CFCM
CANADIAN FINISHING & COATINGS MANUFACTURING MAGAZINE

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Expanding with Flying Colours

A pre-owned Bombardier CRJ 200 Regional jet that has been converted to an executive jet at Flying Colours in Peterborough, ON, being readied for delivery.

Flying Colours Corp. the Canadian aerospace completions, refurbishment and maintenance specialist, has broken ground on the first phase, of a three phase expansion plan, at its Peterborough, ON, headquarters. An investment of over $3.5 million dollars will expand the company's footprint and increase its

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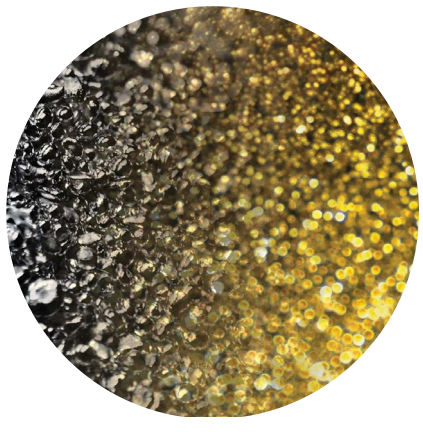
ALSO IN THIS ISSUE

The Chemistry of Plating with Precious Metal

Plating with gold, silver and other precious metals as well as tri-metal chemistry has its own special concerns and applications.



Gold Plating: Companies offer electroplated gold that conforms to military and aerospace specification. Gold is generally used in electrical applications (such as connector pins) where low contact resistance is critical. Moreover, Gold is a noble metal, and as such is not subject to oxidation.

Companies have high capacity vibratory lines that allow for plating larger parts while maintaining the advantage of more uniform plating. This process allows for better coverage of inside surfaces and gentler processing of delicate parts. There are various requirements for minimum purity and hardness, but to meet customer demand gold processes are usually: High Purity such as 99+ per cent; readily solderable; low contact resistance.

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In the News

Association News

Government Submits Proposal to Add VOC Compounds to the Exclusion List of the VOC Definition under Schedule 1

Following extensive lobbying by CPCA over the past several years seeking closer alignment of Canada's list of VOC-exempt compounds with the US EPA list (in and outside the current Canadian VOC regulations), on September 16 Environment Canada and Health Canada finally published their consultation document. It proposes the formal addition of thirteen (13) VOC compounds to the exclusion list of the volatile organic compound (VOC) definition under Schedule 1 of the Canadian Environmental Protection Act, 1999 (CEPA 1999). This proposal for VOC exemption includes three particular DSL compounds (TBAC, dimethyl carbonate and propylene carbonate) for which CPCA has expressed specific interest for exemption dating back to 2006, working closely with CPCA members such as Lyondell Basell.

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What Youth Think About the **Skilled Trades?**

There has been a lot of talk over the years about the lack of skilled tradespeople and the lack of high school graduates choosing the skilled trades over University or simple unskilled jobs. The Canadian Apprenticeship Forum – Forum Canadien sur l'apprentissage (CAF-FCA) provides fresh insights into the way youth across Canada perceive the skilled trades in its latest report, Apprenticeship Analysis: Youth Perceptions of Careers in the Skilled Trades.

Current and anticipated skills shortages, combined with a demographic crunch as baby boomers retire, have raised expectations around recruiting the next generation workforce. An important element of attracting young people to the skilled trades is understanding how their perceptions and attitudes affect career decisions.

In this report, CAF-FCA documents the findings of a national survey with more than 800 students across Canada in spring 2013, and compares the results to findings from a parallel investigation in 2004.

"CAF-FCA members have placed a high priority on raising awareness among young people about apprenticeship, trade certification and career opportunities in the skilled trades. Apprenticeship remains a first-choice solution to addressing skills shortages," said Sarah Watts-Rynard, Executive Director of CAF-FCA. "Over the last decade, the apprenticeship community has expended tremendous resources on this effort. Gauging how youth perceive the trades today tells us where we've seen successes and provides a roadmap to inform future initiatives."

Survey results indicate youth are more open to considering a skilled trades career than they were in past, are more aware of career options, have better access to information and value the contribution of tradespeople.

"We can definitely see improvement in youth awareness and attitudes," Watts-Rynard said. "At the same time, we're seeing the need for stronger messages around opportunities for women and better outreach to parents and others who provide career direction to students."

Meanwhile, we have come to the last issue of the year at CFCM magazine. 2014 will feature several new feature topics and experts are needed to write technical and informative articles. Please contact the Editor if this interests you. Also please note important CFCM address changes in the masthead below.

Sandra.anderson@cfcm.ca

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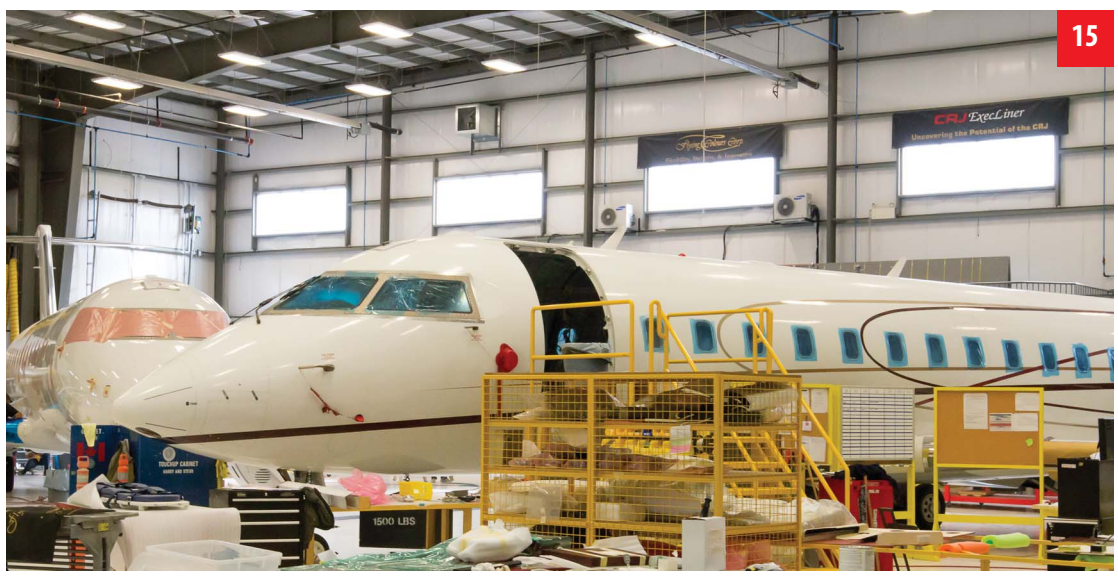

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The consultation document was available for comments for a 30-day public period ending on October 15.

- Compounds Description: The list of thirteen (13) compounds is provided in the document with a brief description of current uses.
- Rationale: The exclusion of compounds from the CEPA VOC definition is being done to align more fully with the United States, thereby providing a level playing field for manufacturers and importers of products, and to avoid varying requirements across jurisdictions. It will make it easier and less expensive for industry to use these compounds as solvents in a variety of products, possibly as a substitute for other solvents that are more harmful to the environment and more strictly regulated. It also provides manufacturers with a cost-effective compliance tool to meet the Volatile Organic Compound (VOC) Concentration Limits for Automotive Refinishing Products Regulation, the Volatile Organic Compound (VOC) Concentration Limits for Architectural Coatings Regulations and other instruments (now and future).
- Definition: In the consultation document Environment Canada notes that it is in agreement with the evaluation for determining reactivity levels for VOCs per the US EPA, which excludes VOC compounds with reactivity levels less than or equal to the reactivity levels of ethane.

CPCA and ACA Submit Comments to the Regulatory Cooperation Council

On October 15, 2013, the Canadian Paint and Coatings Association, along with the American Coatings Association (ACA), submitted joint comments to the Canada-United States Regulatory Cooperation Council (RCC), on important issues of mutual interest regarding how to reinforce, institutionalize and expand efforts of regulatory cooperation between the two countries.

On August 31, 2013, the RCC invited stakeholders, Canadians and Americans alike, to contribute their views. This consultation follows the Canadian and American implementation phase of the initial RCC Joint Action Plan established in 2011 by President Barrack Obama and Prime Minister Stephen Harper, which resulted in 29 Joint Action Plan initiatives.

"It makes imminent sense to have increased alignment of regulations between two countries with the largest trading relationship in the world and we look forward to ongoing efforts on this front," comments Gary LeRoux, President of the Canadian Paint and Coatings Association.

CPCA and ACA are grateful for the opportunity to comment on various RCC initiatives and note common areas of support, with several recommendations for further action. Several issues were identified by both associations, relating to areas of concern for member companies, including: transportation of dangerous goods; product approvals; workplace chemicals; environmental sustainability and nanotechnology.

Since 1913, the Canadian Paint and Coatings Association (CPCA) has represented Canada's major paint and coatings manufacturers, and their industry suppliers and distributors in three primary product categories: architectural paints, industrial products and automotive coatings. In Canada CPCA members have more than 261 paint manufacturing establishments, own more than 3000 retail outlets, supply products to another 3000 retail stores and more than 5,500 auto body shops. This represents annual retail sales of more than $10 billion, employing directly and indirectly 31,800 employees.

Company News

CFCM New Mailing Address

Canadian Finishing & Coatings Manufacturing Magazine can now be reached at:

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Editorial phone numbers remain the same.

Oops

In the September/October issue of CFCM, Page 31, the bottom photo is a Venjakob machine. The caption should have read "Venjakob's Ven Spray Smart".

CFCM apologizes for any confusion this may have caused.

Celanese Simplifies

As customer needs diversify and the complexity of their solutions increases – identifying the right partners and the right solutions can mean the difference between product success or failure.

Recognizing this need, Celanese, a global technology and specialty materials company, is simplifying its brand architecture to capture in a single brand the full suite of Celanese technology, resources, products and solutions. This change moves Celanese toward achieving its vision of becoming the first-choice chemistry solution source for its customers.

There are several changes Celanese is making to support this vision and to communicate its value proposition to customers. Celanese is launching a unified brand that represents the company's multiple businesses and capabilities. Historically, Celanese was represented by separate businesses, including: Acetate Products, Acetyl Intermediates, Advanced Fuel Technologies, Clarifoil, Emulsion Polymers, EVA Performance Polymers, Nutrinova, and Ticona Engineering Polymers. Each of these names will fade and be replaced by Celanese.

www.celanese.com

Clariant closes sale of Textile Chemicals, Paper Specialties and Emulsions businesses

Clariant, a world leader in specialty chemicals, has closed the sale of its Textile Chemicals, Paper Specialties and Emulsions businesses to SK Capital. Starting October 1, 2013, the three former Clariant businesses are now operating under the name Archroma. After some adjustments for working capital and for the lower operational performance of some parts of the businesses, the total purchase price is approximately CHF 425 million. Worldwide, 2,900 employees will transfer to Archroma.

