, Inc. is headquartered in Mahwah, New Jersey. The successful company with originally German roots has up to now competed with Buhler by partly offering similar products in the same market segments. Through the acquisition of Draiswerke, Inc., Buhler has gained a smoothly functioning local team and can benefit from an outstanding base for achieving its future growth targets right from the outset. The company, which generated sales of about USD 5 million last year, will be integrated in the Buhler Grinding & Dispersion business unit, which offers comprehensive solutions for manufacturing electronic materials, printing inks and paints, fine chemicals, and products used in other industries.

The acquisition is a logical further development after Buhler's acquisition of parts of Draiswerke Mannheim GmbH as far back as 2003, which it turned into a economically company, though the company acquired now has been a legally independent entity since the nineties. The parties have agreed not to disclose the purchase price.

Integration in the Buhler Grinding & Dispersion business unit is to be completed by the end of this year. Gisbert Schall, the current President & CEO of Draiswerke, Inc., will retain his function up to mid-2011, by when a successor is to be found. Gisbert Schall has expressed his preparedness to offer his expertise as a consulter to Buhler for another year, after which he will have reached the regular retirement age.

CORPORATE PROFILES

Chemroy Canada Inc.

Chemroy Canada began in the Canadian Paints and Coatings industry over 40 years ago. We take pride in being part of this important market for the Canadian economy.

OUR COMPANY

Chemroy Canada Inc. is a leading Canadian Specialty Chemical and Food Ingredient distributor established in 1967. We supply value added chemicals, ingredients and lab-related equipment, which are manufactured by leading global chemical suppliers. Key markets served are the Coatings, Construction, Food, Pharmaceuticals, Inks and Adhesives/Sealants industries. We carry over 1200 products to support our Canadian customer base, looking to provide cost effective products in a timely manner.

OUR PRODUCTS

Products provided by Chemroy to the Canadian Coatings Industry are biocides, coalescent agents, dispersants and surfactants, pigments/dispersions, rheology modifiers, waterborne resins, crosslinkers, and high solid resins. These products are used in industrial, architectural and automotive coatings applications, meeting specific technical and aesthetic needs. With the drive to Low VOC and "green" products, Chemroy has resins and additives packages to meet most formulation, performance and cost goals.

OUR SAFETY COMMITMENT

We believe that safety comes first. We demonstrate this in the way we work each day, and it is why we only deal with suppliers with established and enforced health and safety programs. Chemroy is a charter member of the CACD (Canadian Association of Chemical Distributors), which is committed to compliance within the "Policies on Responsible Distribution" and ensures that we will not distribute chemicals or ingredients unless it can be done safely and in accordance with the highest standards established by the association and governmental laws.

OUR MOTTO

We work daily by our company motto: "We are proud to be known by the company we keep". This pertains to our customers, suppliers and employees. Customers have come to trust Chemroy's hands-on expertise to deliver quality chemicals and additives.

We work hard to earn their business with quick response times and quality technical suggestions. Our suppliers are global industry leaders to ensure the quality/supply of their products. They bring innovation to their respective industries and chemistries. Chemroy Canada Inc. is a customer-focused distributor with our unique "customer" approach to the marketplace. We have engaged and passionate staff who are looking to help our customers find the right product for their specific application and need.



LOW VOC Solutions- Ready to Launch.

The LOW VOC products you NEED:

- Biocides
 Coalescent Agents
 Dispersants and Surfactants
- Pigments and Dispersions Rheology Modifiers
- Waterborne Resins and Crosslinkers
 High Solid Resins

From the Manufacturers you Trust:

- AGC
- Arch
- BASF
- Cognis
- Clariant
- CVC/EmeraldDow
- Dura Chemicals
 - Icais

OUR FACILITIES

Our warehouses in Toronto, Montreal and Vancouver service our large customer base quickly and efficiently. We have established Customer Service operations in both Toronto and Montreal. We are ISO 9001 certified and part of the Canadian Association of Chemical Distributors (CACD).

- Elementis
- Eliokem
- Hoover
- Huntsman
- Lubrizol
- PPG





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sales@chemroy.ca

www.chemroy.ca

IN THE NEWS

Pricing Updates

Troy Corporation Announces Price Increase for Biocide Products

Troy Corporation today has increased global prices for various biocide products of 5 per cent to 15 per cent, or as contracts allow. Continued higher costs for key raw materials, worldwide regulatory compliance, and transportation make this price adjustment necessary.

Troy Corporation endeavors to provide customers with added value through innovative products, technical service, and full regulatory compliance, coupled with a strong global infrastructure to ensure reliable supply. Customers interested in learning more about the price increase should contact their local Troy Corporation sales representative.

Huber Announces Price Increase for Flame **Retardants and Smoke Suppressants** Huber Engineered Materials, a division of J.M. Huber Corporation, has announced a price increase for its tan alumina trihydrate (ATH) and magnesium hydroxide (MDH) grades. The increase will be effective Feb. 1, 2011, or as current contracts allow.

"Huber's ATH and MDH businesses continue to work diligently to improve productivity and processing efficiencies to minimize the impact of continued rising raw material, energy, packaging, product development and freight costs," said Don Mills, ATH and MDH director of sales."Unfortunately, despite these efforts, a price increase is necessary to ensure the high level of product quality and consistency and industry-leading service our customers expect."

ATH and MDH are non-halogen flame retardants and smoke suppressants used in a variety of reinforced plastics, engineering thermoplastics, rubber, carpet backing, cast polymer, coatings, roofing, adhesives, insulator and wire and cable jacketing applications.

DSM Introduces Price Increases in Americas

DSM NeoResins+ has introduced a price increase

up to 0.07-0.12 \$/lb, depending on the product, for North, South and Central America, affecting the entire Coatings, Adhesives and Graphic Arts portfolio, including NeoCryl waterborne acrylics and acrylic beads, NeoPac waterborne urethaneacrylics, NeoRad UV products, NeoRez waterborne urethanes, NeoRez, Uraflex and Solucote solvent borne urethanes, Uracron solvent borne acrylics, Uradil waterborne polyesters and alkyds and Uralac solvent borne polyesters and alkyds, as a result of the continued increasing costs of its raw materials. The price increase will be effective for shipments on or after February 1, 2011, or as contracts allow.

Steve Hartig, Business Unit Director DSM Neo-Resins+ comments:"Our raw material cost base keeps increasing sharply driven by many factors in the market place. These increases are outpacing our mitigation efforts making it necessary to compensate for the significant cost increase we face. We will continue to focus on our customers by bringing new innovations and technologies to the market and by investing in our supply capabilities

for the technologies of the future."

DSM NeoResins+ is headquartered in the Netherlands.

Arkema Emulsion Systems Announces Price Increase for Latex Products

Effective January 20, 2011 or as contracts allow, Arkema Emulsion Systems increased pricing on all latex products. UCAR acrylic, styrene-acrylic, styrene-butadiene and NEOCAR Acrylic latexes will increase by \$0.065 to \$0.08 per wet pound. UCAR vinyl-acrylic, EVOCAR vinyl acetate-ethylene and NEOCAR Latexes will increase by \$0.03 to \$0.035 per wet pound.

This action is necessary due to continued volatility and increases in cost of key raw materials.

Customers should contact their Arkema Emulsion Systems account representative for additional details.

Ashland Water Technologies **Increases Prices**

Ashland Hercules Water Technologies, a commer-

CORPORATE PROFILES

Alberdingk Boley, Inc.

Alberdingk Boley is a global manufacturer of waterborne emulsions, polyurethane dispersions and water base UV dispersions, providing innovative 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. In addition to the company's core competency of the development of water-based products, Alberdingk Boley has invested in the development of additional eco-friendly characteristics of its products including Zero and low VOC formulation capability, solvent and NMP free as well as renewable sourced PUDs.

Alberdingk Boley offers a full line of waterborne emulsions and dispersions including: Acrylics

- Polyurethane Dispersions
- UV Curable Dispersions
- Acrylic Polyurethane Copolymers
- Acrylic Epoxy Hybrids
- Castor oil polyols

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

AC 25381: Self cross linking multiphase emulsion with superior water and good chemical resistances can be formulated to produce low VOC enamels. It can be used on multiple substrates like wood, fiberglass, metal and other substrates

AC 2360: Self cross linking emulsion with high gloss and excellent block resistance, Can be formulated for steel, aluminum, wood and concrete.

AC 2772: Self Cross linking emulsion for excellent wood warmth. Excellent for wood and concrete sealers

LUX 250: Solvent free hard elastic UV PUD for clears and pigmented wood, plastic and paper coatings with excellent scratch resistance and very fast flash-off time. It has excellent chemical and stain resistances

U 9380: Solvent free polyester polyurethane dispersion with excellent chemical and abrasion resistances. Excellent flexibility and excellent adhesion to multiple substrates including wood. Great for parquet varnishes and sports flooring

See us at the European Coatings Show 2011, Hall 8, Booth 211





substrates

• Wood

Concrete

Plastic

Metal

- Textiles
- Leather

 Paper Visit www.AlberdingkUSA.com for further information.

Product Showcase:

AC 2403: Self cross linking multiphase emulsion with excellent corrosion resistance, superior water resistance, high gloss and excellent efflorescence resistance. For low VOC DTM, primers, topcoat and concrete

Castor oil based polyols

ALBERDINGK BOLEY, Inc 6008 High Point Road Greensboro, NC 27407, USA Tel: (336) 454-500 Fax: (336) 454-5007 www.alberdingkUSA.com info@alberdingkUSA.com

ALBERDINGK BOLEY GmbH Düsseldorfer Str. 53 47829 Krefeld, Germany Tel: +49(0)2151.5280 Fax: +49(0)2151.573643 www.alberdingk-boley.de info@alberdingk-boley.de







cial unit of Ashland Inc., has increased global prices for its pentaerythritol products by 7 cents per pound effective Jan. 1, 2011, or as contracts allow.

CCP Price Increases

Cook Composites and Polymers (CCP) announced a price increase of up to \$.08 per pound for Chempol acrylic and solvent-borne resins. New prices are effective for orders shipped on or after January 10, 2011.

Cook Composites and Polymers (CCP) has also announced a price increase for all emulsions products. Effective for shipments on or after January 20, 2011, prices have increase up to \$0.05 per pound for all ESI-CRYL and ESI-REZ emulsion polymers, concentrates and resin solutions, and up to \$0.04 per pound for wax emulsions.

Effective for orders shipped on or after January 10, 2011, Cook Composites and Polymers (CCP) has announced a price increase of up to \$0.09 per pound for Reafree Powder Coatings Resins.

WACKER POLYMERS to Raise Prices

Effective January 15, 2011, WACKER POLYMERS has implemented a price increase of \$0.04 per wet pound on prices for vinyl acetate ethylene copolymer and ethylene vinyl chloride copolymer dispersion products sold in the Americas.

Pilot Chemical Co. to Increase Prices

Effective January 1, 2011, Pilot Chemical Co. increased list and off-list pricing for certain surfactants. Aristonate alkyl aryl sulfonates will increase by 3.0–5.0 c/lb. Aristonic and Pilot alkyl aryl sulfonic acids will increase by 2.0-4.0 c/lb. Calamide alkanolamides will increase by 20.0 c/lb. CalBlend performance blends will increase by 3.0-6.0 c/lb. Calfax diphenyl oxide disulfonates and disulfonic acids will increase by 3.0-4.0 c/lb. Calfoam and Calimulse alcohol and ether sulfates will increase by 5.0–14.0 c/lb. Calinate sulfosuccinates will increase by 3.0–6.0 c/lb. Caloxamine amine oxides will increase by 7.0-8.0 c/lb. Calsoft and Calimulse alpha olefin sulfonates will increase by 5.0 c/lb.

Calsoft and Calimulse alkyl benzene sulfonates and dry sulfonates will increase by 1.0–3.0 c/lb. Calsoft, Calimulse and Pilot alkyl benzene sulfonic acids will increase by 3.0 c/lb. Calsoft oleic sulfonates and sulfonic acids will increase by 6.0-7.0 c/lb. Calsuds detergent concentrates will increase by 3.0–6.0 c/lb. Caltaine betaines will increase by 7.0-8.0 c/lb., and Pilot hydrotropes will increase by 2.0-5.0 c/lb.

Clariant Raises Prices for its Wax Portfolio

The Additives Business Unit of Clariant has announced an increase of 5-15 percent in the price of its wax portfolio as a result of higher costs for raw materials, transportation and energy.

OMNOVA Solutions Announces Price Increases

OMNOVA Solutions' Specialty Chemicals business has announced a price increase of \$0.05 per dry pound for all styrene butadiene emulsion polymers and \$0.05 per wet pound for all acrylic,

styrene acrylic and vinyl acrylic emulsion polymers. The increase was effective January 17, 2011, for all specialty markets including coatings, tape and adhesives, floor care, graphic arts, nonwovens, textiles, and construction.

Evonik Increases the Prices for DEGALAN

Evonik Industries' Coatings & Additives Business Unit announced a price increase for its range of DEGALAN acrylic coatings resins by eight percent, effective March 1, 2011, in all regions worldwide. This increase will apply to all orders shipped on or after this date and as contracts allow.

OMNOVA Solutions Announces North American Price Increase for Selected **ELIOKEM Coatings Resins**

OMNOVA Solutions and its recently acquired ELIOKEM business has announced a price increase in North America of \$.04 to .06 /lb for Pliotec acrylic and styrene acrylic resins, depending on the grade, and 3 per cent for Pliolite and Plioway

contiued on page 23

CORPORATE PROFILES

Andicor Specialty Chemicals

As it enters its 9th year of operation, Andicor continues to enjoy success by focusing on what customers need in sometimes difficult economic conditions and an ever-changing regulatory environment:

- · competitively-priced value-added specialty chemicals and packaging
- superior customer service
- knowledgeable and responsive sales staff
- next-day delivery from warehouses in major centres across Canada

Key recent developments:

Andicor became the largest distributor in North America for Southern Clay Products, a leading manufacturer of both solvent and water-based rheological additives, including Garamite mixed mineral thixotropes (developed to meet the needs of industries that have traditionally used fumed silica) and Optiflo associative thickeners (designed to solve many of the problems encountered with conventional urethane based thickeners).

Andicor is excited to partner with Bway Corporation, arguably North America's most dynamic manufacturer of metal, plastic, and hybrid containers. Already North America's largest manufacturer of general line and round paint cans, Bway is now also North America's largest producer of steel pails with their acquisitions of ICL Industrial Containers, Central Can, and more recently, Phoenix Container. With on-going process improvements, plastic pails and covers produced at Bway's Toronto area plant will have the same quality and design features as those produced throughout the Bway organization.

Andicor's very first supplier partner SI Group Canada (originally Chemirco Chemicals) was acquired by OPC Polymers, one of North America's leading producers of conventional and compliant polymers, including alkyd emulsions and a broad range of modified alkyds.

Recently, Andicor signed an agreement to represent CINIC America and their line of high-performance organic pigments. CINIC operates the single largest plant in the world for the manufacture of DPP pigments, offering the highest quality at attractive prices.