Archroma Begins New Era in Delivering Color and Specialty Chemicals to Textile, Paper, Adhesives, Coatings and Construction Industries

Archroma has officially launched as a newly formed global colour and specialty chemicals company that comprises the former Textile Specialties, Paper Solutions and Emulsion Products businesses of Clariant. To be combined into a single entity at close, Archroma will continue to deliver specialized performance and colour solutions to the textile, paper, adhesives, coatings and construction industries. The three businesses were acquired by SK Capital Partners, a U.S. based private investment firm with a disciplined focus on the specialty materials, chemicals and healthcare sectors. To be led by CEO Alexander Wessels, the newly recruited senior leadership team will seek to generate a renewed sense of purpose and vision, and will work closely with the

current heads of the three businesses acquired from Clariant. Archroma will be headquartered in Switzerland along with the management team of Archroma's Paper Solutions Business. The Textile Specialties Business will be managed from Singapore and the Emulsion Products Business from Brazil.

Huntsman Acquires Rockwood

Huntsman Corp. has announced plans to combine its pigment business with Rockwood Holdings Inc., as part of a $1.1 billion deal and will eventually take the business public. Huntsman said its purchase of Rockwood's titanium dioxide business would make it the world's second-largest producer of TiO2, a key ingredient for white paint and coatings. As part of the deal, it will also buy Rockwood's businesses that manufacture color pigments, and chemicals for timber and water treatment and rubber compounding. The businesses being bought by Huntsman contributed $1.54 billion in revenue for the year ended June 30. Huntsman will take the combined pigments business public within two years of the deal's closing, which is expected to be during the first half of 2014.

Sherwin-Williams Aquires Comex U.S.

The Sherwin-Williams Company SHW has completed the acquisition of the U.S./Canada business of Consorcio Comex, S.A. de C.V.

Sherwin-Williams will pay US$90 million in cash and assume liabilities currently valued in the range of $75 million. Sherwin-Williams and Comex remain fully committed to securing regulatory approval from the Federal Competition Commission of Mexico for Sherwin-Williams to complete the acquisition of the operations of Comex in Mexico. To that end, the Stock Purchase Agreement was amended to extend the exclusivity period to March 31, 2014. Comex operations in the U.S. and Canada consist of 314 company- operated stores - 234 in the U.S. and 80 in Canada - and eight manufacturing sites - five in the U.S. and three in Canada. In addition, Comex supplies paint and coatings products to approximately 1,500 external retail locations in Canada. The company manufactures and sells products under well-respected brands such as Frazee, Kwal, Parker Paints, General Paints(TM), Color Wheel and Para. Both Sherwin-Williams and Comex place heavy emphasis on supplying high-quality architectural paints and coatings products in the U.S. and Canada.

Acquisition of Rockwood's Rheology Business Completed

The specialty chemicals group ALTANA has completed the acquisition of the rheology business of Rockwood Holdings, Inc. The acquisition was announced on July 28, 2013. With the acquisition ALTANA's sales are expected to reach about 1.9 billion per annum. In the context of the transaction ALTANA acquired the rheology business of Roockwood's Performance Additives segment for a purchase price of US$635 million. The acquired business segment is one of the world's leading suppliers of rheology additives that optimize the flow characteristics of various materials. Rheology additives are used, among other things, in coatings, construction materials, and personal care products. They can, for example, ensure that coatings have the right viscosity and that they can be applied without forming droplets or bubbles.

As a result of the acquisition, the number of the ALTANA Group's employees increased by 350 to 5,700. In addition to the administration department in Austin (Texas), four new production sites have been taken over: Gonzales (Texas), Louisville (Kentucky), Widnes (UK), and Moosburg (Germany). ALTANA will integrate the acquired rheology business into its BYK Additives & Instruments division.

In order to underline the particular importance attributed to the acquisition and to optimally and smoothly manage the integration of the business, the BYK Additives & Instruments division in Wesel has extended its management team. The new management of BYK-Chemie consists of Dr. Christoph Schlünken (Chairman of the Management Board), Albert von Hebel, Gerd Judith, and now also Frank Wright, previously managing director of the acquired Rockwood business.

Dempsey News

Dempsey Corporation, a leading supplier of specialty chemicals to the Canadian Market, now represents two world-class manufacturers of resins.

DSM resins is a leader in the global markets for coating resins, adhesives and graphic arts. They produce revolutionary solutions to match customer needs for sustainable coatings, adhesives and inks. DSM invests in research and product development to anticipate market trends and develop new technologies and products.

For over 30 years, the Indulor Group has been recognized internationally as a specialist in dispersions and solid resins. With two production sites in Germany and one in North Carolina, Indulor has a global footprint. Indulor has become one of the main suppliers in the global Graphic Arts market (Printing Inks and Overprint Varnishes).

Both of these suppliers' products will be stocked in Dempsey warehouses across Canada. They will also be featured at the company's next cross-Canada technical seminars.

Protech Buys Seibert

Protech Chemicals Ltd of Montreal, QC, Canada has reached an agreement with NPA Coatings, a subsidiary of Nippon Paints Japan, to acquire the Seibert powder coatings business.

Protech will continue the NPA manufacturing operations in Cleveland, Ohio. The deal is expected to close by mid-November 2013.

David Ades, Managing Director of Protech, says, "The acquisition of NPA's powder business allows us to expand into new markets, particularly the automotive sector in which NPA is a leader." He continues, "We are committed to maintaining the well-earned reputation that NPA has built over the past twenty years."

The Protech group is a global leader in the development, production and marketing of thermoset and thermoplastic powder coatings. They produce coatings under the Protech, Prolux, Oxyplast, Thermoclad and Innotek labels. Protech offers a complete product range in the industry, with eight production facilities in the Americas and Europe and fifteen licensees in South America, The Middle East and Asia. Its powder coatings brands rank in the top five worldwide. Protech is a privately held company headquartered in Montreal, QC, Canada.

www.protechpowder.com.

In the News

Pricing Updates

Arkema Coating Resins Announces Price Increase for Acrylic and Styrene Acrylic Resins in North America

Effective September 20, 2013, or as contracts allow, Arkema Coating Resins increased the price of acrylic and styrene acrylic latex products sold in North America.

The price of ENCOR and SNAP acrylic and styrene-acrylic, and NEOCAR Acrylic latexes will increase by five percent to 15 percent per wet pound. The price of Celocor opaque polymer will increase by five percent to ten percent per wet pound. ENCOR styrene-acrylic hard resins will increase by five percent to ten per cent per pound.

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

People

Gelest Promotions

Gelest, Inc. announces recent promotions within its R&D, Technical Service and Manufacturing Groups that will enable the company to continue its innovative growth in the coming years.

Fernando Jove has been promoted to Group Leader Special Projects. He joined Gelest in 2010 as a R&D Chemist. Previous experience includes Research Associate, University of Pennsylvania and Postdoctoral Fellow, Temple University. Fernando holds a B.Sc. in Chemistry from the University of Rochester and a Ph.D. in Inorganic/Organometalic Chemistry from the University of Delaware.

John Young has been promoted to Group Leader Metal-Organics. He joined Gelest in 2011 as a Metal-Organic Development Chemist. Previous experience Senior Research Chemist, Exelus Inc. and Assistant Research Chemist, Rhodia Chemicals. John holds a B.Sc. in Chemistry and Business Management from Gettysburg College and a Ph.D. in Inorganic/Organometalic Chemistry from the University of Delaware.

Annalese Maddox has accepted a position as Technical Service Specialist. She joined Gelest in 2012 as an R&D Metal-Organics Chemist. Annalese holds a B.Sc. Chemistry and A.B. in Spanish from Lafayette College and a M.S. in Chemistry from University of Vermont; Waterman Research Group. She also completed research at Auburn University, Polymer and Fiber Engineering Department.

Mike Gillies has been promoted to Production Supervisor for Silanes and Silicones manufacturing. He joined Gelest in 2010 as a process Chemist and was promoted thereafter to Associate Chemist. Mike is a graduate from Muhlenberg College with a B.Sc. in Chemistry.

Gelest, Inc., headquartered in Morrisville, PA, is recognized worldwide as an innovator, manufacturer and supplier of commercial and research quantities of over 3,000 organosilicon compounds, metal-organic compounds and silicones.

CPCA's 100th Anniversary and Conference a Success, New Board Members Named

The Canadian Paint and Coating Association (CPCA) celebrated its 100th anniversary late October, marked by their annual conference, held at the historic Fairmont Chateau Laurier in the nation's capital.

Photo by Pete Wilkinson

The 100th Anniversary Canadian Paint and Coating Association conference was held in Ottawa late October. Sunday included a tour of Rideau Hall, the Governor General's residence. More coverage in the next issue.

The conference took place over three days, from October 20-22, and involved several activities for attendees including a tour of the Gatineau Hills and Governor General's residence, special presentations by federal government representatives and industry experts, presentation of industry achievement awards and a birthday celebration for the Association at the annual Chair's dinner and gala.

The conference also saw the election of new board member for the Association. The full board slate for 2013-2014 is as follows: Sharon Kelly (KelCoatings), Darrin Nobel (Home Hardware BeautiTone), Ed Thompson (L.V. Lomas Ltd.), Fred Veghelyi (OPC Polymers Canada), Andre Buisson (Laurentide), Mike Klein (Dominion Colour Corporation), Harry Danjal (BASF Canada), Richard Tremblay (Benjamin Moore), Paul Macko (AkzoNobel), Ron Nakamura (PPG Canada), Tim Vogel (Cloverdale Paint), Andy Doyle (American Coatings Association), Doug Crabb (Duha Group) and Brent Jamieson (Axalta Coatings). Dale Constantinoff was re-appointed as Chair of the Association.

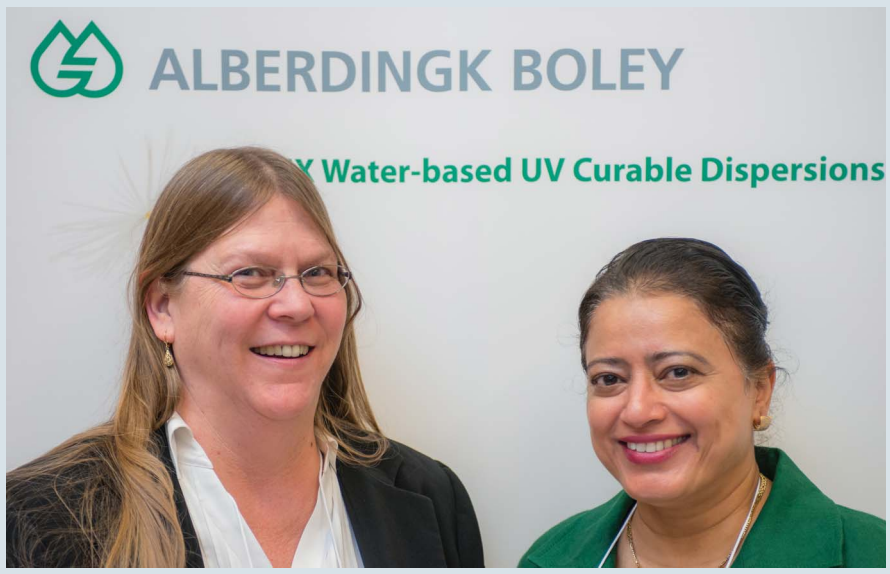
The CPCA would like to thank its Board member, past and present, all conference attendees, and its sponsors for contributing to the success of its 100th Anniversary.

"We are nothing without our members," CPCA President and CEO Gary LeRoux remarks, "While we work tirelessly to advocate for the industry, we are accomplishing more than ever due to the support and strength of our member base."

RadTech East 2013 in New York

Attendance to **RadTech's UV/EB** events increases every year as coatings manufacturers look for an edge in formulating. UV and EB coatings offer instant cure through light, eliminating solvents and drying, and offer improved properties such as higher gloss and resistance. The **UV/EB East 2013** took place October 1-2, 2013 in Syracuse, NY and CFCM was there.

Photos by Pete Wilkinson



Laurie Morris and Yasmin Sayed-Sweet, Alberdingk Boley.

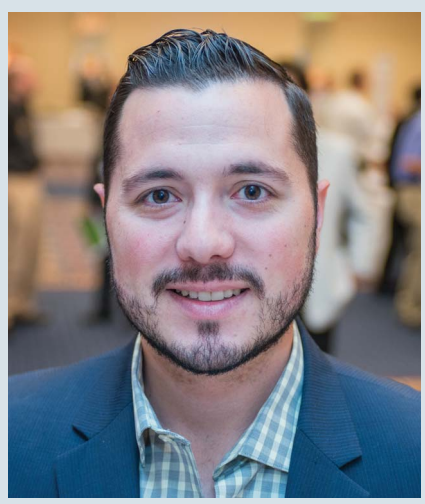
Bob Ruckle and Eugene Ward, Siltech.

RadTech East 2013 in **New York**

Ed McGhee and Haillie Smith-Petee, Nordson.

Barry Whelan and Sharan Nandhra, Zodiac Aerospace.

Jim Zawicki, Sartomer.



Christos Eliopoulos, NuSil Technology.

Venjakob Celebrates their 50th Anniversary and CEO Retires

Some 400 guests joined Venjakob for a festive gala evening at its headquarters in Rheda-Wiedenbrück on September 13th.

Venjakob celebrated its 50th anniversary recently with employees, customers, suppliers and friends. On September 13th the company held its jubilee celebration at the headquarters in North-Rhine Westphalia.

For two days Venjakob partied in a huge tent installed for the event. Otto Nüsser 64, one of the two CEOs of the company, thanked everyone for the cooperation of the past years and officially announced his retirement after 23 years of operational Management, passing leadership to his son Christian Nüsser. Nüsser senior, however, will remain in the company in an advisory position. Christian Nüsser joined the family business in 2002, and since 2008 worked with his father as CEO of the system manufacturer of surface finishing, air purification systems and materials handling products.

In 1963 Heinrich Venjakob laid the foundation for today's company, Venjakob Maschinenbau in Rheda-Wiedenbrück. What began in a workshop in the garden of his parents' home has developed into a success story that has spread worldwide and is now in its third generation of family management.

The first customer was the furniture company Anton Disselkamp. Mr. Disselkamp asked Heinrich Venjakob for help because his employees' hair was turning red from bleaching birch veneers. "That was the birth of the first automatic spray painting system," explained Managing Director Otto Nüsser while nostalgically looking back over the company's long history during his jubilee address to more than 400 guests at the gala event.

Whereas the company concentrated on wood lacquering up until the beginning of the 90s, today Venjakob sells machines worldwide in the plastics, wood and steel tubing sectors as well as special productions. The company has a total of more than 300 employees between the headquarters and its other locations.

Venjakob has also had its share of hard times during its 50 year existence, such as in 2009 and 2010 due to the worldwide economic crisis, which was accompanied by a drop in turnover of 50 per cent. Otto Nüsser explains that for this family-run company "lay-offs were never an option". Thanks to short-time working hours and considerable skill, the father-son team pulled the company through the crisis and in the end went directly from short-time working to working overtime. Since then, the annual turnover at the Rheda-Wiedenbrück location is once again at roughly 30 million EUROS, although a slight increase is expected for this jubilee year. In 2012 the company invested approx. 2.5 million EUROS in a new production hall. Currently 2 million EUROS is being spent to expand the office and administrative building as well as to install a new high bay storage system. Completion is set for the beginning of 2014. Moreover, in the near future, the machinery will be updated, with the focus particularly on the sheet metal forming sector.

During the jubilee gala Otto and Christian Nüsser paid tribute to the achievements of the employees as well as the trusting and uninterrupted cooperation with suppliers, customers and partners. The next day included plant tours, mechanical bull riding, jumping castle, and more, with close to 1500 attending. A special highlight: the live demonstration on a lacquering machine line for China, which lacquers two doors per minute.

Managing Director Otto Nüsser reminisced about both good and bad times for the company during his jubilee anniversary speech. He is confident about what the future holds.

Otto Nüsser and Christian Nüsser

Photos: Venjakob

WITH GARY LeROUX

Canada–United States

Regulatory Cooperation Council Action Plan

Further to the announcement in the Canada Gazette on August 31, 2013, the Regulatory Cooperation Council (RCC), created by President Obama and Prime Minister Harper in 2011, is seeking public views on progress to date and how best to address regulatory divergences between Canada and the United States. In the spirit of cross-border cooperation, the Canadian Paint and Coatings Association (CPCA) and the American Coatings Association (ACA) filed a joint submission on October 11th. Both organizations applaud RCC's ongoing efforts to "underline the importance of finding systemic solutions to avoid creating new regulatory misalignments." Success in this area will ultimately be beneficial for industry. However, several areas have been identified with respect to issues of concern for member companies of CPCA and ACA, which operate on both sides of the border and have significant product moving across the border. CPCA has seventeen U.S.-based members that export products to Canada. CPCA's Canadian-based members, in turn, export product to the US, and in some cases, own U.S.-based companies and vice versa.

With respect to ongoing efforts within the RCC related to the Transportation of Dangerous Goods (TDG) activities, CPCA and ACA suggested moving forward on true harmonization of requirements, either through established and consistent approaches, or through a clear memorandum of understanding that products conforming to either the US or Canadian requirement are compliant in both jurisdictions.

With respect to consumer product approvals, CPCA suggested the following: 1) implementation of a Common Electronic Submission Gateway to allow industry applicants the ability to submit large electronic documents related to products simultaneously for U.S. and Canadian authorities and further encourage increased review and collaboration on those products; 2) adoption of common monographs (e.g., including properties, claims, indications and condition of use); and 3) alignment with respect to the implementation of common classification and labeling requirements for consumer products similar to what is being done with the GHS implementation of workplace hazardous chemicals within the mandate of the U.S. Occupational Safety and Health Administration (OSHA) and Health Canada. CPCA encouraged the RCC to continue its efforts in synchronizing the implementation of the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals in the workplace.

CPCA had several specific comments with respect to initiatives related to the environment including the following: 1) adopting similar or representative VOC control techniques, VOC photo reactivity lists and VOC-exempt definition lists; 2) cooperation on sustainability frameworks, and certain aspects of the Chemicals Management Plan requiring coordination and information sharing such as UCVBs, etc.; 3) greater data sharing on cross-sectoral areas such as nanotechnology, misalignment of the list of registered pesticides and biocides, management of Third Country Import Risk and suggestions for process-related improvements in general for the ongoing work of the RCC.

Alignment of VOC-Exclusion Lists with the US EPA

CPCA submitted formal comments on Environment Canada's proposal to add certain compounds to the exclusion list under the Canadian Environmental Protection Act (CEPA). In its submission, CPCA responded to Environment Canada's Proposal to add 13 VOC compounds to the VOC Exclusion List under Schedule 1 of CEPA. The proposal was launched online on September 16, 2013 for a 30-day comment period, which ended on October 15th. Following the consultation period, all stakeholder comments will be considered prior to drafting and publishing a proposed Order in the Canada Gazette, Part I. CPCA and its members fully supported the proposal. The paint sector will directly benefit from this initiative, especially with regards to three of the thirteen compounds listed: TBAC, dimethyl carbonate and propylene carbonate.

Over the past eight years, the Association and several of its members have made representations to Government officials in an effort to demonstrate the relative merits of these three compounds. These compounds present negligible photo reactivity in the atmosphere and were deserving of VOC exclusion under Schedule 1 of CEPA in Canada, in the same way as they were in the USA, at both the Federal and State levels of government. The US Environmental Protection Agency (EPA) excluded TBAC from the definition of a VOC as far back as December 2004 and excluded propylene carbonate and dimethyl carbonate in 2009. The differences in VOC definitions led to discrepancies in the calculations of VOC formulations, which proved difficult to manage for paint companies operating and selling paint stocks in Canada. The adoption of these proposed exemptions would put an end to increased hardship for many in the coatings industry.

To a lesser extent the Canadian paint industry might also have interest in methyl formate as it can be used as a component for quick-drying finishes and for Solstice 1233zd(E). This substance is not listed on the NDSL or DSL but recently exempted as a VOC in the USA and could therefore be used as a solvent in aerosol and non-aerosol applications. CPCA recommended publishing and enforcing this proposal as soon as possible and to ensure proper alignment of new exclusions with respect to the Third Regulation Limiting the VOC Concentrations for Certain Products. CPCA also recommended setting up a more efficient mechanism for coordinating and expediting future updates of the VOC exclusion list under Schedule I of CEPA with those of the US EPA List.

Important Reporting Deadline of November 13th for Section 71 on Phthalates

Members, both importers and manufacturers in Canada, were recently reminded that the mandatory reporting deadline under the Second Phase of the Canadian Chemicals Management Plan (CMP-2) for phthalates substances on the Domestic Substances List ("DSL") is November 13, 2013. CPCA reminded all of the target list of mixtures, products and manufactured items containing the DSL phthalates and encouraged the filing of blind submissions. CPCA members will not be concerned with the main list of 14 phthalates but with four phthalates contained in the list of 17 additional phthalates published by the federal Government. Full details of this effort were provided to the full membership.

Consultation on a Proposed Risk Management Instrument for Products Containing PBDEs

The federal Government is proposing to prohibit the manufacture, import, and sale of any of the products containing the following chemicals: etraBDE, pentaBDE, hexaBDE, heptaBDE, octaBDE, nonaBDE or decaBDE and other mixtures, polymers and resin. A threshold of 0.1 per cent by weight in homogeneous material is being considered for DecaBDE commercial mixtures (which are not covered under the Stockholm Convention but which include octaBDE, nonaBDE and decaBDE). This threshold would be similar to that of other jurisdictions. It would also allow for unintentional uses of DecaBDE in products, such as when contained in recycled material that has been

chemically or physically modified.

Environment Canada does not intend to propose a specific threshold for the following chemicals contained in products: tetraBDE, pentaBDE, hexaBDE and heptaBDE. The consultation ends on November 28, 2013.

Update on the Multi-Material B.C. Packaging and Printed Paper Product Program

As of September 13, 2013, 1,279 producers registered with MMBC. By May 19, 2014, MMBC will be submitting a list to the Ministry of Environment of businesses that have failed to comply with its obligations. Those contravening the Regulation are liable for enforcement action, which can include fines of up to $200,000 upon conviction and/or may be prohibited from selling, offering for sale, distributing or using packaging and printed materials in a commercial enterprise in British Columbia. For those who currently do not fall within the requirements of a producer as defined by the regulations, but will fall into this category in the future - MMBC indicated that these will likely be required to identify themselves and provide statistics regarding the weight of their packaging and printed materials, immediately after the producer's first year of business.

CPCA Reminds Ontario Members to Complete Toxic Substance Reduction Plan Summaries

CPCA has reminded all members who own and operate facilities in Ontario to submit a toxic substance reduction plan summary under the Toxics Reduction Act, 2009 and its regulation (O. Reg. 455/09). It further notes that it must be done with the mandatory use of Environment Canada's Single Window (formerly known as the One Window to National Environmental Reporting System – OWNERS).