In order to meet the demands of their customers and the expectations of their suppliers, Andicor has added additional inside support staff and four sales people:

- Sharon Love, Sales Representative covering Packaging accounts in Western Canada
- Brett Minken, Sales Representative covering Industrial Specialties accounts in Ontario
- Robert Gracie, Sales Representative covering Packaging accounts in Ontario
- Luc Gauthier, Technical Sales Representative for Quebec and Eastern Ontario

Andicor meets the CACD (Canadian Association of Chemical Distributors) Responsible Distribution: 2008 Code and is also a member of CPCA (Canadian Paint & Coatings Association). Andicor continues its mission to becoming one of Canada's leading specialty chemical and packaging product distributors.

waves in the pond

Andicor Specialty Chemicals is a full-service national distributer of specialty chemicals and packaging. Our mission is to be a seamless extension of the suppliers we represent, offering:

competitively-priced value-added products

Alberdingk Boley www.AlberdingkUSA.com Acrylics and Polyurethane Dispersions

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

Cardinal Color (Eastern Canada)

www.huntsman.com **Epoxy Resins & Curing Agents**

Microcolor Dispersions (Western Canada) www.microcolor.com **Colour Dispersions**

OPC Polymers (ON and Western Canada) www.opcpolymers.com Alkyd and Oil-Modified

from some of the world's leading producers

superior customer service

- knowledgeable and responsive sales staff
- local warehousing and delivery services



www.cardinalcolor.com Colour Dispersions

CINIC America www.cinic.com **Organic Pigments**

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

Urethane Resins

RÜTGERS Chemicals

www.novares.de Hydrocarbon Resins

Southern Clay Products www.scprod.com **Rheological Additives**

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

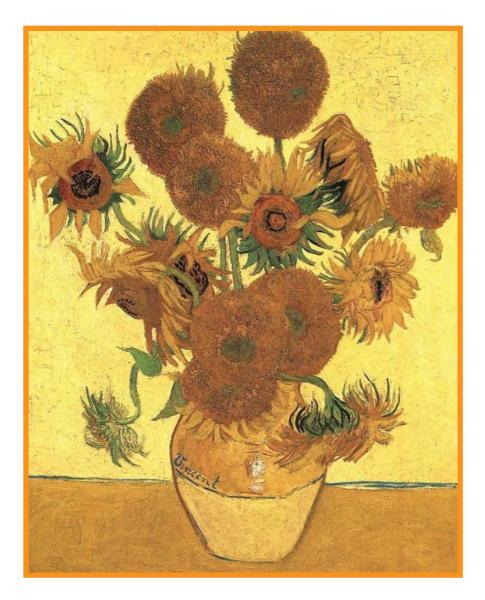
Wayne Pigment Corp. www.waynepigment.com Anti-Corrosion Pigments

Toll-Free: 1-866-488-003 • INFO@ANDICOR.COM Ontario Quebec Western Canada Tel: (905) 795-0911 Tel: (514) 276-5736 Tel: (604) 931-4002

ANDICOR SPECIALTY CHEMICALS CORPORATION 590 Abilene Drive Mississauga, Ontario L5T 2T4 Tel: 905-795-0911 Fax: 905-795-0912 Toll-Free: 1-866-488-0003 To request more information, call our toll-free number or email us at info@andicor.com

PAINT & COATINGS MANUFACTURING: PIGMENTS

continued from front cover



CORPORATE PROFILES

Wet grinding and dispersing technology at its best. The newly combined power of Buhler and Draiswerke provides you with unique know-how in all wet grinding and dispersing applications. Our equipment and process solutions are proven, reliable and tailored to the U.S. market. This is especially evident in the new full-volume Centex[™] Pearl Mill[™] with exceptional media separation and high flow rates.

See for yourself, by visiting us at the 2011 European Coatings \$ in Nuremberg, Germany. Buhler Booth: #211, Hall 6.

Buhler Inc., 13105 12th Ave N., Plymouth, MN 55441, T 763-847-9900 buhler.minneapolis@buhlergroup.com, www.buhlergroup.com



The paintings can be preserved by keeping them cool in air conditioned rooms and reducing light levels because heat accelerates the reaction, but unfortunately Van Gogh didn't know his pigment chemistry.

ANTI-CORROSION

Quebec company Ferrinov Pigments does know its chemistry though, as it has been working for years on its own anti-corrosive pigment that prevents harsh reaction from external elements.

Louis Archambault from Ferrinov says that the company worked in close collaboration for many

years with Arcelor Mittal Montreal and Arcelor Mittal Dofasco, an iron ore mill in Quebec.

They used Arcelor 's own industrial residue (flue dust) generated by electric arc furnaces to develop this high performance anti-corrosive pigment. Their pigment is now available to other paint formulators.

"The paint system for the steel mill's purposes has been formulated and manufactured by Prolux, using Ferrinov pigments as active anticorrosive agent," explains Archambault. "It is a two coat paint system, which outperforms the conventional three coat zinc rich paint system." The result is a substantial saving in labour.

Buhler Inc.

Buhler - unique know-how in all wet grinding and dispersing applications

Buhler is the global specialist and technology partner in the supply of plants and services for processing grain and food as well as for manufacturing advanced materials. Operating in over 140 countries, the core technologies of Buhler are mechanical, thermal and biological process engineering. Grinding & Dispersion is one of 13 business units Buhler operates.

Buhler to strengthen its position in the North American market

The Buhler Group acquired the US company Draiswerke, Inc. just before the end of 2010. The company will be integrated in the Grinding & Dispersion business unit, which offers comprehensive solutions for manufacturing electronic materials, printing inks and paints, fine chemicals, and products used in other industries. This transaction enables Buhler to strengthen its position in the North American market in terms of both existing and prospective customers. This applies to the new equipment business as well as the spare parts and service

business, for example overhauls and retrofits on the large base already installed. In the long term, Buhler Ferrinov is very proud of its new technology and ability to manufacture a very high performing pigment for corrosion protection. Anti-corrosion pigments is all they do.

"There is a need to do better with less money," says Archambault. "A very important thing here is we don't want to be speaking for Prolux...they developed the two coat paint system...we take some credit because we think our pigments are very good."

Ferrinov pigments have been 10 years in development. Archambault explains, "We are not related to any big player, we came from scratch with close cooperation from Arcelor Mittal, who provides our raw material (an industrial residue produced when producing carbon steel)." Ferrinov treats this raw material and transforming it through a hydrometallurgical process.

In Canada Ferrinov is working with Univar, their exclusive distributor of products called Ferrinov 100, 500 and 501. Each is tailor made for different applications, they are all anti-corrosive pigment and one is heat resistant (500).

KEY CONCERNS

Meanwhile Kamlaish Mudhar from UNI-VAR CASE Specialties, a leading full line chemical (including Specialties) distributor in Canada says key points of concern when it comes to pigments in the manu-

optimized energy saving wet milling technology by consequent combination of a multitude of newly developed and ideally matching functional elements – this means, higher productivity from smaller process chamber. And it all comes with a user-friendly handling, different control and automation packages, and exchangeable components for longest service life.

Customer focused solutions

Buhler designs and develops equipment, constructs and installs plants, and advises, trains, and coaches its customers. Thanks to its extensive expertise and the wealth of experience that it has accumulated over the decades, Buhler is in a position to develop unique and innovative solutions, enhancing the customers market success. Through its consistently high quality, Buhler has come to be known over the years as a reliable partner. It owes this reputation to its international service organization, which provides support to its customers around the world whenever and wherever they need it and throughout the life cycle of their plants.



Innovations for a better world.



especially stands to benefit from great opportunities in the field of alternative energy conversion and storage, that is, applications in the trend-setting Cleantech industry, in which substantial investments have been made in the US for some time now.

Wet grinding and dispersing technology at its best

The Buhler equipment and process solutions are proven, reliable and tailored to the US market. Especially the new full-volume Centex[™] Pearl Mill[™] sets standards in the industry and suits the customers' individual needs. The Centex[™] is an enhancement of economics and quality for countless applications, such as paper pigments and printing inks, paints and coatings for highly stressed surfaces, or masses for technical ceramics and for sanitary or functional ceramics. The bead mill provides exceptional media separation and high flow rates. It offers

The Buhler CentexTM T5 large Pearl MillTM (drive power P = 355 kW) was developed for the economical micro wet grinding of bulk material.



facturing of paint are: easy dispersion, good exterior durability and good hiding. She says customers are asking mostly for low price, yet high performance.

Mudhar says that "stir in" products are newest in the marketplace, organic

"Just recently, on Saint Valentine's Day to be exact, it was published in the journal Analytical Chemistry, that the artist Van Gogh doomed his

as well as inorganic. "So, the milling part is taken out of the production. That makes it easy to colour match," she says. "Cost is higher but you do cut down the production time."

Pigments for waterbased products i.e.

ease of dispersion in water without having any rheological effects is a common current trend.

The biggest concern is that pigments need to be heavy-metal free. "Stir in takes the solvent and surfactants out of the formulations. Helps to reduce VOC," says Mudhar. "With the stir-in pigments it will eventually have an effect on the dispersions sold in the market today."

Recently, Andicor signed an agreement to represent CINIC America and their line of high-performance organic pigments (red, orange and yellow). CINIC operates the single largest plant in the world for the manufacture of diketopyrrolopyrrole (DPP) pigments, offering the solution to what customers are asking for...highest quality at attractive prices.

Clariant's Coatings Business provides solutions for all applications in the coatings industry with colorants that include high performance and economic pigments, water or solvent based pigment preparations, solvent or water-soluble dyes. In the spotlight are Easy dispersible pigments, which allow effective paint manufacturing, DPP pigments, with the highest quality in red and VOC-free Colanyl pigment preparations for decorative paints. Clariant extends the production efficiency benefits of Easily Dispersible (ED) organic pigments to waterborne industrial and decorative coatings with the launch of its new range of "ED Pigments".

Previously only available for solventbased industrial coatings systems, Clariant's ED Pigments range has been expanded to simplify the pigment dispersion process for all paint systems and applications by removing the need for an expensive and time consuming milling step.

Without any impact on paint properties, manufacturers can take advantage of a faster, more efficient manufacturing process while reducing manufacturing costs and raising productivity.

To achieve this, Clariant incorporates the optimum amount of dispersing additive to the ED pigment during the manufacturing process. The additive is adsorbed on the pigment surface and facilitates wetting and separation of pigment particles during the dispersion process in paint manufacturing. This innovative approach allows paint manufacturers to add the ED pigment into their paint system only by using a dissolver. No extra dispersant and no bead mill processing step is required.

To avoid compatibility issues, the same additive is used for each product range. ED Pigments can be co-dispersed in one mill base formulation with organic and inorganic pigments to achieve a specific

color shade.

Clariant's extended ED Pigment range includes:

- EDS pigments: Easily Dispersible pigments for solvent-based industrial paints,
- EDU pigments: "Universal" Easily Dispersible pigments for industrial systems, ideally designed for waterbased but also compatible for solventbased systems
- EDW pigments: Easily Dispersible pigments for water-based pigment dispersions used in decorative paints

The BASF range of solvents, pigments, resins and additives covers all applications in the field of industrial coatings, from agricultural machinery, construction machinery, protective and marine applications to computers and consumer goods. BASF will present the whole breadth of its complete range of pigments at the European Coatings Show, coming up in March 2011, including its complete range of lead-free pigments: these pigments allow formulations of coatings that comply with REACH regulations and do not have to be labeled. BASF will also present a new pigment that creates matt glitter effects on computers, consumer goods and communication devices. The company has technology that allows for pigment pastes to be

CORPORATE PROFILES

Buhler Inc. (Nanotechnology)

Prepared for the Future

Swiss-based Buhler Group has partnered with the paints and coatings industry for many years as supplier of equipment and process know-how in a comprehensive range of grinding and dispersion applications. Buhler is also the global specialist and technology partner in the supply of plants and services for processing grain and food as well as for manufacturing advanced materials.

Buhler celebrated its 150th birthday in 2010. Thanks to its extensive expertise and the wealth of experience that it has accumulated over this time, Buhler is in a position to develop unique and innovative solutions for its customers, enhancing their market success. Through its consistent high quality, Buhler has come to be known over the years as a reliable partner. It owes this reputation also to its international service organization, which provides support to its customers around the world.

Buhler operates in over 140 countries and has some 7500 employees worldwide. In fiscal 2009, the Group generated sales revenue of CHF 1.7 billion.

About half of sales revenue (turnover) is generated with products that are less than five years old. Buhler spends an average of about four to five percent of total annual sales on basic research and applications development.

Performance Additives

Focus on Sustainable Solutions

Buhler's 'standard nano-dispersions' of metal oxides such as titania, zinc oxide, and iron oxide, offer a fast and easy approach to nanomaterials. The particles are available in water and organic solvents. However, Buhler moved beyond standard solutions by formulating Oxylink[™] as a waterborne, dispersion-based, and performance-optimized additive to improve waterborne resin systems.

Waterborne coatings are sustainable high-tech products. The formulations are complex and demand optimization to achieve the ambitious goals of each application. Additives play an important part in this optimization process. To the coatings formulator, Oxylink™

Oxylink[™]



offers the possibility to increase resistance properties as well as to reduce service time. The excellent compatibility makes this additive applicable in a broad range of waterborne coatings.

Nanoscaled performance additives are highly attractive for products and segments in which material performance is the key for success - such as in coatings and paints, adhesives and sealants, textiles, functional ceramics, electronics, energy storing and production as well as dental and medical technology.

Buhler continues to develop innovative additive solutions based on nanodispersion technology for Advanced Materials applications.

The additive for one-component waterborne resin systems

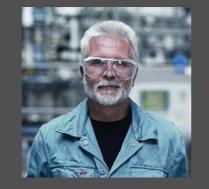
- Higher blocking resistance
- Higher solvent resistance
- Higher humidity resistance

As early as 2002 Buhler has started research in nanotechnology. Buhler's comprehensive know-how in mechanical dispersion processes was complemented with chemical competence. The internal start-up developed a deep understanding in dispersing nanoscaled metal oxides. Today, with the business group 'Nanotechnology' and specifically its Oxylink[™] product series, Buhler extends its role as production technology supplier by offering highly specialized additives to its Advanced Materials customers.

Many key benefits of nanoparticles like chemical activity, optical, and mechanical properties depend on the dispersion quality. Buhler's unique combination of surface modification and dispersion technology permits the company to produce additives that add value to real world products.

better waterborne coatings

The additive for



- Higher efflorescence resistance
- Accelerated drying for faster processing
- Recommended for waterborne formulations based on Acrylic, PUD, and Alkyd emulsions

Call us for a free sample!

Buhler Group (NT) www.buhlergroup.com Oxylink@buhlergroup.com USA / Canada: 512 - 466 8005 Europe / Asia: +49 (0) 681 - 394 6550



PAINT & COATINGS MANUFACTURING: PIGMENTS



Ferrinov pigments were used in the coating formulation for this large overhead structure housing a conveyor system in Quebec. See story in the news section of this issue of CFCM.

formulated that are compatible with a variety of different types of coatings. Furthermore, BASF offers a broad portfolio of acrylic monomers to be used in chemicals and weather-resistant industrial coatings.

Global demand for dyes and organic pigments is forecast to grow 3.9 percent annually through 2013 according to a recent study by the Fredonia Group. Although textiles will remain the largest market, faster growth is expected in other areas including paint and coatings. The Asia/Pacific region will lead gains and increase its market share to one-half of world demand by 2013.

The study analyzes the \$13.4 billion world dye and organic pigment industry. It also considers market environment factors, details industry structure, evaluates company market share and profiles 39 industry players, including Clariant International, BASF and DIC Corporation.

Information for this article gathered from: www.basf.com www.clariant.com www.ferrinov.com www.freedoniagroup.com www.gardian.co.uk www.hangzhoupigments.com www.univarspecialties.com

CORPORATE PROFILES

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

Debro Chemicals

Debro Chemicals was first established in Canada in 1921 as a distributor of raw material used in the manufacture of paints and coatings. As a key part of the 3 billion dollar Amalgamated Metals Corporation PLC global family of companies, Debro Chemicals has been 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, Debro Chemicals is positioned to provide coatings manufacturers across Canada with a competitive source of many key products. Debro remains one of the industry's most respected organizations among its valued principal partners and its many customers from coast to coast.

With industry veterans like Bert Papenburg in Eastern Canada, Ron Yetman in Ontario, Vernon Lo in Western Canada, Gagan Jain 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 vet keep costs to a minimum and wherever possible, pass savings along to its customers.

Ron Yetman has announced his pending retirement, some time in 2011, after long successful career of catering to his coatings customers. Please wish him well, and send some orders his way.

Carole Baillairgé has just joined Debro as the new Account Manager for our Québec HI&I territory. Carole has an extensive background with over 20 years in the chemical industry.

Vacancy in Toronto we have big shoes to fill, we need a tech savvy Account Manager to call on our Coatings, Ink, Adhesives, Rubber, Concrete and related industries. Please contact Paul Ruffo

Debro Supplier News

Imerys Performance Minerals NA Imerys has recently announced the availability of new ultra low silica content calcium carbonates called XCS CARB ranging from 0.7 microns to 3 microns.

Rhodia announces safe and environmentally friendly solvents

Rhodiasolv RPDE is ideal to dissolve polar substrates such as resins, coatings and inks. Used alone or formulated it can substitute methylene chloride, isophorone, or glycol ethers; and in Polyurethane and Polyester

Over 89 Years of Reliable Service to the Coating and Chemical Industries.

QUÉBEC:

Suite 244

www.debro.com

ONTARIO (Head Office): 11 Automatic Road Brampton, ON L6S 4K6 Phone: 905-799-8200 Fax: 905-799-8300 merservice@debro.com

BRITISH COLUMBIA: 1405 route Trans-Canada 130-18279 Blundell Rd Richmond, BC, V6W 1L8 Dorval, QC H9P 2V9 Phone: 778-245-2211 Phone: 514-684-9775 Phone: 866-294-7914 Fax: 514-684-6313 Fax: 877-294-7929 customerservice@debro.com montrealcustomerservice @debro.com

ALBERTA: #118, 5664 - 69th Avenue SE Calgary, AB T2C 5B1 Phone: 866-294-7914 Fax: 877-294-7929 erservice@debro.com

Where is Debro heading?