For Phase II Substances, 2012 plan summaries are due by December 31 2013. The plan summary must be made available to the public on the Internet, although the full version of the plan remains at the facility site. CPCA provides services to members by publishing and hosting toxic accounting reports and toxic reduction plan summaries on its website (www.canpaint.com). The Ministry of Environment recently noted that changes have been made to the Plan Summary module between March 2013 and October 2013 that may impact facilities that have already started a 2012 Plan Summary but not yet submitted it.

Bill 91, Ontario Waste Reduction Act Reaches Second Reading

Despite major concerns raised by a substantial cross-section of Ontario industry, the Ontario Minister of the Environment is pushing forward with his proposed Waste Reduction Act. The Bill reached Second Reading on September 24th. The proposed new Waste Reduction Act will soon move to a Standing Committee of all parties for public hearings. CPCA made a formal submission on September 4th and recently sent a letter to all members of the Ontario Legislature highlighting some of the key elements of the proposed Act that are good and others that require amendment. CPCA will also be meeting with members of the Legislature in the coming weeks with respect to the proposed Act. In some cases, efforts will be made to strengthen demands for appropriate amendments and support existing provisions of the Act that will help waste reduction in Ontario.

New Program Operator for Paint Under MHSW in Ontario

Work continues on a detailed action plan in concert with Product Care and Stewardship Ontario, to put in place an Industry Stewardship Plan (ISP) for paint and coatings under the MHSW program. This is permissible under the Waste Diversion Act and the goal is to have Product Care become the program operator with a view to a smooth transition in 2014. There are significant ongoing negotiations with respect to legal requirements related to the transfer of contracts and other operational agreements once the ISP is approved. Public consultations of Product Care's proposed Industry Stewardship Plan will be completed by Waste Diversion Ontario at the end of October. It will be up to the WDO Board to grant final approval for the ISP.

CARB Approves Amendments to the Aerosol Coatings and Consumer Products Regulations

On September 26th, the California Air Resources Board (CARB) Commissioners approved proposed amendments to the Aerosol Coatings Regulation, the Consumer Products Regulation, and Method 310 (the test method used to calculate VOCs in consumer products and reactive ingredients in aerosol coatings). Under the proposed rule, the PWMIRs for General Categories and Specialty Category A will become effective on January 1, 2017. For the Specialty Category B products, the new revised standards will become effective by January 1, 2015. The General Categories include the largest categories by volume and make up more than 90 percent of the products reported in the survey. The new regulations will require reformulation of over 1,700 formulas.

CARB's proposed standards for the aerosol coatings categories are extremely aggressive, and in some cases the PWMIR standard is reduced 30 to 45 percent from the previous standard (e.g., Ground Traffic/Marking and Fluorescent; Primers; Exact Match Finish – Industrial). CPCA has been involved in several meetings and consultations with the Canadian Government with regards to the identification of a risk control instrument for aerosol paint products sold in Canada. The socio-economic study ordered by the federal Government, has shown that the vast majority of aerosol paint products sold in Canada were already compliant with CARB. In a previous submission, CPCA recommended that the Government of Canada adopt a status quo position and wait until new CARB regulations come into effect before considering the implementation of risk management control actions for these products.

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

The Powder Coating Show

Martin Pageau, Greensolv Inc, Quebec, with David Freeman, Pollution Control Products and Proquip.

Jeff Reimer, Manager of Star Fabrication, Alberta.

Chris Mondy and Mike Simmerer of Bex Nozzles.

With plenty of exhibits and seminars covering everything you ever wanted to know about powder coating and more, the **2013 Powder Coating Show** held in St. Louis, MO, October 8-10, 2013 attracted professionals in industries including: Aerospace; Agricultural and Construction; Appliance; Architectural; Automotive; Electrical; Functional; Furniture; General Metal Products; HVAC; Oil and Gas Pipelines and Transportation. There were several Canadians who also attended including CFCM magazine.

Photos by Sandra L. Anderson

Stuart Oakley and Rick Vanhouke of VanGregor Metal & Powder Coating Inc., Paris, ON.

Bill Brown and Brandon Lloyd, Atotech.

David Carreiro of Fischer Technology.

Greg Taylor of Gema with the new Opti Flex 2 quick colour change system.

Adam Eusepi and Rick Marin, Morin Industrial Coatings, Sudbury, ON.

Axalta's Michael Withers and Craig Dietz.

Robert Tucker of Stone Tucker Instruments, distributor of Defelsko.

Joe Glassco and Matthias Koehler of Wagner pose in front of their new Pem-X 1 manual gun.

David Comley, Lab Manager at the Grimsby Powder Facility for Sherwin-Williams Product Finishes.

Michael Wester of MOCAP masking.

Photos by Pete Wilkinson

continued from front cover

large cabin completion and maintenance capabilities at its Peterborough Airport facility.

With the steel framework now in place, 20,000 square feet is being added to one of the company's existing three hangars. The existing hangar is currently accommodating a long-term project that will see eight Bombardier CRJ 200 regional airliners converted to 16 seat corporate shuttle configurations. This is the first executive shuttle configuration program Flying Colours has undertaken and reflects the company's ambitions to widen its offering to the aviation market place.

Phase one is due for completion in the first quarter of 2014, and whilst large enough to accommodate wide body aircraft, the new building will initially be utilized to increase Flying Colours Corp.'s refurbishment and maintenance capabilities for pre-owned large cabin size aircraft, particularly on the Bombardier Global Express and Challenger 870 families. It is anticipated that the additional space will also be used for a number of special mission programs including the fulfillment of a multiple aircraft contract for modifications to seven CRJ 700/CL870 airframes destined for Asia. The new structure will be equipped to handle refurbishment projects, avionics installations and upgrades, heavy maintenance projects and full interior completions. "This is a major step in the application of our future strategy for Flying Colours Corp.," says Sean Gillespie Executive VP. "We have built an extremely robust business, with an international client base that values our full service offering in terms of completions and maintenance. We have quite simply run out of space to accommodate all the requests received, so have implemented this extensive development project to accommodate current and future work load. When phases one to three are complete, the additional hangar space will enable us to work on the Airbus ACJ fleet, Boeing Business Jet family and the state-of-the-art CSeries models. We are adding a total of 65,000 square feet to our facility and are very excited about the new possibilities."

Phases two and three, which are expected to be completed in 2015, will incorporate further additional hangar space of approximately 45,000 sq.ft and will incorporate an additional large cabin hangar, increased shop space for maintenance and interior workshops, and a new down draft paint facility. Flying Colours is anticipating that the increased capacity will require a bolstering of its workforce by 30 per cent increase creating 60-70 new jobs at the Peterborough location. It has already begun recruitment activity to source new team members with the right skills and knowledge. Once the final phase of building is completed at Peterborough, Flying Colours Corp. will explore the options for expansion at their US facility, which is already running regularly full workshops.

Flying Colours Corp. and newly renamed sister company Flying Colours Corp. KSUS (formerly JetCorp Tech Services Inc) exhibited at this year's NBAA 2013 where it talked up its existing maintenance activity and promoted its new approvals. One year on from achieving Bombardier ASF status, Flying Colours Corp.oration has also achieved the coveted AS9100 certificate for quality and safety management for the aerospace industry; has been appointed by aircraft improvement manufacturer, Raisbeck Engineering as an Authorized Sales and Installation Centre for the entire King Air product line; and in March achieved Beechcraft Authorized Service Centre status for Canada for the entire King Air, Baron and Bonanza product lines which complements its existing status as an authorized service centre for Waco-based Blackhawk Modifications Inc.

Painting Process

Flying Colours' paint process includes the use of environ-

A pre-owned Challenger 604 stripped and sanded in preparation for new paint and interior modifications.

A new Bombardier CRJ 1000 going through final prep before painting.

mentally friendly products and application from a wide range of industry standard suppliers. Their paint team can accommodate all levels of complexity ranging from minor registration changes to full custom paint schemes and applications.

Their in-house design team is available throughout the paint process to assist with selecting new schemes, colours, and coatings. Flying Colours is an authorized paint warranty provider for a number of aircraft manufacturers including Bombardier.

When it comes to providing clients with new exterior paint Flying Colours offers a comfortable combination of function and flair, and a premium quality finish. They make a point of keeping their facilities state of the art, and refinishing procedures up-to-date.

As a Bombardier Authorized Service facility and Beechcraft Authorized Service Center, Flying Colours is capable of handling all scheduled and last minute requirements from their its two modern facilities.

Flying Colours owns Supplemental Type Certificates on a range of modifications and upgrades including the following aircraft models: Lear 60, Challenger 300, Challenger 604/605/850, CRJ200 interior & fuel system, Global Express, Falcon 900, and more.

Flying Colours Corp. established in 1989 is a global leader in all aspects of aircraft completions & maintenance. Initially opened to accommodate a growing aircraft sales and leasing division in Peterborough, ON, Canada, Flying Colours has grown into a leading aviation service provider focusing on Green Completions, Refurbishment & Modification, Executive Conversions, Maintenance & Repair, Exterior Paint, Avionics Upgrade & Installation, Engineering & Design, Component Overhaul & Repair and Auxiliary Fuel Systems.

In 2009 Flying Colours acquired JetCorp Technical Services based in St.Louis, MO, USA to continue their growth expansion and further establish itself within the aircraft services industry. With more than 25 years in business and an impeccable reputation for service and support in all areas, JetCorp was a welcome addition to the Flying Colours team. In 2013 JetCorp was rebranded as Flying Colours Corp – SUS.

"Until now JetCorp Tech Services has been run under its own name but with our continued expansion the time was right to bring the operation under the single Flying Colours Corp. banner," says Sean Gillespie, Executive VP, about the rebrand. "We have experienced significant growth in our maintenance activity, in addition to our completion and refurbishment side, and much of this has been underpinned by activity at JetCorp. It now makes sense to unify the St Louis facility under the one company brand as we aim to provide a seamless image to the market place," he continues.

News of the renaming and freshened brand follows hard on the heels of the announcement that Flying Colours Corp. is well under way on a $3.5 million dollar expansion plan at its Peterborough, ON, headquarters where it will be increasing its large cabin maintenance capabilities and looking to explore opportunities for wide body activity.

Masking Innovations

There have been innovations in Masking as demands of Industrial Finishers have grown to include high temperature and high performing products.

3M Industrial Adhesives and Tapes Division has been testing a new polyester acrylic adhesive masking tape that will be out most likely the first quarter of 2014. It is a new technology that leaves no residue. It is currently in tests and is doing well. It is non-silicone based. It comes off clean at high temperatures. It was originally requested by an aerospace client. The company says the customers have been asking for a product that will compete with the effectiveness of silicone, but not carry its high price. The company says customer feedback to the test marketing of the new product has been positive. While a silicone tape loses performance around 300 degrees, this acrylic tape can withstand heat up to 425 degrees. This is especially useful for powder coating. They also have 3M Masking Films - a variety of masking films available for substrate protection for painting gelcoat and overspray applications.

In June 2013, the company launched a new lineup of five industrial masking tapes – built on increasing levels of performance and engineered to perform in most all industrial jobs that require a masking tape. The new line includes 3M Value Masking Tape 101+ for basic jobs such as marking, temporarily holding, wrapping and sealing; 3M General Use Masking Tape 201+ that's tough enough for everyday jobs like bundling, labeling and identifying; 3M Performance Yellow Masking Tape 301+ for industrial paint masking, bundling, colour coding and sealing; 3M High Performance Green Masking Tape 401+/233+ for high performance industrial painting of aircraft, buses, trailers, trucks, boats, trains and other specialty vehicles; and 3M Specialty High Temperature Masking Tape 501+ for the highest degree of industrial performance in high temperature paint baking applications.

www.3M.com

Silicone is still a very important masking product.

Earlier this year **MOCAP** launched a silicone rubber X-Treme Tape, which is a self-bonding flexible masking tape that offers features not found with convention-

al masking tapes. This rubber tape will stretch wrap to conform to irregular shapes and features no adhesive, which means there will be no secondary clean-up after high-temperature processing. This tape will protect and mask during plating and conformal coating, as well as high-temperature powder coating. The tape will resist up to 500° F (260° C) and remove easily. In many cases, it can eliminate the requirement for a 'custom' mask.

The tape is available in a wide variety of widths, lengths and colors.

www.mocap.com

Silicone Tape Masking from MOCAP.

At the recent Powder Coating Show in St. Luis MO, October 2013, a seminar was presented on Improving Fundamental Processes (Masking, Hooks and Racks). This session focused on a frequently overlooked area of the powder coating process…masking, racks and hooks. Although there are standard products that may meet an immediate need, a thorough evaluation of masking, racks and hooks can not only save money, but can dramatically improve the overall powder coating operation. Useful information was presented on all aspects of masks, racks and hooks, including design, purpose and function. There was an overview of available materials that detailed the pros and cons of each. In addition, simple and complex ways to improve line density was presented. In all areas, case histories will be presented to combine the theoretical with the real world. There have been advances on D12 red polyester tape and its appropriate applications.

Caps 'n Plugs is a leading Canadian manufacturer and global supplier of dip molded flexible vinyl mouldings, industrial adhesive solutions, plastic and rubber injection mouldings, and compression mouldings and extrusions. Our plastic caps, plugs, grips, high temperature paint masks, custom dip and injection molding products are safely manufactured and offer superior quality. We provide clients with outstanding customer service and a vast selection of plastic capabilities for all needs. Order your custom molded plastic products from Caps 'n Plugs. The company has a vast variety of products - plastic, silicone rubber and more that will perform in different temperatures:

- 600°F / 315°C
- Caps & Plugs: Silicone Rubber
- Self-Fusing Silicone Tape
- Polyimide Tape (2 mil thick film)
- 500°F / 260°C
- Polyimide Tape (1 mil thick film)
- 450°F / 232°C
- High Temperature Vinyl Caps (one time bake only)
- 400°F / 204°C
- Polyester Tape / Discs
- 300°F / 149°C
- Standard Vinyl Caps (one time bake only)

www.capsnplugs.com

Manufacturers of masking products are continually making tapes and other products to meet the changing needs of Industrial Finishers.

Testing Equipment in Industrial Finishing

Manufacturers of testing equipment for paint and coatings in industrial finishing continually update technology to meet customer demand.

Coating and thickness measurement can be improved with digital signal processing. Intelligent sensors with integrated digital signal processing have become common in several applications. As the gain in interference immunity, repeatability, durability and reliability of the gauges does not involve any price increase, it is merely a matter of time before digital technology will dominate coating thickness measurement.

Basic analog technology electro-magnetic coating thickness measurement dates back to the 1970s. Conventional analog coating thickness gauges transfer signals by cable to the electronic unit of the thickness gauge where interference-prone analog data processing takes place. Such electronic units may include up to eight analog modules, sometimes including expensive precision components such as temperature- stable amplifiers, capacitors and voltage regulators. Voltage regulators designed for more voltages commonly take up a lot of space and require complicated circuitry. During the manufacture of such measuring gauges, all of its components must be subjected to a strict testing, thermal aging and careful selection procedure.

Fischer Technology Inc. offers a broad spectrum of testing, measuring and analysis instruments for the most diverse applications and industries, whether magnetic induction or eddy current, beta-backscatter, coulometric, micro hardness or x-ray fluorescence.

Whether painted or electroplated, applied to magnetic or non-magnetic materials the company will have the appropriate instrument for precise coating thickness measurements. For electromagnetic methods Fischer offers pocket instruments, handheld instruments, benchtop units and probes. It also covers x-ray fluorescence, coulometric, beta-backscattering and micro-resistance methods

For exact material analysis, the broad assortment of Fischer X-ray fluorescence instruments offers the optimal instrument for any application.

The high demands of today's surface technology, such as very hard, very thin or visco-elastic, require correspondingly powerful measurement methods and systems.

In the nanometer range, the Fischer micro hardness measuring instruments are capable of making quick, precise and effective measurements where classic measurement methods reach their limits. One of the company's newest products offers the capability of non-destructively measuring simultaneously the phosphorous content and thickness in electroless nickel (NiP) coatings using X-ray Fluorescence Instrumentation (XRF). For the first time this capability is realized for measurements in air (vacuum free), regardless of the underlying base material, AL, Fe, Cu or PCB. Fischer's high performance XRF hardware combined with user-friendly advanced fundamental parameter software allows for fast and accurate results of both coating thickness and phosphorous content at the same time with minimal sample preparation. The phosphorus content of electroless nickel coatings is critical in determining the corrosion and wear resistance, hardness and solderability.

FISCHERSCOPE X-RAY XDV –SDD is a High performance X-ray measuring instrument with a programmable X/Y-stage and Z-axis for automated measurements of very thin coatings and composition of NiP layers

Fischerscope® X-Ray XDV –SDD.

ElektroPhysik is a leading manufacturer of portable, non-destructive coating thickness testing gauges. In addition they are the North American exclusive agent for Sheen Instruments offering viscosity testing devices, film application equipment, colour and gloss, adhesion and physical test devices. For coating thickness they offer the Minitest 700, a Universal coating thickness measuring gauge with integrated probe, cable probe or exchangeable probe from an integrated to an external probe. They also offer the QuintSonic, ultrasonic coating thickness measuring gauge for the non-destructive coating thickness measurement of paint, lacquer and other insulating coatings on plastic, wood, glass, ceramic and more. They have a testing instrument to cover most every need.

Extech Instruments, offers its new TKG Series of ultrasonic thickness gauges are now available. The TKG Series – consisting of the TKG250, TKG150 and TKG100 models – uses ultrasonic technology to capture non-destructive thickness measurements on various engineered materials, typically to measure wall thicknesses in steel structures where only one side is accessible to take inspection measurements. The most common applications are to detect thinning areas and corrosion build up in steam lines, boiler tubes, storage tanks, and pressure vessels. Designed and made in the USA, TKG gauges are also used to measure thicknesses on metal

components found on aircraft sections, ship hulls and marine systems, heavy equipment and construction vehicles, and bridge structures. Quality control applications beyond metals include castings, plastics, composites, fiberglass, ceramics, and glass.

Extech Instruments, TKG250.

Some of the key advantages of the TKG Series include its compact design, one-handed controls, intuitive interface, easy-to-read LCD display, and versatile alarm settings. The user-friendly design makes it easier for users to master any of the TKG model's more-advanced features, such as the user-configurable fast minimum/maximum threshold settings, which combined with vibration feedback and visual flashing alarms, are designed to reduce the likelihood of missing critical thickness parameters.

The TKG100 is the basic model that does not display thickness measurements as waveforms; the TKG150 is the mid-range model that has waveform display, Echo-to-Echo feature to ignore paint and coatings, and vibration alarm; and the TKG250 incorporates full-color waveforms, non-encoded B-Scans with color-coded alerts, as well as automatic data logging.

Engineered for use in harsh conditions, these heavy-duty TKG Series gauges are constructed of high-impact materials, and each model is splash-proof (IP54) rated.

DeFelsko offers coating thickness gauges, surface profile gauges, environmental gauges and wall thickness gauges. The company has the icloud feature on its equipment.

Rugged, fully electronic PosiTector coating thickness gauges use magnetic and eddy current principles to measure coating thickness on both ferrous and non-ferrous metals, accurately and quickly. Other features include: ready to measure with no calibration adjustment required for most applications; enhanced one-handed menu navigation; flashing display ideal in a noisy environment; reset feature that instantly restores factory settings; solvent, acid, oil, water and dust resistant – weatherproof; wear-resistant probe tip; shock-absorbing, protective rubber holster with belt clip; wo year warranty on gauge body AND probeertificate of Calibration showing traceability to NIST included (Long Form)uilt-in temperature compensation that ensures measurement accuracy; high resolution mode that increases displayed resolution for use on applications that require greater precision; conforms to national and international standards including ISO and ASTM; its gauge body universally accepts all PosiTector 6000 (coating thickness), SPG (surface profile), DPM (environmental) and UTG (ultrasonic wall thickness) probes. It also has multiple calibration adjustment options including 1 point, 2 point, known thickness, average zero; selectable display languages; high-contrast backlit display for bright or dark environments; flip display for enabling right-side-up viewing and more. The PosiTector 6000 probe for measuring intumescent paint and other thick protective coatings on steel measures up to 38 mm (1.5 inches), has a braided stainless steel cable and is kink-proof, wear and cut resistant.

The PosiTector SPG Surface Profile Gauge measures and records peak to valley surface profile heights. Conforms to ASTM D4417-B, AS 3894.5-C (with optional 30 degree tip angle), U.S. Navy NSI 009-32, SANS 5772 and others.

Its fast measurement rate of over 50 readings per minute is ideal for quickly and accurately measuring surface profile over large, flat surface areas.

Features include: large, easy-to-read, graphics LCD; enhanced one-handed menu navigation; reset feature to instantly restore factory settings; solvent, acid, oil, water and dust resistance; shock-absorbing, protective rubber holster with belt clip and wrist strap and more.

In today's competitive climate it is extremely important for anyone applying a coating to adhere to the thickness and other specifications. Manufacturers of testing equipment for industrial finishing offer the newest technologies, whatever the need.

Editor's note: Companies mentioned in this article can be reached at:
www.fischer-technology.com
www.ElektroPhysik.com
www.extech.com
www.defelsko.com

inoBell Powder Bell Technology

EXEL North America, Inc., manufacturer of SAMES Manual and Automatic Powder Coating Equipment and Solutions has designed the New InoBell Powder Bell Applicator.

The InoBell is a high transfer efficiency applicator that delivers: higher first pass transfer efficiency, better uniformity and high finish quality.

The InoBell can be installed on a robotic or reciprocating system for various types or markets.

www.exel-na.com

New 2012 Polyurethane End-Use Market Survey

The Center for the Polyurethanes Industry (CPI) of the American Chemistry Council announced that the 2012 End-Use Market Survey on the Polyurethanes Industry in the United States, Canada and Mexico is now available to order.

This biennial survey of the industry, produced since 1998, provides a breakdown of polyurethane production by type and by major end-use market for each country over a two-year period. In addition, the survey presents historical data on product use, market drivers and issues that affected the industry on both a domestic and global scale. Historic trends are presented along with discussions of the market status in 2012.