Debro Chemicals has long been a pioneer in the distribution business in Canada and key to the company's continued longevity and unparalleled success, will be a strong understanding of where Debro came from and creating a culture that will attract and retain the best and the brightest people in the industry. We have a vacancy.

Debro People in the News

Gagan Jain joined Debro as Account Manager in the Ontario region. Gagan has been given added responsibilities of product management along with his customer duties. Gagan is a Chemical Engineer with an MBA in Marketing.

resin clean-up, Graffiti removers.

Rhodiasolv DIB is an excellent coalescing agent for paint formulations. Low-odour and low VOC properties. Also used in water borne degreasing applications.

DSM NeoResins

Debro is proud to announce that it will also handle DSM in the Ontario region in addition to the Ouebec and Atlantic regions covered previously. DSM is recognized as the world's largest specialty resin company. The product line includes emulsions for the coatings, ink, graphic arts and adhesives markets, UV resin systems and waterborne alkyds.

Omnova Solutions

Debro is also proud to announce it is the Canadian distributor for Omnova's Floor polish, Pressure sensitive adhesive, Textile and non-woven, Rubber reinforcing, Rubber sports surface and Release products.



High Efficiency and Low VOC

By SANDY ANDERSON

Definitely the biggest concern when it comes to the manufacturing of paint and coatings is the environment. Manufacturers and suppliers of latex additives have made low volatile organic compound (VOC) a top priority, due to government regulations, as well as customer demand.

"Environmental awareness is the main driver for low-VOC solutions," says Dr. Steffen Pilotek, Business Development Director NT, Buhler Inc. /NT.

He adds, "Additives are a strong tool for differentiation. The high efficiency that additives provide along with the great combination potential allow coatings manufacturers to formulate solutions with highly targeted characteristics."

It is the additive that drives the function and quality of the coating, and research and development into new and better additives for latex coatings is ongoing.

KEY CONCERNS

Compatibility is a key concern according to Pilotek from Buhler. "Additives for waterborne systems will only provide the maximum of their functionality if they are fully compatible with the water based system. This is tricky as water is a peculiar solvent e.g. in terms of high variability in pH values." He says, "The heterogeneity of emulsion systems add to the complexity.

The high complexity of low-VOC formulations make it more challenging to provide a targeted effect that works in a broad range of formulations."

Kendall Justiniano, Strategic Marketing and Product Line Manager for Additives, Dow Coating Materials says, "When it comes to low VOC latex additives, formulators must consider the additives' net contribution to VOC content, and whether

CORPORATE PROFILES

ty 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

The future for ElektroPhysik holds many challenges driven by globalization and increasing demands in the

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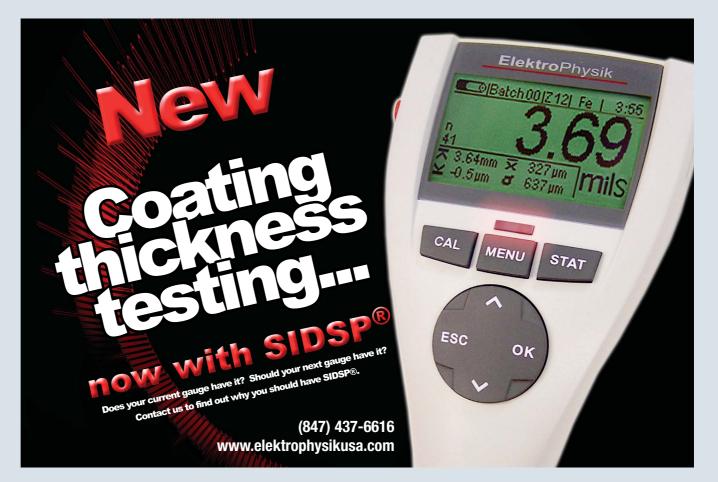
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marketplace by customers to achieve even higher levels of quality in there products. There is no doubt ElektroPhysik will be able to stand up to the challenges as it always has. Driven by the passion for the pursuit of new technologies and implementing them where ever possible is why it is often said; ElektroPhysik....advancing with technology.

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ElektroPhysik advancing with technology

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 Rein 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 ational Standard Interna

coatings over both ferrous and non-ferrous substrates. ElektroPhysik prides itself on its "sensor" technology, ElektroPhysik continually strives at advancing 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 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 vulnerabili-

To better serve the North American markets, Elektro-Physik 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, and GalvanoTest which are electronic platforms for measuring



SIDSP® is available in the MiniTest 700 Series as well as the new MiniTest 70 Series.

PAINT & COATINGS MANUFACTURING: LATEX PAINT ADDITIVES



or not the additive addresses the performance challenges related to reducing overall VOC content.

For example, film formation becomes more difficult when the last bit of solvent is removed from a low-VOC paint. Coalescents traditionally used to solve this problem can have an adverse effect on film properties, such as dirt pick-up resistance or tack, in the end formulation. In addition, low-VOC paints are more susceptible to freeze/thaw problems, which compromises their effectiveness in cold climates. These additional challenges need solutions, many times provided by additives."

Justiniano adds, "One of our most recent innovations designed to help our customers differentiate is our patented Acid Suppression Technology. It allows us to develop high-efficiency HEUR rheology modifiers without using solvents or surfactant additives. And because it reduces the added VOC load to paint can formulations, it offers customers the flexibility to use VOC in other parts of the formulation."

CUSTOMER DEMAND

Pilotek from Buhler says, "Customers have very specific requests with respect to their particular application. Improvements in drying time reduction to increase productivity as well as increased resist-

CORPORATE PROFILES

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 solvent-based systems these products provide the low viscosity properties needed to meet high solids and low VOC requirements.

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- 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.
- HIFILL[™] Cost effective hiding power with excellent brightness, gloss and color integrity in styrene acrylic and vinyl acrylic emulsion white and pastel colored paints.

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.



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



Key Products Include:

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- 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.

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E-Mail: ContactUs@brilliantadditions.com

Website: www.brilliantadditions.com



ance properties are typically high on the wish list."

Justiniano at Dow says, "Customers want higher levels of performance and help with total formulation cost. They're looking for greater hiding and solutions that address sustainability trends without increasing costs."

"Technology innovation enabled the breakthrough paint-and-primer-in-one products you see today, and customers want to take it to the next level with a true one-coat hide," Justiniano adds. "Traditionally, higher hiding meant more TiO₂ (the most common white hiding pigment), but we're doing it with less. As you know, TiO₂ is one of, if not the most expensive components in the paint can, and tight supply of TiO₂ globally has made it even more costly for formulators. Our ROPAQUE polymers stretch the hiding performance of TiO₂, so formulators can make a high performance paint at a lower total cost."

He explains, "Dow continues to expand beyond its current offering to meet customer needs in the most comprehensive ways possible. A series of additives will soon be launched in North America that are designed to both reduce TiO₂ and VOC content in solvent-borne alkyd gloss and semi-gloss paints, while maintaining or improving hiding properties. For waterborne traffic paint applications, Dow is also on the cusp of releasing a next generation high efficiency binder that allows up to 50 percent reduction of TiO₂ content while offering the same performance."

"Volatile organic compounds (VOCs) in paint are considered harmful to the environment and especially for people who work with them on a regular basis."

PRODUCTS

Buhler provides a broad range of solutions for the coatings industry, including the additive OXYLINK, a highly specialized dispersion product in water, designed to improve the performance of water based coatings. It is a dispersion of specially stabilized and formulated metal oxide particles in water itself to provide ready-to-use functionality. The additive improves the drying time and resistance characteristics, such as blocking resistance, solvent resistance, humidity resistance, and hardness by increasing the cross-linking density of water borne resin systems. Buhler has had its OXYLINK product series on the market since 2009.

One of Dow's latest innovations is Acid Suppression Technology. This innovation enables Dow to develop high-efficiency HEUR rheology modifiers without using solvents or surfactant additives. Justiniano explains, "The resulting RMs maintain high solids content at very workable viscosities, so formulators can produce associative thickeners that are solvent- or APEO-free, and have high Stormer (KU) efficiency, very little discernable odor and low VOCs. Because ACID Suppression Technology can be incorporated into many thickener structures, it provides greater formulation flexibility in complying with VOC and other regulations while maintaining cost and product performance." He adds, "Our first two products based on this new technology are ACRYSOL RM-845 and RM-895 Rheology Modifiers, non-ionic (HEUR) associative thickeners for high-performance coating

rheology in both interior and exterior latex paints. We also offer ECOSURF LF, our newest line of surfactants that are an APEO-free alternative for low foam grind requirements."

Roger Mouhanna of Inortech Chimie Inc. says volatile organic compounds (VOCs) in paint are considered harmful to the environment and especially for people who work with them on a regular basis. Exposure to VOCs has been related to organic solvent syndrome, although this relation has been somewhat controversial." He adds, "The usage of some glycol derivatives (e.g. ethylene glycol, butyl glycol) and certain emulsifier types (e.g. APEOs = alkylphenol ethoxylates), glycol ethers are regarded as HAPs (Hazardous Air Pollutants), which are known or suspected to cause serious health damage. Their use is restricted by thresholds under the Clean Air Act (in the revised version of 1990)."

Mouhanna explains that some properties that might be compromised when formulating a low to zero VOC coating are:

- Open Time
- Film formation
- Color Acceptance
- Block Resistance
- Scrub resistance

CORPORATE PROFILES

Norspec Filtration

For more than 25 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 the customer's needs.

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 or recirculated back into the booth.

Norspec offers the largest selection of weights

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



"For All Your Paint Booth Filtration Needs"



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.

CANADA*S **Paint Booth Specialists!**



nesses, 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 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.

PAINT & COATINGS MANUFACTURING: LATEX PAINT ADDITIVES

- Gloss and flow and levelling
- Freeze-Thaw Stability

Inortech Chimie, a specialty chemical company, is a leading supplier of performance additives to a variety of paint and coating applications and a key goal for them is to find solutions.

"During formulation, our specialty additives provide outstanding benefits: enhanced surface wetting, improved coating adhesion to substrate, superior dispersion stability and gloss, enhanced color development and stability, better foam control," says Mouhanna.

The Inortech product line includes:

- LOW VOC film modifiers such as Evonik Tego VP-258 and the Tegowet 500 series
- Performance additives from Tego-Evonik including Wetting additives, Dispersing agents, Mar and slip additives - called "surface control additives" since they control surface structure - Defoamers (Polyethersiloxane based defoamers are recommended for low VOC gloss and semi-gloss formulations) and special additives to increase surface hardness and improve performance of low VOC formulations. The latter grouping

includes Carbodilites, a safe to use and environmentally friendly crosslinking agent for waterborne resins, paints, inks, adhesives and coatings. (Specifically Carbodilite V02L-02 and SW-12).

"Such critical substances must be avoided in today's polyurethane thickeners without compromising the products' performance."

Then there are Borica Titanates and Zirconates adhesion promoters and coupling agents.

The typical structure of Titanates: (XO)n-Ti(OY)4-n, where X are alkyl groups, Y are organo - functional groups. This makes titanates coupling agents,

bridging two dissimilar species chemically. They are also useful coupling agents for carbonates, carbon black and other fillers. The alkoxy groups react with the hydroxyl groups of both the resin and the substrate to form a fixed cross-link, permanently bonding the coating to the surface. Borica has introduced coupling agents in a water based medium that contribute to adhesion in low VOC formulation: Titanate AQ33 Titanium ammonium lactate and Zirconate AQZ30 Triethanolamine zirconate.

Then there are rheology modifiers.

Mouhanna explains that when waterborne coating systems are formulated as "low-VOC" or "VOC-free", the rheological additives must comply with the strict, modern-day requirements on environmental compatibility.

"Such critical substances must be avoided in today's polyurethane thickeners without compromising the products' performance," he adds.

Hique associative thickeners meet those requirements, noteably: HIRESOL 180 and HIRESOL 182 that are solvent free, help with flow and leveling and film build. HISOL 308 is APEO free.

When it comes to specialty polymers Nuplex and Hauthaway offer low to zero VOC waterborne features. Nuplex offers a series of selfcrossling acrylics that allows formulators to develop low VOC formulations with outstanding overall performance, specifically Setaqua 6756 with 50g/liter performance coating.

On the other hand Hauthaway offers solvent free aliphatic polyurethane dispersion that has light fastness and exterior durability with minimal effect on the environment, notably Hauthane HD 4675.

"Equipped with an R&D laboratory, Inortech Chimie is engaged in exploring innovative solutions to LOW to zero VOC formulating concerns," says Mouhanna. "In partnership with our suppliers, academic and research institutions that are concerned with the environment we endeavour to increase our knowledge of leading edge technology so we could offer a solution package to our customers."

When it comes to Low VOC Latex Paint Additives, manufacturers have taken compatibility and performance expectations into consideration and come up with product solutions that not only meet government regulations, but that provide desired results and ultimate safety.

Companies who contributed to this article: www.bublergroup.com www.inortech.com www.dow.com

CORPORATE PROFILES





YOUR INNOVATIVE PARTNER FOR COMPLETE FINISHING LINES AND SURFACE TECHNOLOGY





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Venjakob North America

Welcome to Venjakob A systematic approach in surface coating technology and exhaust air filtering

The Venjakob group of companies plan, produce and install complete system solutions - from pre-treatment, followed by the painting process, conveyor and handling equipment through to drying and exhaust air filtering. Decades of experience, complemented by qualified and motivated staff paved the way for the company to evolve into an internationally recognized technological leader. Members of the group of manufacturing companies include: Venjakob Maschinenbau GmbH & Co., KG in Rheda-Wiedenbrück/ Germany, Venjakob Umwelttechnik GmbH & Co., KG inSarstedt/Germany and Nutro Inc. in Strongsville, Ohio/USA. Venjakob has numerous locations worldwide to service you, including Spain, India, China and of course, Venjakob North America, Bolton, Ontario.

History

As a family business, Elisabeth Nüßer, nee. Venjakob and Otto and Christian Nüßer are leading the company as second and third generation owners.

In its 47 year history, Venjakob has gained a reputation as a developer, manufacturer, Distributor and service provider to become an internationally recognized and worldwide system manufacturer of surface finishing machines, exhaust air cleaning systems and conveyor equipment. Sustained efforts to develop and produce high-quality solutions have become a landmark of the company, proven by a large number of patents. Added value for the benefit of the customer has always been the cornerstone for the success of the Venjakob brand.

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

Exhaust gas purification: We have installed over 500 systems in diverse industry sectors worldwide.

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

Quality and competence, however, is also provided by our extensive spare parts store, our fast and experienced service staff and qualified instruction of your personnel.

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Reference List

Automobile and Plastics: Venjakob painting machines are in use many areas of plastic processing such as polyester and adhesive coatings.

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

ronmentally friendly - economical - reliable."

A large number of in part patented product developments allow customers to produce in an energy efficient, environmentally sound and economical manner. Moreover, the modular design of our machines makes your investments future-proof. Secure these added values for vourself.

Venjakob lives this environmental aspect not only in the design of machines, but takes it further into production, which is confirmed by the DIN EN ESO 14001 certificate.

Venjakob is committed to achieving the objective that the trust placed in us is answered with innovative system solutions and convincing service. The satisfaction of our partners drives the consistent and innovative growth of our company.



INDUSTRIAL FINISHING: POWDER COATING CASE STUDY

continued from front cover



Ed Baldassi and son Brock on site at Offsite.

The services of Engineer, Jack Tammela of Cedar Ridge Consulting was employed for the entire project, with Baldassi and other service personnel and design engineers directing, supporting and modifying to suit Offsite's requirements.

EQUIPMENT AND PRODUCTS USED

With Offsite's specialty being the powder coating of ferrous and non ferrous metals, it concentrated on building the best equipment for it.

The main production line consists of a six stage washer, using an Alkaline cleaner, rinse, Zirconium pre-treatment, rinse, rinse and reverse osmosis (RO) water rinse. Zirconium is the chemical of choice over the old iron-phosphate pretreatment. (It is also more environmentally friendly.) The cleaning process is followed by a dry-off oven, and into one of the most sophisticated powder booths in the industry.

This booth is pre-programmed with



Parts exiting curing oven.

Global Finishing Solutions (GFS)

CORPORATE PROFILES

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-practises advice to companies looking to get the most from their finishing equipment.

The newest training tool from GFS is the new online educational resource, the Finishing Academy. Developed from a massive amount of training materials produced over the years from some of our past brands, such as JBI spray booths and the DeVilbiss spray booth division, this valuable material was re-organized in to a website format that allows users to learn at their own pace, as well as choose which sections are of most interest to them. The Finishing Academy is free to use, and available to everyone online at www.finishingacademy.com.

The Finishing Academy currently contains two educational modules, one focusing on automotive refinish and the second looking at aerospace finishing. Each module contains three sub-sections covering topics such as spray booth design and history, contamination control and spray booth maintenance, shop layout and facility planning, as well as a look at some of the more advanced spray booth technologies that exist, such as accelerated curing systems and programmable control panels. GFS is dedicated to growing the knowledge contained in the Finishing Academy to include other areas of the finishing world like powder coating, wood finishing, and more. New sections of material will be added to the site in coming months, and it is GFS' hope that the Finishing Academy grows in to the most complete educational resource for finishers across all industries. 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.

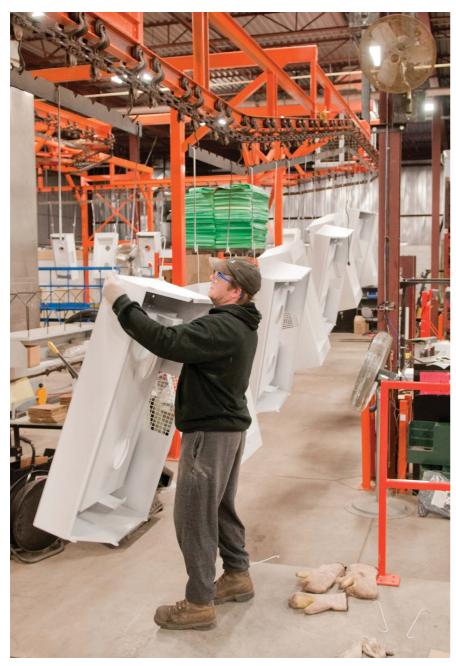
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INDUSTRIAL FINISHING: POWDER COATING CASE STUDY



Andrew Howels offloads finished cabinet parts from the overhead conveyor.



the product requirements, unique for the particular product being sprayed. Sensors detect the parts entering the booth, move the guns to the optimum position, adjust the flow of powder, air, static charge, and commence spraying on 'seeing' the part. Manual touch-up of special areas is covered by two painters with manual guns. Powder is continuously reclaimed at an efficiency of 95 per cent. The powder change from one colour to the next is achieved by a self cleaning feature of this booth, which accepts the next part in just nine minutes.

Parts are then conveyed to the twostage cure oven. The feature of this special oven is that it has two variable speed burners, initially jacking up the temperature to 'gel' the powder and the next stage, to cure it at the optimum temperaOffsite set up another production line with its own washer, rinses and drier to handle this. Offsite did not wish to risk any contaminations with its dedicated paint line. Turn-around is usually 24 hrs.

Baldassi explains that Offsite Industries had concentrated on Automotive parts and consumer products, working for companies like John Deere, Dana and Magna, to name a few, but over the years work of a diversified nature kept increasing, and work was being received from all corners.

THE PEOPLE

Offsite is a family owned business, with Ed Baldassi as president; his wife Sabrina running the office, backed by long term staffers Cletus Benedict as Plant Manager, Jesse Pearson as supervisor, Richard



Doug Ker works in the custom built manual powder paint booth. He is working on a metal frame for a trailer used for traffic control in Germany.

ture. Every new part is initially run with a data recorder to ensure that the set temperatures are achieved at the 'part surface'. This is then set into the PCL controlled equipment for next-time use. All information is documented for accurate repeatability. Parts are then inspected, and packaged according to customer requirements. Every customer's unique requirements are made available to the line staff, via computers located at strategic locations.

Offsite paints with Polyester, Urethanes, Epoxies, Hybrid powders, depending on specific customer requirements. It generally advocates the use of standard colors to maintain lower costs. However it can colour-match any shade, the customer may desire, with powder textures varying from smooth glossy, textured, hammertones, to flat. Hunter as Quality Manager and Rob Parsons as IT Manager. Ed and Sabrina's eldest son Blake, is at University studying Business Management, and hopes to join the team. Their youngest son Brock is already hard at work learning the ropes from the ground up. The company is also backed by other quality and financial staffers, skilled personnel in maintenance and production fields and are fully equipped to handle anything that can be thrown at them.



Louis Brady works at a Magna Flux testing station.

This line was built to accommodate parts, 25ft. long by 42ins. wide by 7ft. tall. This was to reduce the cost of painting high volume large parts.

For those with much larger products, up to 33ft. long by 15ft. wide by 7ft. high, Offsite built a "Batch' system, with the same stringent quality control in a manual system.

For the washing of trays (dunnage), totes etc. contaminated with dirt, oils etc.

Parts exiting the washer/dryer.

20 CANADIAN FINISHING & COATING MANUFACTURING JANUARY/FEBRUARY 2011

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INDUSTRIAL FINISHING: POWDER COATING CASE STUDY

RECOGNITION

Offsite has ISO/TS 16949:2002 registration. This is their commitment to customer quality and service; proof of which, being the recipient of Dana's prestigious Diamond Award for two consecutive years. The Just-In-Time delivery and zero defects record with GM for eight years is further testimony of its service and dedication to its customers.

FINAL MOVE

Offsite's aim is to be the #1 manufacturing solution provider in the Niagara region. And they have come a long way from humble beginnings in a 5000 sq. ft. building wet painting, 27 years ago. "Bursting at its seams" Ed had to keep expanding, by acquiring more bays, till he could expand no more. He moved to another location in St Catharines having switched to powder coating, and soon out-grew this 35,000 sq. ft. building too. It was time to make a major change, and Baldassi now feels he has come to his final home for Offsite at the Louth Street location.

Now with its new facility and plenty of room for expansion and the next generation of Baldassi's joining force, Offsite Industries in St. Catharines, ON is poised for the future. Photos by Pete Wilkinso



CORPORATE PROFILES

Arya Chem Inc.

Arya Chem Inc. is a chemical distributing company based in Canada. Our main activity is supplying a wide range of chemical and plastic raw materials for the requirements of the paint, printing ink and plastic industries.

Arya Chem Inc. is a leading player in selected markets and business segments through continuous focus on customer and product profitability.

Based on long-term relationships, our commitment is to meet or exceed the expectations of our customers, suppliers, employees and the environment. • Local leader across all segments

· Distributing across the whole country

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Applications: Paints & Coatings

innovative power.

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for 50 years has stood for quality, experience and

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- Printing Ink
- Plastics & rubber
- Polyolefins/polystyrenes Elastomers
- Polyvinyl chloride PVC
- Engineering polymers
- Thermosetting plastics
- Paper & laminates
- · Decorative papers / paper laminates



RYA CHEM INC.

Thioplast® EPS resins are low viscosity, epoxy terminated polysulfides and do not contain thiol end-groups that cause foul odors. These Resins are

modifiers for epoxy and acrylic coatings, primers, adhesives and sealants. Thioplast® EPS can either be used alone or in combination with commercial aromatic glycid ether



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- Paper coating paints • Food, drugs & cosmetics
- Electroceramics & ceramics
- Catalysts

EuroCeras: High performance **CERALENE®** waxes

EUROCERAS is the producer of oxidized, no-oxidized & functionalized LDPE and HDPE waxes. These waxes are being used since many years in the Plastics, Coatings, Paints and Automotive industries as well as the production of Masterbatches.

Application:

- Aqueous and solvent based coating systems (surface modification)
- Improved wetting of pigments, fillers and fibers
- · Pigment dispersion in colour masterbatches
- Masterbatches for technical plastics
- Processing of PVC and rubber
- Adhesion promoter in fiber/plastic composites
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- Bitumen
- Manufacturing of water and solvent based wax
- dispersions Cosmetic applications

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made in Germany Application: Paint & Coatings

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Paper & Laminates Food, Drugs & Cosmetics

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IN THE NEWS

contiued from page 11

acrylic copolymer dry resins. The increase was effective on February 1, 2011, or as contracts allow, and is necessary to offset the rise in the cost of raw materials which are used in the production of these products.

OMNOVA Solutions is a technology-based company with 2010 sales of \$846 million and a workforce of approximately 2,430 employees worldwide. Including the ELIOKEM acquisition, pro-forma sales for 2010 would be over \$1.1 billion with a global workforce of approximately 3,060. The Company completed its acquisition of specialty chemicals producer ELIOKEM in December 2010. OMNOVA is an innovator of emulsion polymers, specialty chemicals, and decorative and functional surfaces for a variety of commercial, industrial and residential end uses. Visit OMNOVA Solutions on the internet at www.omnova.com or www.eliokem.com.

People

Michelman Keeps Eye on Future with New Chemical Specialties R&D Manager Michelman is pleased to announce the hiring of Michael Kramer as its Chemical Specialties R&D Manager. Kramer will be based at the company's headquarters in Cincinnati, OH, and will be



responsible for the global chemical specialties R&D activities, including project and technology leadership, technical service, and laboratory management. He will also serve on the company's technology leadership team.

Kramer earned a Ph.D. in Polymer Science from the University of Southern Mississippi and has over 15 years of technology experience in the specialty chemical industry, including experience in radiation-curable and water-based technology, industrial coatings, powder coatings, pressure-sensitive adhesives, and printing inks.

Stephen Leonetti Appointed Industry Manager, Energy & Hydraulic Systems Stephen Leonetti has been appointed Industry Manager - Americas, Energy and Hydraulic Systems by Enthone Inc., a business of Cookson Elec-

tronics. Leonetti's primary focus will be on the development of oil, gas and energy sector business for Enthone wear resistant coatings products.

Leonetti comes to Enthone with more than 30 years of experience in the metal finishing industry. Throughout his career he has held sales, sales management and senior management positions in the specialty chemical industry. He earned a master of business administration degree from the University of New Haven, as well as bachelor of science degrees in biology and chemistry. Leonetti has been active in several industry trade associations including national leadership positions in the MFSA and AESF.

Josh Erd Appointed Account Manager, **U.S. Western Region**

Josh Erd has been appointed Account Manager, U.S. Western Region by Enthone Inc., a business of Cookson Electronics.

Prior to joining Enthone, Erd previously held sales positions with Eli Lilly & Company, Roche Diagnostics and Synthes Spine. He served four years in the United States Marine Corps and, having recently completed Officer Candidate School, is now an officer in the United States Army Reserves. Erd also spent two years in South Korea as a volunteer missionary and is fluent in Korean. He earned his

Bachelor of Arts degree in advertising/marketing from Brigham Young University in Utah.

DSM NeoResins+ Management Changes

DSM NeoResins+ appointed Martin Vlak per January 1, 2011 as Global Sales Director. Martin Vlak moves from Sales Director Europe, Middle-East, South-America and Africa with DSM NeoResins+. Martin Vlak, a Dutch citizen, has more than 20 years experience in the Coating Industry.

Effective the same day, Ad Ernst, presently Global Sales Director, after more than 40 years of service at DSM NeoResins+ will focus his energies on integrating within the DSM Business Group Resins, and helping to grow the recently announced intended acquisition of a majority stake in AGI Corporation. In this position, Ad will report to Dimitri de Vreeze, President DSM Resins.

Dimitri de Vreeze, President DSM Resins comments:"We would like to take the opportunity to sincerely thank Ad Ernst for his outstanding contribution in the different roles he executed in his lengthy service within DSM NeoResins+, and are more than happy that Ad continues to use his capabilities for the benefit of DSM Resins, particularly in respect of its UV Resins business. I am also confident that Martin Vlak will use his abilities and experience to move us further forward."

Obituaries

Bobby Kuntz



Kuntz ElectroPlating Inc. (KEI) in Kitchener has suffered yet another blow to its patriarch as Robert (Bobby) Kuntz Sr. has died Monday, February 7, 2011. He had just turned 79 on January 10. Kuntz retired from the family

business in 2003 due to a long battle with Parkinson's disease and other health issues a few years before brother Paul retired in 2007.

The two were co-owners and Bob originally took over leadership duties of the company after their brother David's sudden death in the 60s at the age of 31. Bob is described by all who knew him as having a courageous inner spirit, lion heart and dignity of a man who was a fighter - for his family, on the football field, in the business world and in all other aspects of his life. Survived by wife Mary, his partner for over 50 years, and their six children; Carl (Kay), Elizabeth (Fred), Robert Jr. (Erica), David (Rosemary), Joel, and Suzanne Kuntz Forth (Peter) who predeceased him in 1991 and 12 grandchildren. Born in Detroit, raised in Cleveland, Bob and his family moved to Kitchener-Waterloo in 1948, where father Oscar started up Kuntz Electroplating Inc. Bob had a successful career in the CFL - 6 years with the Argos and 5 years with the Tiger-Cats. He was part of the Grey Cup winning teams in 1963 and 1965.



gramming and the initiation of new collaborative environmentalthemed workshops across Canada, industry participation in CAMF increased. Paul also began negotiations with the US-based National Association for Surface Finishing, (NASF) of which CASF is now an international affiliate.

Born in Detroit and growing up in Cleveland and Kitchener/Waterloo, Paul in business is described as a strong, passionate and caring leader. Paul joined the Kuntz Electroplating in the early 60s in the accounting department and eventually became president (1995) and CEO (2002). In the early 2000s, he spearheaded a threeyear, \$7 million project with the University of Waterloo to use more robots in the polishing of chrome-plated wheels at Kuntz. He was also involved in pollution-prevention measures that won the company several industry awards in the late 1990s.

vention Coordinator and Energy Efficiency Coordinator for the Canadian Association of Metal Finishers (CAMF, now CASF) for Québec since 2002; and he became the Québec Director for CAMF in 2003. He was responsible for the success of several federally-funded programs across Canada, such as the translation of Ontario's Pollution Prevention Manual to French, Atlantic Canada's Metal Finishing Industry Pilot Project for Eco-Efficiency and the Canada-wide Energy-Efficiency Benchmarking Studies. Marc also assisted in the translation of the CAMF/CASF Newsletter.

Marc was a well-respected professional among his peers for his passion, knowledge and understanding of metal finishing processes and the many ways in which system optimizations could be achieved through pollution prevention and energy efficiency. He was an author a variety of well-written technical papers, presentations and articles presented to industry members. Sider was also



Services were held February 10. at St. Francis of Assisi Roman Catholic Church, Kitchener, ON

Paul Kuntz

The Canadian Surface and Metal Finishing industry is saddened to learn of the passing of Paul Kuntz of Kuntz Electroplating Inc. in Kitchener, ON, on Dec. 29, 2010, after a long battle with a rare form of blood cancer. He was 72.

Paul was the President of the Canadian Association of Metal Finishers, CAMF (now the Canadian Association for Surface Finishing, CASF), from 2002 until 2007. His first objective as president was membership. He met with government officials to seek funding for programs that would provide membership benefits to metal finishing companies across Canada. Through the increase in educational pro-

Survived by wife of 25 years, Karin, and sons Mike, Andy, Bill, Mike, Mark and Derek and their families. Predeceased by his parents Oscar and Martha and brother David. He was a beloved brother to Mary, Bob, Doris, Anne, Sandy and Louie.

Services were held in Kitchener on January 4, 2011.

Marc Sider, Engineer

The industry mourns the passing of Marc Sider, Engineer and owner of H&S Electrotechnologies Inc., Montreal, QC, at his home on December 29, 2010. He was 51.

Sider was a graduate of École Polytechnique in chemical engineering (1981) and worked in electrochemistry. He was Pollution Preinvolved with the Instrumentation, Systems and Automation Society (ISA) - Montreal Section and served as Montreal Section President from 2004 to 2009. He was a member of the board of directors of ISA Montreal at the time of his death. He will be remembered as a man of high integrity who was extremely committed to his work but who always found the time to volunteer. His ideas, enthusiasm, and dedication will be missed.

The Evolution of Powder

BY ROBERT LANGLOIS

Early in 2001 the initial objective was to develop a commercial process for the powder coating of high temperature plastic substrates. To date Alliance has shipped over 5 million powder on plastic parts from Major Appliances to outdoor stadium seating, objective achieved.

Certainly the holy grail of powder coating has been the ability to compete head to head with liquid coatings, both on plastics and metals. To achieve this lofty goal, new low temperature cure powder coatings would be required to paint heat sensitive substrates such as TPO or PCABS. Secondly, the development of new powder coating processes to achieve an appearance equally as good as that of liquid.

Typically when you ask a powder paint manufacturer if they have low cure powders, they quickly acknowledge that they do, low cure in their world is 325 F and is primarily a functional coating, usually an epoxy. The cure I speak of is 250F, and capable of providing a smoother appearance in a mono coat than most multiapplication liquid processes. So does this elusive material exist? It does, ASF is exclusive distributor of such materials, which Alliance classifies as ASFAG or Automotive Grade powder formulations.