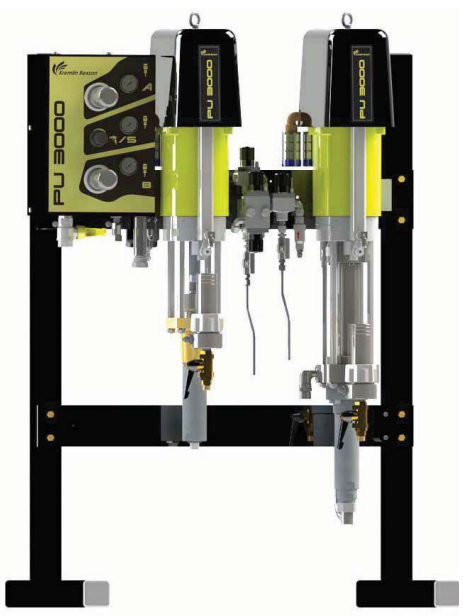
The survey information was compiled by an independent third party, IAL Consultants. It includes more than 300 pages of information and analysis as well as 150 data tables, plus charts and graphs.

www.americanchemistry.com

Kremlin Rexson PU3000 Plural Component Electro-Mechanical Mixing Equipment

EXEL North America is pleased to introduce the New Kremlin Rexson PU3000.

The PU3000 incorporates a unique "Plug and Play" concept for mixing two component paints. The patented "Pulse Free Control" technology delivers pulsation free performance for improved quality of mixing and application.



Electronic, variable-ratio pumps ensure accurate, reliable mixing and controlled fluid delivery. The control panel can be remote mounted or machine mounted.

On average, the PU3000 will save or add about 50 minutes of production time each day. The PU3000 will reduce material waste and facilitate faster clean-up, which significantly lowers operational costs.

Exel also offer a PU3000PH unit specifically designed for acid catalyzed materials.

The PU3000 is ideal for applying primers and top coats to metal, plastics and wood.

www.exel-na.com

AGC Chemicals Americas Specialty FKM Fluoroelastomer

AGC Chemicals Americas Inc. has a new peroxide-curable specialty FKM, AFLAS 200P. AFLAS 200P performs better than conventional FKM-type fluoroelastomers for applications that need to withstand aggressive oils containing antioxidants, solvents, ozone, acids and bases. It is ideal for oil seals, shaft seals, O-rings, gaskets and a variety of other parts and fittings, including oil seals for automotive and heavy-duty diesel engines. AFLAS 200P can also be solvated and applied as a coating.

Classified as Type 4 FKMs by ASTM standards, AFLAS 200P fluoroelastomers offer improved performance at cold temperatures (Tg = -13 °C, TR-10 = -8 °C).

www.agcchem.com

SAMES e-Jet 2 Manual Powder Systems

EXEL North America, Inc. manufacturers of SAMES products would like to announce the release of the new SAMES e-Jet 2 Manual Powder Systems.

The SAMES e-Jet 2 is the New Manual Powder System that is Ergonomic, Reliable, and High-Performing.

The SAMES e-Jet 2 has been specially designed for companies looking to improve their powder coating application and overall efficiency of that application.

The new manual powder systems are available in box and hopper feed designs. The box feed units are typically used for frequent color changes and the hopper feed is typically used for medium to larger production runs.

These systems are ergonomically designed and lightweight for easy maneuverability.

www.exel-na.com

continued from front cover

Plating can be rack/wire as well as conventional and vibratory barrel plating.

Commonly used specifications:
- MIL-G-45204/MIL-DTL-45204
- Type I - 99.7 per cent minimum purity
- Type II – 99.0 per cent minimum purity
- Type III – 99.9 per cent minimum purity
- Grade A - 90 knoop maximum hardness
- Grade C - 130 to 200 knoop hardness
- Grade D - 201+ knoop hardness

Silver Plating: Silver plating needs to conform to federal specifications, company and the AMS and ASTM specifications.

Silver Plating tends to be solderable, high purity, and highly conductive (both Electrical and Thermal). Applications include Electrical (Contact Pins, Buss Bars, etc.) and Bearing Surfaces (Silver has excellent lubricity).

Processing can be done through barrel plating (conventional and vibratory) and racking/wiring.

Commonly used specifications:
- QQ-S-365
- Type I - Matte finish
- Type II – Semi-bright Finish
- Type III – Bright finish
- Grade A - With supplementary anti-tarnish treatment
- Grade B - Without supplemental treatment

Nickel Plating: Nickel can be used as a final plate for corrosion protection or as an undercoat for other processes, such as gold and silver. Nickel ranges in brightness from matte (dull) to bright, depending on the process used.

Typical Processes Include:
- Sulfamate Nickel: semi-bright finish, excellent ductility, low stress deposit, meets requirements of QQ-N-290, AMS-QQ-N-290 and AMS 2404
- Bright Nickel: bright finish, good wear resistance and meets requirements of QQ-N-290 and AMS-QQ-N-290

Specifications:
- QQ-N-290 (AMS-QQ-N-290)
- Class 1 - Corrosion protection
- Class 2 - Engineering plating
- Grade A - 0.0016 inch minimum thickness
- Grade B - 0.0012 inch minimum thickness
- Grade C - 0.0010 inch minimum thickness
- Grade D - 0.0008 inch minimum thickness
- Grade E - 0.0006 inch minimum thickness
- Grade F - 0.0004 inch minimum thickness
- Grade G - 0.0002 inch minimum thickness

White Bronze Tri-metal: There is a renewed interest in applications for white bronze tri-metal (Cu-Sn-Zn alloy). The increased interest is driven by increased electronic frequency demands and tightening of boundary bandwidths requiring components that are corrosion resistant, non-magnetic and have higher hardness properties. The cost of precious metals has risen sharply, with silver consistently selling at over $25 per ounce. Recent research and applications developments have improved process control, ease of analytical measurement and resulting performance of tri-metal alloy electroplating. New proprietary formulation-based enhancements including a high-speed version, have been introduced to expand the product usage and applications. Tri-metal "white bronze" chemical processes have historically been difficult to control and too often produced a less desirable and less capable alloy than was required. Recent applications development has improved these chemical systems, determined the most critical control parameters and control points, and standardized the preferred analytical techniques for precise alloy control. Specifically, these improved techniques allow for a preferred alloy to be plated consistently, resulting in higher performance and expanded applications in the electronic industry.

The plating of copper-tin alloys has been done for many years and is widely used for a variety of applications. The most common processes are the plating of brass for decorative purposes and the plating of copper-tin deposits for electronic components. Recently there has been an increasing requirement for high performance and specialty electrolytic deposited layers. For example, decorative layers and electronics applications now must fulfill higher technical requirements for corrosion resistance, deposit hardness and wear resistance.

The properties of single-metal deposits are fairly stable and can only be slightly enhanced. Process enhancement emphasis is restricted to improved brightener and leveling additives that improve metallurgical properties such as ductility, elongation and overall process stability. By depositing two or more metals simultaneously to form an alloy coating, properties are produced that are not possible with single metal systems. The properties and performance can be varied by considering an unlimited number of alloying elements and alloy compositions. Therefore the properties of the deposits can be tailored to fulfill specific requirements and customized applications.

An example of this approach is the plating of tin alloys, copper-tin alloys and specifically copper-tin-zinc alloys. Copper-tin alloys invented over 40 years ago are now being refined and used in a wide variety of applications from jewelry and architecture to medical and electronic connector parts. In most manufacturing process sequences, copper-tin alloys are plated over acid copper deposits, which tend to level the underlying deposit and increase the alloy coating adhesion.

White bronze is an alloy consisting of a combination of copper, tin and zinc. Tri-metal alloys are white in color, similar to bright nickel, silver or rhodium and are extremely resistant to tarnish and corrosion. The alloy range is centered around 55 per cent copper, 30 per cent tin and 15 per cent zinc.

The impetus to develop processes for this deposit alloy initially came from the "nickel-free" legislation first introduced about 15 years ago. Because of its appearance and chemical properties, such as being highly resistant to corrosion and wear, being solderable, non-magnetic, smooth and non-porous, tri-metal is an ideal substitute for nickel and silver for high frequency RF connector and other electronic applications. The bright white finish of tri-metal plating can also be used as an undercoat with palladium, palladium-nickel, silver or gold products or as a topcoat with those finishes. Tri-metal plating creates a non-toxic, non-magnetic deposit that is highly resistant to corrosion. This metal finishing application and deposit has low porosity and a low coefficient of friction. Lead-free tri-metal plating is outstanding for solder applications.

Tri-metal chemistry: The plating process is a cyanide-based plating solution, with organic additives that give excellent brightness and some degree of leveling, even with thicknesses of only 2 or 3 µm. The chemistry operates in either rack or barrel mode and is suited to deposition on steel, brass, copper or zinc die cast basis material. An important feature of tri-metal chemistry is the throwing power of the process. The process is sufficiently capable to plate the same thickness inside a zip fastener slider as the outside of the fastener. Plating can be accomplished even in a barrel application. This throwing power feature, combined with electrical wear resistance, non-tarnishing properties and low cost has made white bronze popular with companies who previously would probably have used silver with an anti-tarnish coating. The process and the chemistry is relatively straightforward, well understood and uses standard analytical capabilities. Baths routinely have a very long life. In fact, depending on the manufacturer, many bath solutions in use today are seven or eight years old and still performing well.

Controlling Ventilation and AIR POLLUTION

Ventilation and air pollution control equipment is required in metal finishing facilities to reduce the risks associated with chemical contaminants mixed in air that may affect the health and safety of employees and chemical contaminants at a concentration in outdoor air that may adversely impact the environment and the community.

Because it can be expensive to rely just on pollution control technology, other pollution control options can include the evaluation of alternative manufacturing and production techniques and/or the substitution of raw materials and improved process control, such as the use of different degreasing or cleaning solvents that have a lower toxicity level.

Customer specifications and quality requirements, however, normally impact a metal plating facility's ability to make significant changes to manufacturing, production, raw material or process control parameters.

Most plating facilities apply mist control techniques at the surface of the tank to help contain mists and gases. Examples of mist control techniques for open plating tanks include applying tank covers, polypropylene floats on the surface of a process tank to reduce the exposed liquid surface area by up to 90 per cent, and chemical surfactants and foams.

Discharging air pollutants into the natural environment are provincially regulated.

Technical considerations on the type of ventilation, exhaust or pollution control device to be applied to a certain process tank includes: heating and cooling requirements for employees' comfort; toxicity of the contaminant; irritability of the contaminant; corrosiveness of the contaminant; the plating bath temperature; current applied to the solution and air or mechanical agitation.

General ventilation involves the installation of fans to move air at a determined airflow rate to contribute to a number of air changes per hour. The fans move clean air into an area to dilute the air contaminant concentrations that are released within a work area.

Make-up Air equipment is a roof-mounted supply fan equipped with air filters that exists to help balance the air pressure within the facility. This equipment can also heat and cool the air through direct-fired heating methods with gas, which is the most energy-efficient, or indirect-fired heating with combustion vented to the outdoors. Incoming air should not be located too close to exhaust hoods. General ventilation addresses heating and cooling requirements for employee comfort, but is not as effective as local exhaust ventilation, since it requires greater airflows to achieve the same affect and does not protect workers who must work close to the process operation.

Local exhaust ventilation with fume hoods and ductwork controls air contaminant concentrations within a work area by removing them at the source. The velocity of air moving across the surface of the tank should be adequate to ensure that the maximum amount of the targeted process contaminant is drawn into the hood.