This leads me to the second issue, powder meeting the current aesthetics of liquid. For anyone who has ever traditionally sprayed out a high end silver metallic powder with a subsequent powder clear coat will confirm that the appearance is noticeably different than the liquid version. When I say traditionally sprayed out, I mean basecoat then Cure followed by the application of the powder clear coat with a subsequent second curing.

So, how is it that it is now possible to produce a powder coated part, be it metal or plastic that in fact has a better appearance than current liquid technology. As an inventor/patent holder for numerous powder processes and technologies, I would like to say that this outcome was the intended goal, but truth be known it was a by-product of another development initiative, an accident as you will. I had always heard that the great inventions were not the intended goal, certainly I always viewed this statement with some skepticism, but here we are.

Upon the consideration that the trend in powder finishing is to achieve automotive styling, just look at the latest major appliance offerings, how best would a powder coating operation, either job shop or in-house offer this look which in almost all cases involves a base coat and a clear coat. The goal was to turn a monocoat powder line into a two coat system with minimal capital investment costs while at the same time providing a significant economic advantage over a two booth, two cure system or cycling parts through the system twice to achieve the desired base coat/clear coat effect.

A year later, and hundreds of thousands of dollars in development costs incurred, Alliance in conjunction with its Partners, AkzoNobel and ITWGema had achieved a commercialized process whereby two different powders could be applied in a single powder booth with a subsequent co-cure. This process known as the Alliance DCS (Dual Coat System) not only achieved the desired effect of providing for a basecoat and clear coat in one step, thereby achieving the goal of turning a mono-coat system into a two coat system, but also had some very interesting aesthetic implications.

Herein lies the accident, as a byproduct of DCS we are able to achieve incredible smoothness or high Orange Peel numbers, where 10 is plate glass and 1 is an Orange. Typically, what we have found is that when

CORPORATE PROFILES



Erie Powder Coatings

Custom manufacturing specialty powder coatings, Erie Powder Coatings (EPC) offers many advantages. If you are looking for anti-graffiti, SEFA laboratory grade products, fast cure powders, or just a powder coating that you need in your company colour and you need it on time, Erie Powder can help make your job easier.

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

Erie offers a very strong and varied line of anti-graffiti products. Four separate chemistries are available for AG applications, 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. products. SEFA (Scientific Equipment and Furniture Association) sets standards for laboratory furniture and cabinets. EPC has been active in this market and has qualified both epoxy and urethane products that meet or exceed these specifications. While this is a select and niche market, Erie has found this market to be a strong one.

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

With two facilities, our original powder manufacturing plant in Grassie Ontario and more recently the new facility in North East Pennsylvania under the EPC powder label, Erie is able to assist all of our customers on both sides of the border. Erie continues to supply coatings further afield as well, into South American and the Caribbean.

not just black & white ...

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Erie Powder offers two lines of SEFA grade

Erie Powder Coatings is proud to be ISO 9000 compliant.



DCS is used the OP increases by 2-3 values. Thus when we take a silver metallic powder where OP is expected to be 6-7, and when DCS is applied it now becomes 8-9+, thus providing a look equivalent or indeed better than that of liquid.

Earlier this year the DCS process was compared to the gold standard of liquid automotive paint, Lexus, and according to one North American OEM was able to meet the challenge. The one qualification here is that whereas the Lexus paint application includes multiple post painting buffing and polishing operations, the DCS sample was direct from the cure ovens with no post work applied. We are not suggesting that powder will replace liquid overnight, however steps are being made to introduce powder clear coats and primers on heat sensitive substrates.

In the meantime there are more current applications for the use of DCS, one being the improvement of mar and scratch resistance for components such as B Pillars and window sashes which are currently either being painted in a full gloss powder mono-coat or liquid paint. Although recent enhancements of this polyester technology have provided increased mar and scratch resistance, it still does not meet some OEM performance specifications. In theory a topcoat of powder clear would more than address

DCS Results				
	Group A	Group B	Standard	
		DCS		
Process Time	50 Min.	22 Min	22 Min	
Orange Peel	6 - 7	8 - 9	8 - 9	
Film Build	5-6 Mils	3-4 Mils	2-3 Mils	
Mar and Scratch	Superior	Superior	Acceptable	

this issue, however from both a cost and visual appearance this is would seem not possible with current processes and paint technologies.

In-depth paint trials were conducted, using window sashes and B-Pillars. Group A would be painted in traditional two booth two cure process, while Group B would utilize the DCS process, and both A & B would be compared against the Standard, the mono-coat system.

The results are compelling for the use of DCS, in that the trade off for a signifi-

cant increase in mar and scratch resistance is a slightly increased film build, while all the other processing parameters remains constant when compared to the standard.

It would seem that powder paint technology has cleared the last remaining hurdles, which will make powder the logical and economic choice of future generations of paint applications on both conductive and non-conductive substrates both within and outside of the Automotive Industry.

Robert Langlois, Alliance Surface Finishing, rlanglois@asf-powder.com

Greg Taylor; ITWGema, gtaylor@itwgema.com

Steve Polanski. Akzo Nobel, Steve.polanski@akzonobel.com

CORPORATE PROFILES

Exel North America

EXEL North America - Manufacturer of Kremlin Rexson, SAMES, & Johnstone brand products. We offer Automatic or Manual Paint Spray Guns, Rotary Electrostatic Bell Atomizer, 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 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. We manufacturer spray guns, bells,

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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.

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pumps, metering systems and all the accessories that go along with them. 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.

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is orange peel a problem for you?

What about film build up?

CFCM spoke to **Dupont Industrial Coating Solutions** to ask their opinions on trends when it comes to powder coating in Industrial Finishing.

KEY CONSIDERATIONS

Trena Benson Marketing Manager for Dupont Industrial CoatingSolutions, says, "In general, when a powder coater is weighing their options, the first decisions focus on the best surface, application, and performance characteristics for the end use. Then, cost and product availability are considered. A key part of the process is ensuring that the correct systems are in place to achieve the desired result. Powder has many advantages making it a wellknown, cost-effective, and environmentally-friendly finishing solution."

THE DEMAND

"In addition to the standard chemistries, interest continues to increase for non-TGIC polyester systems (HAA curative), especially from global organizations seeking to standardize their powder coating usage across their entire organization. For architectural applications, there is increased demand for systems that provide enhanced levels of extended weatherability such as premium weathering TGIC and fluoropolymer chemistries. These powders qualify for the U.S. Building Council's LEEDS program, EQ 4.2," says Benson. "There continues to be interest in antimicrobial-treated powders, especially in the construction of public buildings.

Even though thorough analysis can usually prove the cost advantages of using powder coatings, customers continue to look for ways to decrease their costs. So, low cure options will increase in the marketplace."

Benson says, "Powder is so friendly and economical that it has become a great choice for unique, niche markets. Applicators continue to find new ways to utilize powder coatings even with the standard textures and metallics."

R&D

"Research and development efforts continue," says Benson, "with powder manufacturers and raw materials suppliers in the industry, for powder applications for plastics, MDF, glass, and injection molds. It's important to note that future conversion within the industry should be designed keeping the current application equipment in mind."

ENVIRONMENTAL CONCERNS

Mileidys Bello, DuPont CoatingSolutions technical product leader says, "Powder coatings are 100 per cent solids that meet or exceed the minimum regulatory requirements for VOCs in coatings. The ability to reclaim powder coatings means that up to 98 per cent of the material can be utilized. The typical work environment for powder application is cleaner and easier to maintain. These benefits work together to provide not only an environmentally sound process but also an economical one."

Bello adds, "Various entities such as The Consumer Product Safety Commission (CPSC), Toxic Substances Control Act (TSCA), Registration, Evaluation, Authorization and Restriction of Chemical substances (REACH) regulate and/or require transparent disclosures related to product content and their safe use."

COST

Benson says that when it comes to cost concerns, "In many cases, powder is less expensive than liquid coating. Couple that with the environmental advantages and performance (super tough), powder will be the best answer in most instances. As is the case when buying organic foods, often, environmental concerns and high performance formulations can increase pricing. Formulators usually make the most cost efficient products but often, in meeting requirements sensitive to the customer's needs, costs increase. Newer technologies also tend to be more costly. It is also important to understand how to figure applied costs when comparing different powders."

CORPORATE PROFILES



Com-Pleat/Servair Filters Inc.

Focus on Spray Booth Filters Keeps Servair Growing

Com-Pleat Filters Inc. manufactures and sells all over North America. Servair Filters focuses on Canadian industrial finishers and has a rapidly growing body shop segment.

With spray booth filters there are always trade-offs between capacity, efficiency, change out frequency, price and other factors. Spray booth manufacturers tend to put the same filter in every booth they sell, regardless of the application. We find that over 50 per cent of spray booths we see could use a better filter for its unique application so we are happy to run free trials of any of our filters in your spray booth to see which filter works best for you. Just contact us and we can go over your current requirements and suggest the filters that are the best ones for you.

The continual growth of SERVAIR FILTERS is a testament to the single minded devotion to providing the best filter for every spray booth application.

Spray booth filters can be an accessories afterthought for some suppliers but it is the ONLY thing the team at SER-VAIR FILTERS focus on.

Brad Wilson started Com-Pleat Filters in 1996 with colleagues Glen Widdifield and Len Szamreta while he was sales manager of Servair Inc. In 2002 Wilson went on his own, moving the manufacturing plant to Georgetown, ON and in 2005 he bought the filter division of Servair Inc. renaming it SERVAIR FILTERS.

Most recently, SERVAIR FILTERS divided its sales force into Industrial Spray Booths with Colleen Ketteringham and Collision Centre Spray Booths with Keith Hayward to better serve the specific needs of each market segment. The sales team has developed a lot of experience with spray booth filters as a result of this emphasis.

Brad Wilson, President of Com-Pleat Filters Inc., Servair Filters, Georgetown, ON says when it comes to Filters in spray booths, "There are no new products in the spray booth filter industry."

Wilson explains, "The trick is in knowing which filter works best in each particular application." He says, "there are 5 types of filter media, accordion style, baffle box, polyester pockets, paper mesh and fibreglass. The problem is that each booth manufacturer puts the same filter in every booth they sell, regardless of the application. Factors such as booth size, air flow requirements, type of overspray and changeout frequency all need to be matched with filters that provide the best life, efficiency and air flow tradeoffs. We find that over 50 per cent of the market should be using a different filter so we run a lot of trials to provide the best filter for the application."

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SERVAIR FILTERS, along with her sister company, Com-Pleat Filters Inc., either manufactures in house, or imports truckload quantities, of the 5 main types of interchangeable spray booth filters: accordion style, baffle box type, paper mesh, polyester pockets and fiberglass.

Several years of "on the road" experience calling on industrial and automotive customers gives SERVAIR FIL-TERS the skill needed to find the most appropriate filters for each spray booth. This is done with free trials of various filters to determine the best trade-off between capacity, efficiency, price and other factors. Com-Pleat Filters Inc. and Servair Filters, Canada's only exclusive manufacturer of paint booth filters, operates just outside the GTA in Georgetown Ontario.

"We saw a need to supply inexpensive and compact pleated accordion style paint arrestors to industrial spray operations and began manufacturing in 1998," says Brad Wilson President. "We purchased our largest distributor in 2005 in order to offer a full line of imported booth filters to compliment what we were already manufacturing in house." He adds, "We are the only Canadian manufacturer who only services the spray booth market."

Servair has over 20 distributors across Canada.



CORPORATE PROFILES

Akzo Nobel Wood Coatings Ltd.

Established in 1976, Chemcraft International is now part of AkzoNobel Wood Finishes and Adhesives group after an acquisition in July 2007. 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 that Chemcraft is known for with an even greater amount of expertise and technology that can be drawn from the global presence of AkzoNobel. The Chemcraft brand has not disappeared through this acquisition 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 while treating our customers as partners and this is a unique position in the market and this 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 2011 AkzoNobel will be launching a new complete line of water base coating systems that will have been developed with cost, application and performance being the main drivers for this product launch. This new water base line of products will be available to both direct and distribution customers and will cover all your coating requirements.

With the emergence of L.E.E.D. and Greenguard driving the move to lower VOC and removal of formaldehyde we have complete systems to meet these finishing requirements with both conventional and UV cured technology.

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.

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. On October 26, 2010 AkzoNobel globally recognized a Safety Day at which time all of our employees took 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.

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Ontario	Winnipeg
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Port Hope, ON	Winnipeg, MB
L1A 3Z3	R3T 3N9
Ph. 1-800-263-7951	Ph. 204-452-7943
Quebec	Calgary

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274, rue St-Louis #6	
Warwick, PQ	
JOA 1MO	
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AkzoNobel welcomes our role in helping to preserve our planet and currently are ranked #2 on the Dow Jones Sustainability Index. innovation experts will take our products and systems to a whole new level. A large part of that innovation is our eco-strategy; sustainability is a deeply embedded part of our philosophy, and the Chemcraft[®] brand of products embraces this vision fully. Our eco-friendly products give you lower Volatile Organic Compound (VOC) emissions without sacrificing performance properties and proves that there doesn't have to be a trade off for sustainability. Combine all that with our commitment to superior customer service and support, and you'll see that we have all the pieces in place to continue in our role as the industry leader for years to come. Chemcraft® is the obvious choice for industrial wood finishes. Visit www.chemcraft.com to locate your nearest distributor.



Chemcraft® is a registered trademark of Akzo Nobel Coatings Inc



Stripping, it is all in the Method

By Sandra Anderson

Stripping is an important part of Industrial Finishing. Basic Methods are:

Chemical, which works by softening or dissolving the film and breaking the bond between the coating and the substrate;

Abrasive, which uses compressed air to impinge a media such as steel shot, sand, ground nutshells, ice, plastic pellets etc. agaist a coated surface;

Mechanical, which use some form of impact or grinding action to remove the coating;

Thermal or Burn-Off, which uses pyrolytic strippers to burn the coating off the substrate

And due to the wide array of modern paints (electrocoats, primers, solventborne, powder coatings, etc.) and substrates (steel, aluminum, galvanized steels, zinc and its alloys, magnesium, titanium, etc.) encountered, there is no single method or chemical product that will universally strip all coatings from all substrates according to David Chalk, PH.D. Principal Research Chemist, Galaxy Associates Laboratories.

SELECTING THE PROCESS

Chalk explains that selection of the appropriate process and product for stripping cured paints will be determined by:

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

There are quite a few factors that need to be considered according to Daniel Yankovich, Product Manager – General Industry, Chemetall US, Inc:

• Type of paint being stripped, thickness (and variation in thickness)



Oisometric burn off oven. Photo courtesy of Steelman

CORPORATE PROFILES

Valspar

The Valspar Corporation is one of the largest global coatings manufacturers in the world, providing coatings and coating intermediates to a wide variety of customers. Since 1806, Valspar has been dedicated to bringing customers the latest innovations, the finest quality, and the best customer service in the coatings industry.

With more than 9,500 employees in over 25 countries, Valspar is in a truly unique position

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- Matt, soft-feel and other special effect coatings for plastic and glass containers for the cosmetic industry
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The market segments serviced by Valspar include; consumer, high performance architectural, packaging, wood coatings, industrial metal, automotive and coatings intermediates.

Headquartered in Minneapolis, MN, our diverse array of products makes us one of the most complete suppliers anywhere, and the sixth largest paint and coatings company in the world.

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Valspar offers the broadest technology portfolio in the wood coatings industry. Our technical capabilities in short and long-term research are combined with state of the art analytical and applications laboratories. In addition, our International Colour and Design Studios help to keep our colour styling on the leading edge of design. We are committed to providing exceptional and cost-effective wood finishing solutions you can rely on. Valspar 2 zenith 2 zenit Valspar if it matters, we're on it.®



- Quantity and size of parts, racks, etc. that need to be stripped
- Substrate that's being stripped and its sensistivity to stripping methods - i.e. heat, abrasion, dimensional stability
- Time frame within which the parts needs to be stripped
- Environmental restrictions emissions, discharge limits, creation of ash, etc.
- Cost of the process capital/equipment, energy, manpower, supporting equipment, supplies
- Floor space available
- Flexibility of process

Yankovich says, "Every situation is different and requires careful consideration to make the best decision. I believe it starts by reviewing all of the key factors and setting up a matrix of the key factors and then weight-ranking them relative to each other - i.e. System Cost, Labor, Disposal, Energy, Flexibility, Speed. Usually this analysis will point to one or two methods that may be best for them. Of course, we sell chemical paint strippers and feel that this approach offers the best overall combination of these factors." Chemetall offers a broad array of chemical paint stripping products that include alkaline, acid, alkline/solvent hydbrid, acid/solvent hybrid, solvent-based and thickened products as well as custom designed chemical paint stripping equipment. They

also carry a broad array of specialty chemical products and solutions that include the following broad families of products and services - cleaners, conversion coatings, rust preventives, metalworking fluids, permanent coatings, passivation treatments, paint strippers, paint spray booth treatments, water treatment products (boiler, cooling, wastewater) laboratory support services, and chemical feed, monitoring and control equipment.

BURN OFF

Steve Moore, Sales Manager: Burn-Off Oven Products, Steelman Industries, Inc., says Steelman Industries is the leading manufacturer of heat-cleaning, or burnoff, ovens. Burn-off ovens are used to remove paint or powder coating from metal parts — normally hooks and racks — by heating the parts in a low oxygen atmosphere. The paint or powder coating is converted to smoke which is pulled into a high-fire afterburner where it is destroyed by temperatures as high as 1,800° F.

He says things to consider when looking into the purchase of an oven, "Damaging the hooks and racks through over heating or allowing them to catch fire is a common concern. Steelman's patented "Top-Down" heating and venturi grill sys-

Graco provides equipment for spray finishing, protec-

tive coating, paint circulation, lubrication, and dispensing

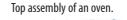
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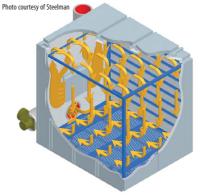
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tem combined with our patented rate control, work to prevent any fires before they occur."

David Freeman, ProQuip Consultants Inc. adds, "This also ensures Temperature uniformity, which prevents warping and damage to larger hooks and racks. Operating costs, labour and utilities can be minimized by racking the hangers so they can be cleaned without reloading and unloading. The efficiency of the design can minimize hot air going directly up the chimney. This should be understood by the purchaser." He adds, "Operating cost due to poor design (excessive gas consumption) and excessive handling due to error in Oven sizing and cart design can result in a long ROI."

The demand in burn off ovens tends to be safety and speed. "Second to safety (all Ovens must meet the inspections stan-

dards TSSA-CSA) for gas but many other safety features are important to allow controlled operation. Process speed and automatic operation (no operator input) is one of the top questions we are being asked. Steelman's Top-Down heating and Automatic Process Control allow the oven cycle to automatically adjust to each load; only running as long as necessary to properly clean (pyrolyse) the loads thus reducing operating costs and quickly processing the load," says Freeman.

Freeman from ProQuip suggests that the finisher always do their homework before investing in an oven. "Most Manufacturers provide a guide to selecting an Oven. These should be read carefully as they are written in such a way to show that their product is unique. Beware of claims of per cent efficiency or any other claims that can't be substantiated. Do your homework and understand the process. Have confidence in your sellers knowldege and don't be fooled by references selected by the Manufacturer. Remember: there are few people who will admit their mistake or they're not aware of better products."

Chalk says all Galaxy's customers who paint, "will also do some amount of paint stripping, if for no other reason than to strip the hooks from which they hang their work." He adds, "While a burn-off oven

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Easy-to-use, entry-level plural component proportioner designed for multi-color. two-component applications. Designed for multi-color, two-

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Graco's 4-ball piston pumps feature an enclosed wet cup and spring loaded packings which result in consistent lubrication for longer packing life and reduced maintenance. They are also energy efficient and

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These compact and lightweight guns have an ultra precision indexing knob to control flow rates, and two new aircap technologies – HiTEch for excellent atomization and Air Brush for precise, small surface area spraying.

For high performance precision finishing, choose AirPro EFX.

INDUSTRIAL FINISHING: STRIPPING



Parts Before Paint Stripping. Photo supplied by Chemetall US, Inc.



Parts After Paint Stripping. Photo supplied by Chemetall US, Inc.

can accomplish this, some drawbacks include high energy costs and need for specialized acid rinses to remove the "ash" from the burned work. Also, any reactive substrates other than ferrous metals (e.g., aluminum or galvanized work) are generally not suitable for stripping in a burn-off oven."

Galaxy Associates is a specialty chemical company offering industrial chemicals to support manufacturing. Their products include lubricants and cutting fluids for fabrication of metals, cleaners, pretreatments, sealers, and rust preventatives for protection and painting of all substrates, as well as paint booth compounds, waste treatment products, truck washing products, and course paint strippers.

CHEMICALS

"Chemical strippers are therefore used routinely for stripping of all substrates," says Chalk. "In the early days, before environmental regulation of solvents, chlorinated solvents were used for both cleaning the metal before painting and for stripping of defective painted work." Chalk adds, "Because volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) are now heavily regulated, the cleaning, finishing and stripping of painted work must be accomplished without using chlorinated solvents."

Yankovich from Chemetall says, "When it comes to chemical paint stripping our customers are looking for products that



will strip their particular set of paints as quickly and effectively as possible at the lowest cost. They want as simple a process as possible while minimizing up front capital and ongoing energy costs - and doing this within the constraints of their production schedules." He adds, "Speed is still very important."

STRIPPING METHODS AND THE ENVIRONMENT

As for environmental issues, Yankovich from Chemetall says, "We are seeing more environmental pressures on paint stripping - and as you may know, the US has some pending emissions regulations that would be devastating to the burn-off oven manufacturers and users." He says, "Green technologies will continue to be emphasized." Chemetall offers several HAPS-Free and SARA 313-Free chemical paint strippers.

Yankovich explains, "Almost every paint stripping method has some sort of environmental impact:

Burn-Off Ovens - Particulate and VOC emissions

All Processes - Disposal of stripped coating (possible potential for recycle)

Chemical - Potential for hazardous pollutant content, disposal of spent solution, vapors

There are several abrasive methods (media blasting, carbon dioxide/dry ice, ice crystal, high pressure water) that may have less environmental impact, but require more elaborate equipment or have slower stripping times and are labor intensive - and have difficulty removing paint in narrow openings.

Freeman from ProQuip says, "All Burn Offs are subject to M O E regulations and must be approved for emissions. Ovens cannot be operated unless they are permitted. The ash remaining after Pyrolysis is non toxic (unless the coating contains heavy metals) and can be disposed of in land fill but should be submitted to the M O E for testing and approval. This ash can cause significant housekeeping issues. The Microbe Bath eventually has to be replaced and I believe it has to be disposed of as hazardous waste. Similarly the sand from the fluidized bed breaks down over time and also must be disposed of as hazardous waste. Water discharge is not an issue."



SALTS TO WATER-SOLUBLE SOLVENT

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In many cases, water-borne solutions that were comprised of high concentrations of caustic salts and sequestering agents were used for stripping paints, says Chalk. "Later developments included water-soluble solvents, leading to the development of "di-phase" paint strippers that both broke down and dissolved the cured paint."

ON-LINE STRIPPING

David Freeman, ProQuip Consultants Inc. explains that there are two methods of online stripping.

1. Hot Caustic: Very expensive to operate and there are safety concerns due to very high temperatures. When the caustic needs to be replaced it is hazardous waste. If it fails or needs maintenance the line must be shut down. Environmental approval is difficult and can require costly stack emission testing.

2. Induction Heat: A new process is just being introduced using induction heat to soften the paint, and brushes are used (like the conveyor cleaning system) to remove it without heat or emissions. This system is only suitable where there is one style of rack or very similar.

There are a few systems in operation and it is very expensive. This is a simpler system than the caustic and does not require M O E or Gas approval, just electric. Operating cost is fairly high, but should save money in the long run.

SPECIAL CONSIDERATIONS

Chalk explains, "Special considerations for stripping of aluminum and other white metals led to stripping products based on non-chlorinated/low volatility solvents and unique caustic compounds that do a very good job of stripping paint coatings while inhibiting impact on the reactive base metals." He adds, "These highly specialized materials must be kept "dry", i.e., no water must be permitted to contaminate the stripping tank. However, they facilitate removal of cured paint from substrates that otherwise could not be stripped in a conventional burn-off oven."

NEW STRIPPING PRODUCTS

Chemetall's newest paint stripping products are "hybrid" technologies that combine alkaline and solvent-based components in a mixed two-phase solution.

"The combination of the two components provides superior paint stripping results for a wide variety of coatings," says Yankovich. called Eurostrip 7028/7031 and Eurostrip 7048/7049.

Steelman is proud to be the first to offer a customizable touch-screen PLC control system as an option on their burnoff ovens. This system allows for monitoring of the oven over a network and monitors critical functions. It also allows for expert diagnosis from the factory by emailing the read outs from the Operating

Oven to the Service Department. (Serviceman on the spot). In addition there are fluidized sand Units that strip very quickly but these units are costly and are high energy users as they have to be kept at "idle" all the time whereas the burn-Offs only run when stripping. They are also labour intensive as they can only process a small number of racks each time. It is also very "messy" as sand is carried out with the racks.

Recently a new stripping method has been introduced: Microbes! these organisms remove the paint without heating the racks/hangers but the systems are very slow if not heated, labour intensive and require a high degree of filtration.

COST CONCERNS

"Cost is a concern no matter which paint stripping process is used," says Yankovich. He says the finisher must determine the overall best cost/benefit that works for them because each situation is different.

Freeman from ProQuip says, "Many Companies are using outside "job" shops to do their stripping. This is expensive and entails packing shipping and unpacking. Due to the high cost some Companies do not strip as frequently as they should. This can result in high paint/powder cost as virtually all conveyorized systems utilize

electrostatic guns and excess coating on racks means high consumption rejects and in extreme cases (powder systems) a spark and fire or explosion of the paint dust. This also means that unless they have redundant racks they are at the mercy of the stripper and the weather. In order to make a proper comparison between outside and in house the Customer has to make an honest appraisal of the true frequency for efficient operation times the cost of each strip including transport and rack damage. Excessive build up of coating on the rack (1/4" dia rack = 1" dia excess coating means that this excess paint is adding to the heat load for the dryoff and paint bake."

Chalk sums it up, "Customers are strongly encouraged to contact their chemical supplier for an on-site survey to determine the best approach for stripping of painted work. Usually some laboratory work will be needed to verify the chemical product selection and stripping parameters to achieve the expectations."

Editor's Note: The companies that contributed to this article can be reached: www.steelman.com www.galaxy-associates.com www.ChemetallAmericas.com www.proquipconsultants.com

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Make it Sparkle

When it comes to decorative plating, customers are asking for new decorative finishes such as satin chrome and dark chrome, according to those in the industry. They want shine and sparkle – brilliant finishes, as well as corrosion-free protection and durability.

DECORATIVE CHROMIUM PLATING

Chrome plating is by far the most popular decorative plating material. Following is an excerpt from a paper by Enthone researchers submitted at a recent SurFin conference.

"Bright chromium plating has always been the favoured decorative plated finish for both metallic and plastic components. Metallic chromium is completely tarnish resistant, hard, and wear resistant and most of all has an elegant blue metallic appearance. Bright chromium is not just a single chromium layer, but invariably has an under layer or layers of electroplated nickel ranging from 5 to 50 micrometres. The visible top layer is a thin chromium coating typically with a thickness of 0.4 micrometres.

For components used indoors such as office furniture, office equipment and domestic appliances, a single layer of bright nickel is adequate to afford the necessary surface improvement. This combined with the chromium layer provide sufficient product durability. At the other end of the environment spectrum, exterior automotive trim presents much greater demand on the metallic layers in terms of corrosion resistance, and subsequently, it requires a more complex system.

Research going back over 30 years or more has shown that very significant improvements in corrosion resistance can be achieved with two or more different nickel layers and special microdiscontinous chromium top coating or strike layer. Today multi-layer nickel and

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microporus chromium are the preferred choice to resist even the most severe environments."

Dr. Dmitri Kopeliovich, Phd. materials engineering, Israel, has written several papers on various fields of expertise, such as aluminum alloys, electroplating and much more. He is founder of www.SubsTech.com

"Decorative chromium is thinner than hard chromium. Additionally decorative chromium depositions have micro-discontinuity (micro-porous, micro-crack) structure in contrast to hard chromium, which is normally crack-free.

Typical applications of decorative chromium electroplating include automotive parts (interior and exterior); plumbing fixtures; metal furniture; hand tools; bicycles.

The best appearance and corrosion resistance is achieved when decorative chromium is deposited on a surface undercoated by nickel or copper and

JBC Limited

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:

nickel layers.

Copper undercoating is deposited by copper strike followed by copper electroplating. Copper covers defects on the substrate surface improving its decorative appearance. Copper also protects the substrate metal against corrosion.

Thickness of copper layer is 0.2-0.5 inch (5-13 mm).

Nickel undercoating is deposited by a nickel electroplating process in one (bright nickel) or two (semi-bright nickel and bright nickel) layers. Nickel provides corrosion resistance and leveling of the substrate surface. Additionally nickel activates the surface preparing it for chromium plating. Thickness of semibright nickel is 0.5-1.2 inch (13-30 mm). Thickness of bright nickel is 0.2-0.8 inch (5-20 mm).

Decorative chromium is deposited directly on bright underlying nickel.

Thickness of decorative chromium depositions may vary in the range 0.01-

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Engineering Anodizing Systems Hard Chrome Plating Systems Aqueous Cleaning Systems Ultrasonic Cleaning Systems Bright Chrome Plating Systems Electroplating Rectifiers Rectifier Parts and Service Waste Water Treatment Systems Incoming Water Purification and Storage Process Tanks Ventilation Systems Electroplating Consulting Services 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.

The NAR team provides customer support in areas of: • Preventative maintenance

- 3-D CAD drawings
- Piping schematics
- Copper buss bar drawings
- Fabrication drawings
- Factory plan layouts
- Factory floor flow drawings
- Control Panel layouts
- HMI screen operator display styles
- CAD electroplating simulation and feasibility studies
- Ventilation system drawings
- Water usage studies
- Energy usage studies
- Ergonomic work station design
- Pre-start safety reviews (PSR)

- Emergency service
- 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 userfriendly 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."



0.03 inch (0.25-0.75 mm).

Decorative chromium coating possesses numerous invisible defects: microcracks and micro-pores. These micro-defects play important role providing Cathodic protection of the nickel undercoating (chromium serves as cathode and nickel as cathode). Since the micro-cracks or micro-pores are uniformly spread over the chromium surface, corrosion reaction is not localized and therefore it proceeds slowly."

OTHER DECORATIVE PLATING IDEAS

Besides chrome, there are other choices.

Atotech is a leader in decorative plating. Their product range covers technologies for the entire spectrum of decorative and functional surface treatment for various materials including steel, aluminum and even plastics. Much of the following information is paraphrased with permission from www.atotech.com.

Electroplating of Precious Metals is a technology with a long tradition. The first patents for the deposition of gold out of potassium bicarbonate containing gold solutions were issued in England and France in 1836, followed by a patent issued in September 1840 for the deposition of gold and silver from potassium cyanide solutions. Precious metal plating technologies date back to 1901. That was when Schering Electroplating developed and sold the first silver trisalyte. Precious metal processes are used to decorate and protect everyday items including faucets, lamps, spectacle frames, fashionable jewelry or sanitary tapware and exquisite writing instruments.

SILVER PLATING

Silver electrolytes are available for a wide range of applications, both rack and barrel plating, as well as post-treatment processes so the silver will resist tarnish.

GOLD AND GOLD ALLOY PLATING

Gold has the unique visual attraction and durability that makes it ideal for a wide range of applications. As gold is also an excellent conductor and almost totally resistant to corrosion and wear, it makes a reliable coating for technical and industrial purposes such as those in the electrical and electronics industry. Gold plating electrolytes are available for the deposition of flash gold, gold strikes, colored gold, hard gold, pure gold, gold alloys and immersion gold.

Palladium and Palladium Alloy Plating Palladium and palladium-nickel coatings are ideal for decorative and technical applications. Palladium coatings have many of the properties of gold coatings, but come at a fraction of the price. Pure palladium coatings are used as a diffusion barrier and in cases where a nickel-free coating is required.

There are palladium and palladiumnickel electrolytes processes for flash, as well as thick deposits and multilayer systems. All processes can be applied for both rack and barrel plating.

RUTHENIUM PLATING

The anthracite-colored, highly transparent visual approach of ruthenium creates an outstanding visual effect. Especially in combination with gold or palladium coating, the decorative effects that can be achieved with ruthenium are unsurpassed and offer excellent wear resistance.

Ruthenium electrolytes can be different shades of color for predominantly decorative application.