After local exhaust, the air is vented to the outdoors through a stack, though concentrations of hazardous chemicals can still exist in the vented air. The air currents outside mix and diffuse the air, and these air currents are affected by nearby buildings, equipment and wake effect created which may cause pollutants from a stack to reach the ground above regulated concentration limits.

Air Pollution Control Absorption

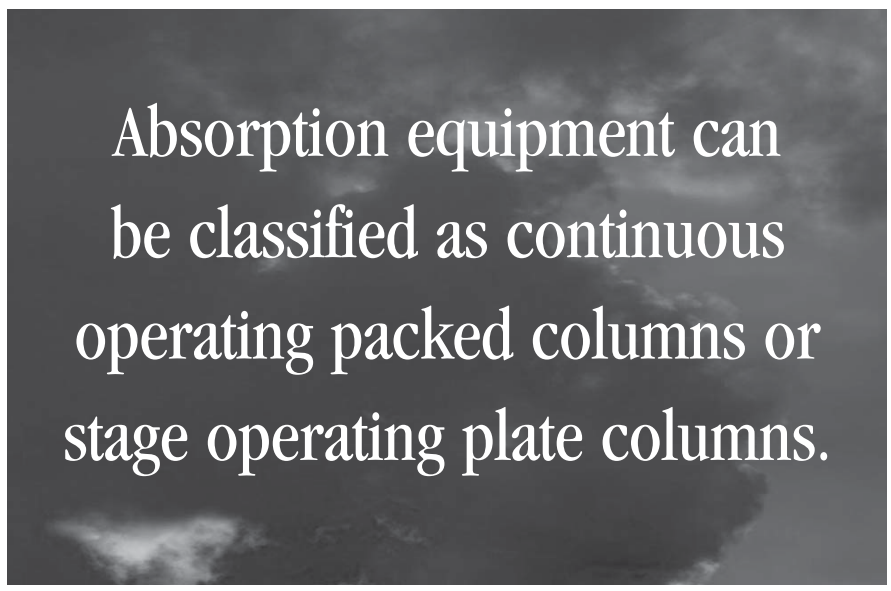
With wet scrubber absorption, gaseous contaminants are removed from an air stream by transferring them to a liquid. That liquid is usually water or an aqueous solution that contains chemicals selected to react with the absorbed contaminants. Absorbers can be designed to operate over a wide range of collection efficiency

in order to meet specific emission limitations. Most systems operate with collection efficiencies of 70 to 99 per cent. Scrubbers have a section where liquid-gas contact occurs and a section where wetted particles are removed.

The solubility of the contaminant in the liquid is most important. Solubility is a function of the temperature and pH of the liquid. Gases are more soluble in cold liquids than in hot liquids and less soluble in liquids with low pH. System pressure can also affect solubility, but this is not a major variable in absorbers used for air pollution control, since they operate close to atmospheric pressure. The liquid surface area and the time available for diffusion of the gaseous contaminants into the liquid are also important factors affecting performance.

Two main types of adsorption are physical and chemical. In both processes, the reaction is exothermic (the adsorbed contaminant loses its motion and releases heat). Physical adsorption is the physical removal of contaminants from air effluent by passing through beds or media containing solid sorbents. Chemical adsorption is when a chemical reaction between the sorbent surface and contaminant takes place.

Biofiltration can be applied to remove contaminants from air streams. It uses a biological oxidation process to convert odours and VOCs into harmless final products, carbon dioxide and water. Suitable microorganisms (bacteria) are immobilized on a mineral-based porous biofilter media and packed in biological reactors known as biofilters.



Absorption equipment can be classified as continuous operating packed columns or stage operating plate columns.

Usually vertical, packed columns (countercurrent, cocurrent and cross-flow) are used for the continuous contact of liquid and gas. Countercurrent packed columns are the most common absorption pollution control for the removal of gas, vapour or odour. Gases move upward through the packed bed against a scrubbing solution that is injected at the top of the unit. Cocurrent packed columns are less efficient units because they require large driving forces to operate well. Cross-flow units have the air stream moving horizontally through the packed bed and the air flow comes into contact with the scrubbing solution that flows vertically down through the packing. Cross-flow units have low water consumption and lower pressure drop than the other two units. Smaller pump and fan motor size the cross-flow units more efficient. The one downfall with cross-flow packed columns is the need for mist eliminators downstream.

The performance of air scrubbers can be further improved by installing composite mesh pad technology. Operating problems that can occur in absorption systems are: inadequate liquid flow; low inlet liquid pH; poor gas-liquid contact; inadequate chemical feed rate; excessive liquid temperature; plugged beds or mist eliminators and corrosion.

As the air stream is passed through the media, the VOCs are transferred to the surface of the media through a sorption process. Here, the captured organic matter is metabolized and destroyed by the microorganisms.

The installation and operation of general ventilation, local exhaust ventilation and air pollution control equipment, can be expensive. By lowering air contaminant concentrations in process air streams, thereby lowering technological requirements in controlling the presence of these air contaminants, a company can be cost-efficient in managing its process waste by-products (mists and gases).

A company can consider: the evaluation of alternative manufacturing and production techniques; the substitution of raw materials for a less toxic alternative; improved process control, such as operating at minimal bath; concentrations, minimal current applied, minimal air or mechanical agitation or implementing eductor agitation to minimize creation of bubbles and misting, and at lowest temperature; applying mist control techniques at the surface of the tank to help contain mists with options, tank covers, polypropylene floats on the surface of a process tank to reduce the exposed liquid surface area by up to 90 per cent and chemical surfactants and foams, and operating at minimal heating and cooling requirements, while maintaining general employee comfort.

Inhibiting CORROSION

When it comes to making paint and coatings anti-corrosive, formulators are looking for attributes in additives that make the paint or coating waterbased, chrome free, high performance and cost effective.

Ontario company **Andicor Specialty Chemicals** and WPC Technologies offers corrosion inhibitors including:

Wayncor 229 is an effective multi-component, multi-phase synergistic corrosion inhibitor pigment. It is a chrome-free product, and is compatible with all commercially available aqueous and solvent-based resin systems.

Wayncor 274 is a white non-refractive corrosion inhibitive pigment use in protective coatings. It is compatible with a wide variety of coating systems and can provide a viable lower cost alternative to zinc phosphate, at equal or in some instances lower loadings. It can be used as the sole inhibitor, or as a synergist, with other technologies such as WPC Technologies' C.I.A. 300 organic inhibitor. Wayncor 274 has a fine particle size and narrow particle size distribution and can be incorporated into a coating using high speed dispersion. Wayncor 274 is recommended for both primer and Direct to Metal (DTM) applications.

Waynflash 111 is a liquid flash rust inhibitor, which contains sodium nitrite as part of its flash rust inhibition matrix. It is a highly effective inhibitor of flash rusting on ferrous substrates (such as galvanized steel) in the aqueous paint phase. It is highly versatile and can be used in any water based system. Waynflash 111 shows good paint stability and can be incorporated at any stage of paint manufacturing. It is both HAPS and APEO free.

Arkema provides Additives for anti-corrosion. Their additives help prevent corrosion in water treatment (power plants, boilers...), metal working fluids or refineries. They can also act as neutralising agents or oxygen or H2S scavengers.

Silcone is often added to paint and coatings to prevent corrosion among other attributes. Dow Corning® 52 Additive is a silanol-functional, ultrahigh-molecular-weight silicone dispersion for slip and abrasion resistance in waterborne Paints, Inks and Coatings applications that does not negatively impact mechanical properties in waterborne coatings. By providing these benefits at low concentrations, this additive can also enhance the cost-effectiveness of your formulations. Dow Corning 52 Additive offers good compatibility in a range of coatings formulations, including industrial wood coatings, wood trim, inks, overprint varnishes and interior/exterior paints. Its low viscosity facilitates easy incorporation into waterborne formulations, allowing it to be added during let-down or post-addition.

In 2002, an International treaty was signed banning the application of paint containing tin on all ships beginning January 2003 and the complete prohibition of the presence of tin on all ships by January 2008. In response, Microtek laboratories, developed a patented encapsulated biocide paint additive which contains no tin or copper that provides for time-release of an anti-foulant agent. The same encapsulation technology developed for time-release of biocides can be modified to work with other types of paints or coatings additives such corrosion inhibitors. These microcapsules release chemicals during a specified period of time to provide long-term protection. For example, a special paint may be needed to retard damage to steel objects which are constantly submerged in water or which are continually exposed to inclement weather conditions. As an alternative to time-release of the anti-corrosion agent, Microtek can produce the capsules to provide on-demand corrosion control at the site of corrosion as the corrosion occurs.

Cognis, part of BASF, offers long-term corrosion inhibitors such as:

Alcophor 827 – A highly effective corrosion inhibitor, in combination with zinc phosphate for waterborne and solvent borne systems that increases the anti-corrosive effect of pigments which form protective layers in the anodic zone; improves the stability of anti-corrosive coatings manufactured with it, owing to its extreme low water solubility; offers very good dispersability and exhibits an outstanding stability against sedimentation.

Alcophor AC – a mixture of modified compounds containing tannin, acts as a corrosion inhibitor in primers and one-coat paints; eliminates the residual moisture from the paint by capillary effect; is suitable for use in anti-corrosive paints based on binders drying by oxidation such as epoxy esters, alkyd resins of any kind, linseed oil, stand oil and is used for corrosion primers, paints for agricultural machinery and car-body paints.

Tolsa Group has available Pangel S9, A highly efficient powder rheological additive manufactured from high purity sepiolite, for the use in aqueous systems. It is a powder additive that modifies the aqueous systems to which it is added. Pangel S9 imparts excellent thixotropic and pseudoplastic properties to the system in which it is incorporated, improving stability and spreading properties: At rest, it provides the system with a high consistency, which produces a suspending effect and a great resistance to settling, avoiding sedimentation. Under a shear stress, Pangel S9 forces the viscosity to promptly fall down, easing manual and mechanical spreading and levelling. Pangel S9 controls system flow and consistency, ensuring optimal distribution of solvents, fillers and other components. Suspensions made with Pangel S9 are stable even at high electrolyte concentration. Its rheological behaviour is stable in a wide pH range and at high temperatures. Pangel S9 keeps a high absorption capacity and a high degree of interaction with polymers.

Many additive manufacturers will work with your company in order to develop and produce products that work with your coatings and paints to fit your specific requirements.

www.andicor.com
www.arkema.com
www.dowcorning.com
www.basf.com
www.microteklabs.com
www.tolsa.com

Calendar of Industry Events, 2013-2014

November 13, 2013: Canadian Association for Surface Finishing (CASF), Environmental and Technical Forum, Hilton Garden Inn, Vaughan, ON, www.casf.ca

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

December 10-12, 2013: 2013 CHEM SHOW, 55th CPI (Chemical Process Industries) Exposition and the AIChE (The American Institute of Chemical Engineers) Northeast Manufacturing Conference, Jacob K. Javits Convention Center, New York, NY, www.chemshow.com

2014

January 27-30, 2014: NACE Northern Area Western Conference 2014, Shaw Conference Centre, Edmonton, AB, www.nace.org

March 18-20, 2014: FABTECH Canada, Toronto Congress Centre, Toronto Canada, www.fabtechcanada.com

April 8-19, 2014: American Coatings Show, Georgia World Congress Center, Atlanta, GA, www.american-coatings-show.com

April 22-24, 2014: ECOAT14, presented by the Electrocoat Association, Rosen Centre Hotel , Orlando, FL, www.electrocoat.org

May 12-14, 2014: RadTech 2014, UV & EB Technology Expo & Conference, Hyatt Regency O'Hare Rosemont, IL, www.radtech.org

June 9-11, 2014: SUR/FIN 2014, Cleveland Convention Center, Cleveland, OH, www.nasfsurfin.com

September 16-18, 2014: Powder Coating Show, Indiana Convention Center & Lucas Oil Stadium, www.PowderCoatingShow.com

November 11-13, 2014: FABTECH 2014, Georgia World Congress Center, Atlanta, GA, www.fabtechexpo.com

Sustainable Product Solutions

Formulators of paint and coatings are looking for sustainability when it comes to biocides, algaecides and preservatives.