RHODECO FOR WHITE

Rhodeco combines brilliant white color whilst achieving high technical demands, such as. hardness values of 800 to 900 HV for deposit purity >99.9 per cent, whilst providing a density of approximately 12.4 g/cm. Rhodeco can be used for both rack and barrel applications and can yield a deposit thickness of up to 2 microns for most jewelry, spectacle frames, writing utensils and technical applications.

Satin, Bright and Semi-bright Nickel, Satin Nickel Processes

For decorative applications and industries fashionable satin nickel finishes are a versatile alternative to standard bright nickel chrome layers or other decorative deposits. As satin nickel is driven by fashion trends, many different effects and colors can be provided.

NICKEL

Bright Nickel Processes are available for every kind of application or market, answering any low sulfur-containing deposits and high corrosion resistance needs

Semi-Bright Nickel Processes are a major requirement for the decorative coating of any component, apart from the fact it must have a good appearance, is that the finish must last. Semi-bright nickel provides the base layer for excellent corrosion resistance in multilayer nickel systems and function as a 'barrier' to prevent base material corrosion.

Platers have many options available to answer their customer's needs for decorative finishes.

Dynamix

Blending Technology, Service and Value

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

History and Experience

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

Our Philosophy

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

Main Focus

The primary focus of Dynamix is the design and manu-

Our Strength

Dynamix's strength is in zinc plating, as the company has well over 100 zinc lines presently in service across North America. What sets the company apart from the competition is their ability to do their own research and development and manufacturing here in Canada.

Dynamix offers a service that encompasses all of their values with a highly skilled and motivated team. The laboratory at Dynamix is well equipped and able to provide analytical solutions specific to a particular sector of industry and/or customer.

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

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

Please visit the Dynamix web site at www.dynamixinc.com.

Let Dynamix demonstrate how they can maximize your plating chemistry productivity by providing the most robust chemical processes available.



CORPORATE PROFILES

DYNATREAT CrR: DYNATREAT Pfloc:	Reduces hexavalent chromium to the trivalent state at any pH. Accelerates the precipitation of metals in plant effluent streams.
DYNATREAT Acid Pure:	Extends acid life indefinitely, eliminating environmental issues associated with acid disposal.
DYNAPREP PFH:	Phosphate-free replacement for steam and iron phosphate which improves paint adhesion and corrosion protection.
METALAST TCP-HF:	Drop in trivalent-based replacement for hexavalent chromates that meets or exceeds corrosion requirements of MIL Std., MIL DTL 81706B, and MIL C 5541 for Class 1A and Class 3.
DYNAPLATE Cr-FS:	PFOS free fume suppressant for hexavalent chromium plating solutions.
DYNAPLATE NCC:	Non-cyanide alkaline copper process.
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QPL, RoHS, ELV, WEEE compliant conversion coatings and electroless nickel.

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facture of specialty chemicals for the metal finishing industry, covering all aspects of metal finishing from anodizing to zinc plating. Toll blending, packaging and distribution of custom formulated products are also available.

Distributing Partners

Dynamix understands that from a research and development perspective you can never be the best at absolutely everything. For those areas, Dynamix has partnered with some of the industry's best supply houses. Distributing products for their partners allows the supply of a wider variety of chemistries, including automotive and aerospace approved products. Ask a representative at Dynamix about their full line of proprietary products or enquire about a custom blended product. All products are developed with your business success in mind.

Contact DYNAMIX INC. today.

Contact us for Information on:

Anodizing - Black Oxide and Antiquing - Conversion Coatings- Corrosion Preventatives/Topcoats - Electroless Nickel Plating Processes - Electroplating Processes - Electropolishing- Phosphating - Pretreatment/Cleaners - Metal and Paint Strippers - Waste Treatment - Commodities

BLENDING TECHNOLOGY, SERVICE AND VALUE.

Contact us directly at our Toronto office **905-477-0900**, Montreal office **514-292-4322**





ISO 9001-2008 REGISTERED

www.dynamix-inc.com

Air Emission Compliance to the Environmental Protection Act, and Regulation 419/05 (former Regulation 346)

BY STEPHANIE MCCALLUM

Air pollution is defined as "the presence of undesirable materials in the air, in quantities large enough to produce harmful effects." "The undesirable materials may damage human health, vegetation, human property, or the global environment as well as create aesthetic insults in the form of brown or hazy air or unpleasant smells"

Due to an increase in awareness to air pollution, and air pollution controls, the Ministry of the Environment (MOE) wanted to protect and conserve the natural environment. In 1972, facilities saw legislation (The Environmental Protection Act) come into effect to meet this purpose. The Environmental Protection Act, Section 9 specifically deals with air approvals. At the time Section 9 required "companies to obtain an approval before construction, alteration, extension or replacement of any equipment or structure that may emit or from which may be emitted a contaminant into the natural environment, other than water. Approval is also required for the ongoing operation of any equipment that may discharge a contaminant to the atmosphere".

If you were a facility in operation or had equipment in operation prior to 1972, you were grandfathered by the MOE. You were also grandfathered if your facility or equipment remained unchanged. To date, facilities that meet this requirement are not required to have an approval. Facilities that began operation or had equipment post 1972 were required to obtain an approval from the MOE.

The approval that the Environmental Protection Act makes reference to is known as a Certificate of Approval (C of A air). A C of A (air) is issued by the MOE on a site specific basis, and the C of A (air) provides the legal requirements that the company must comply with. These requirements are written in accordance with the legislation and policy guidelines. Furthermore, the C of A (air) ensures human health and the environment are protected. The issuance of the C of A (air) by the MOE in 1972 could be valid for an undefined period of time.

The Environmental Protection Act was the first step for regulators to ensure human health and the environment were being protected. In the mid 1970's, more awareness, through Regulation, was placed on facilities with air emissions. Facilities were required to comply with Regulation 346 General – Air Pollution, under the Environmental Protection Act. Regulation 346 requires a facility to assess contaminant concentrations (for each contaminant) at an off-site location or the nearest human receptor using an (approved) air dispersion model (mathematical model). The modeled concentration (for each contaminant) is then compared to the list of air standards in the regulation. The modeling (using Regulation 346 model) became a part of the C of A (air) application process.

Facilities were faced with more regulatory change in 1988 when the Environmental Protection Act, Section 9 was amended to include Section 9 (7) which states "no person shall use or operate a plant, structure, equipment, apparatus...for which a C of A is required....unless the required C of A has been issued and complied with..."

This change meant that a facility would have to submit an application to the MOE for approval if the facility was planning to add new equipment, start up a new facility, etc. During a growth period, facilities could have multiple applications in for approval at the MOE, plus the MOE issued a C of A (air) number for each application they approved., thus facilities could be operating under more than one C of A (air).

Eventually, the MOE wanted to reduce the amount of applications being made to the Environmental Approvals and Assess-

CORPORATE PROFILES

Cyanide Destruct Systems Inc. (CDS)

CDS Environmental has recently expanded its presence in the precious metal refining and electronic scrap recycling industry.

Our unique program includes purchasing or processing of E Waste circuit boards and melting and assaying consumer jewelry scrap.

CDS is a highly recognized name synonymous with quality cyanide treatment and precious metal refining services. CDS Environmental, for example has imported waste from as far as Puerto Rico. CDS Thermal Hydrolysis Systems are being used in Lima Peru and Singapore, just to give you an idea of our worldwide presence.

Definitely a niche player with a somewhat diverse market, CDS enjoys a very loyal and equally diverse customer base. Our success has been driven by entrepreneurial spirit and the flexibility to adjust rapidly to changing market demands.

Thermal Hydrolysis Systems are the foundation on which the company was built. The owner of CDS, a chemical engineer, worked with very well recognized research facilities



and developed a keen interest in producing a practical system to utilize thermal hydrolysis.

Taking advantage of a safe, clean, chemical free process, thermal hydrolysis accelerates the naturally occurring chemical reaction between water and cyanide. Very simply, this system is the only way to effectively destroy cyanide in all forms including complex ferricyanides to below detectable limits. Systems are custom engineered for each application

got gold cyanide?

Turn Your Gold or Silver Solutions and Scrap into an Asset

Specialized Precious Metal Recovery in Canada and the USA
 Cyanide Treatment Systems
 Cyanide Treatment Facility

www.cyanidedestruct.com

293 Saunders Road, Barrie, Ontario, Canada L4N 9A3 CDS CVANIDE DESTRUCT SYSTEMS INC. Toll-Free 1-888-886-9022 and are 100 per cent guaranteed. Both continuous flow and batch systems are available depending on the application.

Our Environmental plant located in Barrie, Ontario, serves generators of more concentrated type wastes using several batch systems. Precious metal (PM) refining of gold plated circuit boards, PM bearing solutions and various other PM products has been a staple of our business since inception.

More recently, CDS and The Environmental Quality Company based in York Pennsylvania as a joint venture have been operating a US based precious metal refining company, CD&E Refining.

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ment Branch (EABB) and moved towards three different types of certificates of approval (air): individual, consolidated, or comprehensive.

Facilities needed to decide to understand what the difference were between each approval option, and then needed to make decisions on what was the best option for the facility on a go forward basis. Consolidated or Comprehensive Certificates of Approval were made available and were a good consideration for companies that frequently need to make changes. The Individual C of A (air) was still suitable for facilities that don't make a lot of change, and can allow for the MOE approval. The next question: what is the difference between a consolidated C of A and a comprehensive certificate of approval? A consolidated C of A is a single Certificate of Approval (air) that replaces existing Certificates of Approval. The consolidated C of A (air) may include the addition of new or "historically" unapproved sources for all emissions from the facility.

A comprehensive C of A (CC of A (air)) is consolidated C of A that includes all sources of contaminants at the facility for all compounds emitted from the facility and ensure ongoing legal compliance for a five (5) year approval period. One of the benefits to the CC of A (air) is that it has

limited operational flexibility based on the facilities maximum production rate which is listed in the CC of A (air). The operational flexibility allows for the addition of new equipment, process changes, and improving throughput restrictions (debottlenecking).

In 1998, the MOE released a document "Procedure for Preparing an Emission Summary and Dispersion Modeling (ESDM) Report" which has now become an industry standard. The ESDM promotes uniform reporting and improves submission quality. An ESDM report is required, under Section 5, Regulation 346 to further demonstrate that aggregate emissions for a facility are in compliance with the air standards. From 1988 onward, the MOE mandated that an ESDM report be submitted as part of the application for approval under Section 9 of the EPA.

Facilities that were submitting new applications, has more requirements to support that compliance with the Environmental Protection Act, as an example: the CC of A (air) requires an annual ESDM submission to the MOE. The ESDM is an up-to-date document that demonstrates the facilities ongoing compliance.

Further changes occurred in 2005 when Regulation 346 was revoked and replaced with Regulation 419/05 – Air Pollution – Local Air Quality. The major



reason for this change was to address outof-date dispersion models, and out-of date air standards. The original models did not accurately assess how emissions behaved in real life scenarios, and were possibly under estimating them, thus not adequately protecting the environment. The new air standards are effect-based, and some are more stringent, plus more accurate dispersion models were included in the Regulation such as: AERMOD, ISCPRIME, as examples. Facilities are required to remodel using one of the new approved models based on the listed Phase In dates, and NAICS code.

The AERMOD modeling approaches under Regulation 419/05 uses the following information for the modeling: (i) "Process meteorological data using AER-MET; (ii) Obtain digital terrain elevation date (if terrain is being considered, see section 16 of the Regulation); (iii) Incorporate building downwash using BPIP-Prime (requires sources and building information); (iv) Characterize site – complete source and receptor information; (v) Perform terrain data pre-processing (if required) for AERMOD dispersion model using AERMAP; (vi) Run the Model; and (vii) Visualize and analyze the results. The AERMOD modeling system has three (3) primary components: (1) AERMET – Meteorological Data Pre-Processor; (2) AERMAP – Digital Terrain Pre-Processor and (3) AERMOD – Air Dispersion Model".

Regulation 419/05 has a phase in period that will allow facilities to move towards compliance with the new air dispersion models and more stringent air standards. However for facilities that are not able to achieve compliance within the phase in period they can apply (on a caseby-case basis) for "site specific alternative standards"

Ongoing regulatory compliance with the Environmental Protection Act and Regulation 419/05 is a significant part of business for facilities that release air contaminants. The decision on what pathway for compliance that they should follow is really site specific.

Stephanie McCallum is Air Quality Technologist for Kuntz Electroplating Inc. www.Kuntz.com

CORPORATE PROFILES

Haviland Products Company

Haviland Products Company offers the complete line of surface finishing chemistry. From nickel plating to chrome plating, anodizing to zinc plating passivates, we have the technologies you're looking for. If we don't have exactly what you're looking for, we'll custom formulate it for you. Our surface finishing division restarted in 1982 with a single plating process, and a single promise: Provide the best products, at the best prices, with the best technical service, to exceed our customers' needs.

Over the last twenty-eight years, we've done our best to hold to that promise, and we've grown our product line to meet our customers' ever changing goals. Today, Haviland Products markets their products to nearly every industrialized country in the world. From cleaners to non-cyanide coppers, nickel brighteners to our Prodigy line of hex-free passivates, Haviland provides the surface finishing industry with the tools to succeed.

Our Worldwide Partners

Haviland's exclusive distribution partner in Canada is Canadian Finishing Systems Ltd.

Canadian Finishing Systems Ltd. (CFS) is a Canadian owned and operated distributor, with a broad range of equipment, chemicals and service. CFS serves a diverse market that includes automotive, electroplaters, anodizers, phosphaters and manufacturers of appliances, fasSurface Finishing Association, with Company Director, Mr. Douglas Fortunato de Souza, currently serving as General Coordinator and slated as President for 2011.

Itamarati Metal Quimica offers a vast array of surface finishing chemistries; from copper-nickel-chrome to functional coatings, phosphates and passivates, even processes for ABS pretreatment. The variety and quality of their chemistries may be the driving force behind their quarter century of success, but their NBR ISO 1400:2004 Environmental Management Certification in May. 2010 may be their enduring legacy. While most developing nation companies strive to put dollars before all else, Itamarati knows that economic sustainability and environmental sustainability are not mutually exclusive.

M2M – Partnership has its Benefits

To fully understand everything Haviland Products Company can do, you first have to ask yourself, "What do I need to make my company better?" Whether its technical support for a plating process or formulating and packaging a unique chemistry, Haviland's 77 years of expertise in surface finishing and contract packaging can give you the advantage over your competition. To see a recent M2M success story, go to: www.havilandusa.com/m2m.





We are saving 20 percent on the cost of chemicals, using less and getting *better results*."

Southwest Plating, Inc. made the switch to Haviland's Optima 200 HL

Semi-Bright and HP Performa HD Bright-Nickel Process in 2010.

See the rest of the story at www.havilandusa.com/m2m

teners, plumbing, jewelry, electronics and paint/powder coating. CFS provides customer-proven technologies.

Canadian Finishing Systems Ltd. 3455 Harvester Road, Units 20 - 22 Burlington, Ontario L7N 3P2 CANADA Telephone: (905) 634-5168 Fax: (905) 634-5699 info@canadianfinishing.com

In 2010, Haviland Products Company proudly announced Itamarati Metal Qúimica as our exclusive distributor for Haviland surface finishing specialty products in South America. This will also include the Product Sol of automotive approved products as trusted by US auto manufacturers since 1959.

Based in São Paulo, Brazil, Itamarati Metal Qúimica has been a leader in the Surface Treatment market for over 25 years. The first 100 % Brazilian company to attain ISO 9001, Itamarati actively participates in the Brazilian Wayne Fish, *Vice-President* o Southwest Plating, Inc. Duncan, **Oklahoma**

> 800-456-1134 www.HavilandUSA.com

HAVILAND PRODUCTS COMPANY

NEW PRODUCTS AND TECHNOLOGIES

Stone Tucker Instruments Appointed Canadian Distributor of New SaltSmart Technology

As Canada's leading distributor of coatings inspection instrumentation, Stone Tucker Instruments is pleased to announce we have partnered with

Innovative Productivity Inc. to add new SaltSmart Technology to our growing family of premium coatings inspection products.

Five years in development, SaltSmart[™] Technology is an innovative device for the detection of soluble salts.

SaltSmart uses a unique hand-held meter and disposable sensor to detect salts on a wide variety of surfaces. SaltSmart's self-contained design gives you the ability to quickly test large surfaces without the risk of cross-contamination or testing residue, and its compact body makes it ideal for use in hard-to-reach spaces.



When you purchase SaltSmart Technology through Stone Tucker Instru-

ments, your investment is backed by a commitment to provide the Canadian coatings inspection industry with the very best products and outstanding customer service.

www.stone-tucker.com

New from ITW Gema

Making multiple color changes in an 8 hour shift? ITW Gema's NEW Magic Center is the perfect powder management system to achieve XTreme Productivity.

Included in the system are the application controls, the gun mover axis controls and the fresh powder supply. The fully automatic cleaning process reduces color change times significantly and the Magic Center is quick to install and easy to operate.

The OptiSpeeder is the heart of the Magic Center and combines the powder feed and cleaning functions into one compact unit. The OptiSpeeder's improved fluidization and low maintenance pumps

deliver powder to the guns using less compressed air, resulting in a softer powder cloud for

improved transfer efficiency. During the Magic Center's automated cleaning, the OptiSpeeder empties the remaining powder for reuse, and purges the pumps and all of the powder hoses... guickly and efficiently. Because the OptiSpeeder is a completely sealed and closed system - this is a dustless process. The onebutton cleaning operation allows one operator to complete a total color change in 10 minutes or less.

The Magic Center Powder Management System is a complement to ITW Gem's Magic Cylinder and Magic Compact powder coating booths. All powder coating system controls are integrated into the Magic Center's compact design, making it the ideal color management solution for the Magic Series booths.

Color changes are performed in the blink of an eye with ITW Gema's NEW OptiColor

If you have a manual spray operation that uses multiple hoppers set up to spray various colors, this easy to use and cost effective solution will save you time and money when changing from one color to another. The OptiColor allows the user to conduct all normal spraying operations, as well as do fast, simple spray gun color changes from a single location. Working in conjunction with the



The OptiColor allows production spraying to continue while a hopper color change is being performed. Fast color changes in seconds maximize production, throughput, and flexibility. The OptiColor is conveniently located at the operator, giving easy access for application adjustments and color change selection. Experience fast color changes, multiple color capabilities, and risk free contamination all in a simple user friendly package.

A complement to ITW Gema's OptiFlex series manual spray guns, the OptiColor is available in 4 and 8 color units, which can be combined to accommodate an endless variety of colors. This new technology is ideal for XTreme Color Change Environments where multiple colors are required during production.

www.itwgema.us.





coatings on non-metals such as wood, concrete, fiberglass and more. An affordable choice to quickly and accurately check coating thickness non-destructively.

The PosiTest® AT-A Automatic Adhesion Tester measures adhesion of coatings to metal, wood, concrete and other rigid substrates and now features an electronically controlled hydraulic pump. The new electric pump applies smooth and continuous pull-off pressure at user-selectable rates. New features include user selectable pull rates for complying with a variety of international test methods, built-in rechargeable batteries, convenient shoulder strap and AC power.

DeFelsko also offers quality inspection instruments including the PosiTector Dew Point Meter to measure and record climatic parameters prior to coating application and the and PosiTector Ultrasonic Thickness Gage to measure wall thickness and the effects of corrosion or erosion on tanks, pipes or any structure where access is limited to one side. Call DeFelsko at (800) 448-3835 or visit our website at www.defelsko.com to get assistance selecting the optimal instrument for your application.

CORPORATE PROFILES

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 American made PosiTector® 6000 is ideal for measuring coatings on all metals. With the addition of a Removable Built-in Probe, now ALL PosiTector 6000 probes can be detached and replaced with any of a wide variety of probes including separate probes and microprobes. Memory models also feature Bluetooth Wireless Technology for immediate data transfer of your readings to a PC or Bluetooth compatible device.

The New PosiTector® PC Powder Checker® non-contact, uncured powder thickness gage measures powder coatings before going into the oven to predict a cured thickness. The PosiTector PC helps control powder consumption to lower cost and reduce waste.

The PosiTector® 200 Series gages measure

PosiTector® **DPM Dew Point Meter**

Measures and records climate conditions during surface preparation and application of coatings as required by ISO 8502-4 and ASTM D3276.







DeFelsko

- Internal Memory stores 2,500 datasets in 100 batches
- Graph Mode charts all 5 parameters onscreen
- Smart Trend[™] Indicators identify rising or falling readings
- Flip Display enables right-side-up viewing in any position

Magnetic Surface Temperature probe available for hands-free recording

1-800-448-3835 or www.defelsko.com

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For more information:Tel: 1-800-448-3835 (USA & Canada) 315-393-4450 Fax: 315-393-8471 Email: techsale@defelsko.com Web: www.defelsko.com **DeFelsko** Corporation 802 Proctor Avenue Ogdensburg, NY 13669 USA

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Nordson's Encore Manual Powder Spray Gun and Trilogy Electrostatic

Nordson Corporation introduces a cup gun kit for its production-proven Encore manual powder spray gun, providing users with the ability to achieve full-scale production results in laboratory and field test trials of various powder formulations and colors.

In its cup gun configuration, the Encore manual gun achieves the unmatched transfer efficiency, part coverage and cured-finish results matching that of a production Encore system spraying from a more typical capacity hopper or vibratory box feeder.

Designed specifically for efficient, small-scale testing with results that correlate to production coating operations, the Encore cup gun kit is ideal for evaluating new powder formulation types and colors by powder manufacturers and end users.

The Trilogy Electrostatic Spray Gun System from Nordson Corporation delivers 93 kV, increasing transfer efficiency, reducing material costs and improving part finish.

Equipped with Nordson air caps, Trilogy guns produce fine particle atomization at lower pressures for improved paint-to-part transfer with minimal overspray. With a Trilogy system, extreme fan pattern control from four to 20 inches is also achieved through fast, easy air adjustments that can accommodate varying part configurations. The increased transfer efficiency and fan pattern control saves money on coatings and rejects.

Featuring two atomization technologies – air spray and high volume, low pressure (HVLP) – Trilogy systems deliver superior application performance with a variety of substrates, coatings and part profiles. In addition, switching from air spray to HVLP and back is simple, requiring only the change of a nozzle. Trilogy systems are also available in manual or automatic gun models that incorporate the latest in engineering and design materials.

www.nordson.com

GEW UV Curing Mini Laboratory Unit Now Available Through Harperscientific

Harper Corporation introduces GEW's mini laboratory UV curing unit for any ink room working with UV inks in North and South America. The 88-pound (40kg) mini lab UV curing unit with its simple controls and ozone-free UV lamp can be operated away from printing and coating lines. It offers a belt and curing width of 6 inch (150mm). Using constant UV lamp



power the mini lab unit controls curing dosage by varying belt speed from 16.4 to 229.6 feet per

Stone Tucker Instruments Inc.

CANADA'S LEADING SUPPLIER OF COATINGS INSPECTION and TEST EQUIPMENT

Stone Tucker Instruments was incorporated in 2003 to meet the Canadian coatings industry's need for cuttingedge inspection technology backed by world-class customer service and the expertise of NACE-certified staff.

The company has since become the leading Canadian distributor for many of the world's finest manufacturers of inspection equipment, including DeFelsko, Testex, Chlor-Rid, and PCWI.

Stone Tucker Instruments continually adds new

products to ensure industry professionals have access to the best and most advanced technology on the market. Their latest product, Innovative Productivity Inc.'s SaltSmart™ Technology Surface Salt Detector, is engineered to ensure fast, accurate results when testing surfaces for corrosive salts.

Coatings professionals will tell you 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 Bris-

STONE TUCKER INSTRUMENTS INC.



tle 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.

PosiTector[®] 6000

COATING THICKNESS GAGES

Calendar of Industry Events 2011

March 29-31, 2011: European Coatings SHOW 2011, Exhibition Centre Nuremberg. *www.european-coatings-show.com*

June 14-15: SUR/FIN 2011 in Rosemont IL. (Chicago) www.nasf.org

October 4-6: NAI The North American Industrial Coating Show, Duke Energy Convention Center, 525 Elm Street, Cincinnati, OH. *www.thenaicoatingshow.com*

October 4-6: AAC 2011 Anodizing Conference and Show, Tempe, Arizona. *www.anodizing.org*

October 27-29: WMS Woodworking Machine and Supply Expo, Direct Energy Centre, Toronto, Ontario. *www.woodworkingexpo.ca*

November 14-16: FINISHING TECHNOLOGIES Pavilion and Conference at FABTECH Chicago II. *www.ccaiweb.com*

Calendar of Industry Events 2012

May, 8-10, 2012: American Coatings SHOW, Indianapolis, IN, USA. *www.american-coatings-show.com*

May, 7-9, 2012: American Coatings CONFERENCE, Indianapolis, IN, USA. *www.american-coatings-show.com*

minute (5 to 70 meters per minute).

Included as standard is GEW's focused dichroic reflector with 80W/cm (200W/in). An exhaust fan/on-board cooling system keeps the unit running at peak performance even after many hours of full speed operation.

The mini lab's 220/240 V 50/60 Hz single phase 13 amp power supply fits with most workplace locations. Available options include in-feed and out-feed sample catching trays, iron and gallium doped lamps, spare UV cassettes and UV lamps and an inert gas nitrogen atmosphere capsule for inert curing applications.

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CORPORATE PROFILES



Stone Tucker Instruments recognizes the importance of timely delivery in the fast-paced coatings industry. They keep a broad inventory of products in stock at all times and are DeFelsko's primary Canadian distributor, so their complete line is always available. Their customers can count on them to have the equipment they need, when they need it.



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Tough probes, robust housing, and two year warranty
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PosiTector®6000

Stone Tucker Instruments is committed to providing their customers with outstanding service, including repair and calibration.

Recently, Stone Tucker Instruments added a NACE –trained technical sales representative with multi-disciplinary NDE field experience. The addition will provide exceptional customer support for Dakota Ultrasonics, Western Instruments, Gal Gage, and their many other NDE instruments and products.

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.

JANUARY/FEBRUARY 2011 CANADIAN FINISHING & COATING MANUFACTURING 37

Bluetooth

CLASSIFIED



Raw Material Supplier Paint Manufacturing Equipment Supplier

Paint & Coating Manufacturer

Industrial Finishing:

Automotive & Transportation Products **Automotive Refinish Commercial Coating Contractors** Custom Coaters & Job Shops



Plastic Product Finishers Supplier of Finishing Equipment Manufacturing not otherwise classified

Other:

Consultants Education & Government

General Manufacturing

Please fax this signed form to: 1-416-519-1313 Or mail to: **Canadian Finishing & Coatings Manufacturing** 250 The East Mall, Suite 1103 Toronto, Ontario, Canada, M9B 6L3

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www.cfcm.ca

CORPORATE PROFILES

Inortech Chimie Inc.

Ethique, Engagement, Loyauté

Principes de base qui ont valu à INORTECH son enviable réputation d'honnêteté et de service à la clientèle inégalé. Ces préceptes fondamentaux ont séduit du personnel de haut calibre. Leurs expertises variées nous procurent une position privilégiée pour mieux comprendre et répondre aux besoins et demandes de nos clients ainsi qu'aux attentes de nos fournisseurs.

Notre laboratoire de service à la clientèle et de R&D a confirmé et a donné une nouvelle dimension ainsi qu'une profondeur d'expertise technique et d'innovation à l'avant-garde de la technologie qui était déjà reconnue au sein d'INORTECH.

Notre Laboratoire confirme et donne une



profondeur d'expertise technique inégalée à ce jour. De plus, il propulse Inortech à l'avantgarde de l'innovation et de la technologie faisant d'Inortech un incontournable.

Les professionnels hautement qualifiés de notre laboratoire R&D évaluent sans cesse les nouvelles technologies de pointe pour mieux aiguiller les efforts de recherche de nos clients afin qu'ils atteignent plus rapidement leurs objectifs. L'expérience variée du personnel de laboratoire permet de qualifier les matières premières afin de minimiser le temps d'évaluation de notre clientèle.

Notre laboratoire R&D nous assure une compréhension accrue des produits de nos fournisseurs ainsi qu'une expertise sur les applications que nos clients utilisent. Les forces de l'équipe d'INORTECH conjuguées au niveau technologique du laboratoire de R&D nous permettent d'offrir à nos fournisseurs une pénétration et une reconnaissance dans les marchés que nous desservons.

Ethics, Commitment, Loyalty

We at Inortech live by these words. These basic principles have earned Inortech an enviable reputation for honesty, integrity and unparalleled customer service. These fundamental principles have attracted highly qualified employees. Their varied expertise positions us to better understand and meet customer needs and supplier expectations.

Our unique technical service and R&D laboratory provides an added dimension to the in-depth technical expertise and cutting edge technology for which Inortech is already recognized.

The Inortech team constantly strives to improve customer service and increase our supplier's visibility in the focused markets we serve: coatings, ink, adhesive, and plastic.

Our R&D laboratory, staffed by highly motivated and knowledgeable professionals, provides an excellent resource for exploring new technologies and helping with customers to promptly realize their objectives. We are uniquely positioned to provide customers with the means to evaluate and pre-screen raw materials, streamline research efforts, and reduce approval times.

Our R&D laboratory enables us to provide our suppliers with increased product and application know-how and favorable exposure with the customer. Combined with the strengths of the Inortech team, the R&D laboratory provides our suppliers with a powerful tool for increased market penetration and recognition.

We're Proud of our R & D Laboratory

Jean-Marc Pigeon felt, for many years, that customers had a growing need to deal with a distributor who would have an in-depth understanding of new products and technologies that were developing around the world.

"I wanted to be recognized in the Canadian market as being the distributor that would bring these products and technologies to the market," says Jean-Marc. Thus, he formed Inortech Chimie Inc. in April, 1990. He discovered that to really adapt these products and technologies, it took more than theoretical understanding. In 2000 Inortech opened a comprehensive Research and Development (R&D) Laboratory to deal with these new products and technologies and make sure that they met Canadian standards.

Due to the acquisition of new equipment, the lab space was getting very tight. So five years after the laboratory opening, Inortech built its own building (2005).



customer. The company says they are the only Canadian distributor in coatings, inks and plastics with a fully equipped laboratory.

Technical Seminars

Being recognized as a market leader, Jean-Marc felt that it was his duty to more effectively transmit this expertise.

"We organized technical seminars so that our suppliers have a privileged and more direct contact with our customers. In turn, our customers really appreciate the private and direct contact with our suppliers," says Jean-Marc."Thanks to the outstanding support from our suppliers, these seminars are always very successful".

Customer Service

Inortech employs 15 people, including three in the lab. Two of the company's chemists have more then 30 years experience. Inortech lab and sales people have in-depth knowledge of the markets the company serves...paint, ink, adhesive and plastic. They are dedicated and have the customers' and suppliers' success at heart. They do everything possible to make it easy to work with Inortech.

Meanwhile, in order to ease the introduction of new products, Inortech provides madeto-measure help to their suppliers. Inortech's very competent and professional HSE person stays abreast of all new Canadian legislation and provides suppliers with key support when it comes to Environment Canada registration. The relationship between customers, legislators and suppliers is what makes an unparalleled team spirit. "We go beyond chemistry," says Jean-Marc. "Our customer service has the mandate to do everything possible to meet our customers' requirements and satisfy their needs," says Jean-Marc. Besides its efficient customer service department, Inortech has inventory warehouses across Canada in Montreal, Toronto, Winnipeg and Edmonton.

"We team up with our customers and suppliers to make sure that our customers are not negatively affected by the changes that today's marketplace challenges call for. We keep our customers informed as part of our decision making process," says Jean-Marc.

With their team of more than 30 suppliers, Inortech has a very good selection of raw materials necessary to meet almost any paint, ink, and plastic and adhesives challenges.

New Technologies

Inortech is known as the market leader when it comes to bringing forth and testing new technologies. Because of Inortech's dedication to the market they serve, they can anticipate customers' needs. "We search the world for innovative ways to meet these challenges. Let us be your active intermediate," says Jean-Marc.

Unlike other distributors, Inortech has the ability to qualify new technologies and provide in-depth knowledge of these technologies before entering the market. Therefore, customers know that the technology works and that Inortech can provide "turn-key" solutions.

"We keep improving and implementing new policies and new computer programs to help us keep our word and live up to our high standards: Ethics, Commitment and Loyalty," says Jean-Marc. Inortech has grown by making sure that its customers understand that its lab is there to help and that customers are welcome to use it as much as they need. Also, suppliers who visit Inortech immediately understand how Inortech's team will be beneficial for their Canadian Market penetration.

Inortech is always on the cutting edge of technology.

"It is quite interesting to have a well organized, well equipped and spacious laboratory, but it does not help if you do not have highly motivated and knowledgeable professional chemists," says Jean-Marc. He hired two experienced chemists in the fields they service and a hands-on formulator with outstanding experience.

"I strongly believe that the Inortech team and the laboratory is what makes us stand out from the competition," says Jean-Marc. Inortech has the exclusive ability to test a formulation in the lab then take it directly to the



Head Office

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