Troy Corporation's Mergal line of biocides, algaecides and fungicides uses a dry film preservative for paints and lacquers, offering compatibility with aqueous polymer emulsions such as pure acrylics and polyvinyl acetates. It also has its Polyphase line of liquid preservative for solvent-based, and some aqueous-based, wood protective stains and coatings. Some Polyphase products, such as 828, are free of volatile organic compounds as well as isothiazolinone-free, carbendazim-free, diuron (AOX)-free, water-based broad-spectrum, dry-film preservative used for exterior applications. Troy also has the Troysan line of Biocides/Algicides/Fungicides. They are VOC-free, diuron-free, water-based, cost-effective, isothiazolinone-free, broad-spectrum, available in powder and paste.

Troy Corporation increased the price of Micropel OBPA-based antimicrobial products by up to 9 per cent earlier this year. The company says this price increase is necessary due to escalation in the cost of raw materials, energy, labour, packaging, transportation, and worldwide regulatory compliance, as well as Troy's continual investment in new production capacity to meet global demand.

Troy tries to help formulators reach their performance and cost targets with advanced, high-performance products combined with industry leading technical support services. "With a broad line of innovative, high performance dry-film and wet-state preservatives and performance additives product lines, Troy enables manufacturers to achieve compliance and cost savings while maintaining or exceeding performance goals," says W. Brian Smith, Vice President, Troy Corporation. "Troy products provide industry-leading efficacy at low use levels, translating into benchmark cost-in-use."

Troy has introduced several new, innovative Troysan Controlled Release (TCR) preservatives this year, which offer improved leaching resistance, long-lasting protection against algal growth, and an excellent environmental profile. TCR preservatives deliver optimum protection at very low use levels in a low VOC, Diuron-free package that requires no N-label at typical dosages. Troy's Polyphase preservatives address some of the biggest concerns of the paint and coatings industry today, namely performance, cost efficiency, and favourable environmental attributes. Polyphase 636 & 920 for solvent-based decorative coatings and wood preservatives provide protection against fungi, are highly effective at low use levels, and are EU label-free at typical dosages. Polyphase 828 and 899 for exterior waterborne coating systems offer broad-spectrum protection against fungi & algae, are free of VOCs, Isothiazolinones, & Diuron, and are N label-free at typical dosages.

Troy Corporation develops and manufactures specialty materials that enhance the properties and performance of its customers' products and processes, and is committed to helping manufacturers meet global requirements for compliance and sustainability. Founded in 1950, Troy is headquartered in Florham Park, New Jersey with sales offices throughout the United States, Canada, Europe, Asia, and Latin America. Troy materials are used and available in over 100 countries worldwide.

Beth Ann Browne, North American Customer Application Specialist for **Dow Microbial Control** says, "Our customers continue to seek more sustainable product solutions to solve their microbial control challenges." She adds, "Dow Microbial Control takes an aggressive approach to helping protect against microbial contamination through customer-specific formulation testing (microbial efficacy for in-can and in-film preservation, biocide stability, algal testing and time-kill testing for product contamination)." Browne continues, "We also conduct microbiological audits of manufacturing facilities and provide analytical support and in-person and online training. Our TAUNOVATE High-Throughput testing technology is a microbial testing platform developed specifically for aqueous industrial products, including coatings. It provides efficient, simultaneous evaluation of several biocide combination, leading to the identification of synergistic combinations and concentration ratios for customized solutions that are not only cost-optimized, but facilitate environmentally conscious decision-making."

A couple of years ago, **Clariant** presented an innovative solution to the challenge of harmful bacteria in hospitals and public places with its JMAC Silver Technology for hygiene paints and coatings.

JMAC is a preservative active with antimicrobial properties that reduces the spread of bacteria over the long term.

Based on the inorganic composite of silver chloride on titanium dioxide, the released silver ions interact with microorganisms such as Gram+ and Gram – bacteria, yeasts and mould. The resulting effect ranges from growth inhibition to cell death. Slow, controlled release over a long period of time ensures long-term effectiveness for the coating.

The attractiveness of JMAC's antimicrobial protection is reinforced by its low toxicity, nonsensitizing performance and very low environmental impact. JMAC meets Ecolabel standards for use in paints and coatings.

For In-can preservation, the excellent thermal and pH stability of JMAC biocides means they can be used in a wide range of industrial applications, such as polymer emulsions, paints, sealants and adhesives.

Paint and coatings manufacturers benefit from easy and economical formulation. The JMAC biocides are effective at very small ppm addition levels and offer low viscosity liquid dispersion. Safe handling is assured through the non-flammability, non-corrosive nature of JMAC.

In the **Global Biocides Market 2013 Report by Research and Markets**, the report covers the market in the Americas, and the APAC and EMEA regions; it also covers the Global Biocides market landscape and its growth prospects in the coming years. The report also includes a discussion of the key vendors operating in this market.

Eco-friendly biocides are those that break down over time to non-polluting constituents with no potential accumulation in the environment. Strict environmental regulations and the rise in societal awareness about sustainability have led the biocide producers to invest in the R and D of biodegradable, non-toxic, and eco-friendly biocides. In the future, the emergence of safer, natural, and eco-friendly technologies and breakthroughs in new applications will promote the rapid growth and expansion of the Global Biocides market. Thus, the emergence of eco-friendly products is one of the major trends in the Global Biocides market, and it is expected to have a positive influence on the growth of the market during the forecast period.

The major force driving the Global Biocides market is the increasing usage of biocides in the Water Treatment industry. Research and Markets is a world-leading source for international market research reports and market data.

As formulators continue to look for more sustainable product solutions to solve their microbial control challenges, manufacturers of biocides, algaecides and preservatives are answering the call.

New Kremlin Rexson Finishing System

EXEL North America, Inc. is pleased to announce the release of the new Kremlin Rexson 10-C18 Air-mix Finishing System.

The well-known and very successful 10-14 system has been re-designed and is now the brand new and improved Kremlin Rexson 10-C18 Finishing System.

The Kremlin Rexson 10-C18 finishing system is based on the same technology of the well-known and successful 10-14 and brand new Kremlin Rexson EOS system. The new 10-C18 finishing system delivers "Efficiency, Optimization, and Simplicity" through the advancements in design, operation, and easy maintenance procedures.

The new Kremlin Rexson 10-C18 offers:

- Compact design
- Simple construction
- Reliability based on previous Kremlin technology
- Designed for quick colour changes and reduced material waste

The target markets for the New Kremlin Rexson 10-C18 finishing system are:

- Customers in small to medium work shops
- Spraying less than 13 gallons or 50 liters per day
- Searching for flexibility: (1) pump to accommodate (1) gun

www.kremlinrexson-sames.com/en/usa/

New From Nordson

Nordson Corporation, a recognized leader in liquid and powder coating technologies, has introduced the patent-pending Break-Away Cyclone for powder coating applications. The Break-Away Cyclone incorporates a revolutionary design that enables upper and lower sections to be disconnected for thorough cleaning. Splitting the upper and lower cyclone sections helps make it easier for operators to clean the interior surface with a compressed air wand.

With certain powder formulations that tend to stick to the interior walls of the cyclone, and some of the more challenging colour-to-colour combinations, such as white to black, the break-away cyclone allows the entire interior surface to be wiped clean to positively ensure contamination-free colour change.

Nordson also introduces the ColorMax® 2 engineered powder coating system. The new, fully integrated system incorporates features that ensure fast, contamination-free colour change, easy installation and trouble-free maintenance, allowing powder coaters to increase productivity and line efficiency. Nordson will be exhibiting the new ColorMax 2 System at Powder Coating 2013 in St. Louis, Booth #513.

With the ColorMax 2 system, all powder contact surfaces, including the innovative Nordson break-away cyclone, are accessible for easy cleaning and visual inspection. The patent-pending dual cyclone enables the upper and lower sections to be disconnected for thorough cleaning. With most

powders, the interior surface of the cyclone can be cleaned with just a compressed air wand. Splitting the upper and lower cyclone sections helps make this easier and more effective. With the breakaway cyclone, you can actually "see, clean and touch" the entire interior surface to make absolutely certain it is clean. In addition, the ColorMax 2 booth features a non-conductive canopy for minimal powder attraction and retention. Constructed with patented Apogee composite material, the booth is designed for minimal powder in process and faster color change. Less attraction also means less powder to clean during colour change and easier removal of the powder from the canopy using only compressed air. The stainless steel booth floor provides maximum durability and grounding of operators during cleaning for safety.

Other features that minimize powder build-up and speed colour change include:

- AeroWash Base Cleaning System – with air knives that use compressed air to periodically remove settled powder from the booth floor
- AeroDeck Air Distribution System – this high velocity air stream keeps airborne powder from the AeroWash air knives moving to the cyclone
- Automatic gun cleaning – high pressure air knives provide automated cleaning of the gun exterior, eliminating disassembly and manual labour
- As a fully integrated, engineered solution, the ColorMax 2 system also features Nordson technologies to ensure system efficiency, including the iControl® 2 integrated control system, Encore® feed center and in-line pump, and Encore® HD manual and automatic guns. The system also incorporates a higher level of factory preassembly, including a new pre-wired, pre-plumbed utility deck that significantly cuts installation time.

• iControl system – provides up to 255 user-configurable presets for part identification and in/out positioning of reciprocators and oscillators, as well as speed and stroke of reciprocators.

Encore powder feed center – can accommodate up to 27 pumps and incorporates an innovative vibratory sieve with deck screen that helps to eliminate any potential contaminants from both virgin and reclaimed powder sources.

Encore HD technology – the transfer pump continuously evacuates powder from the twin cyclone resulting in maximum efficiency and minimal powder in process.

Encore manual and automatic guns – provide high transfer efficiency and consistent coating quality.

Nordson's new Encore HD Automatic Powder Spray Gun is the third, and most advanced, generation dense-phase powder spray gun from Nordson. Encore HD guns incorporate a proprietary, integral HDLV module that is designed to work with Nordson HDLV pump technology for superior spray versatility and performance.

Nordson HDLV – or "High Density Low Velocity" technology – delivers a high concentration of powder, but using very little air. An integrated coating solution, the system includes the Encore HD gun, the Nordson HDLV dense phase pump and iControl integrated control system to achieve the ultimate in process control.

Central to the system operation is the HDLV dense phase gun pump, which operates much differently than a traditional venturi pump. Venturi pumps use high velocity air, which – when coupled with abrasive powders and/or high powder output rates – causes them to wear over time. They also wear at different rates, requiring frequent adjustments to the gun settings to achieve consistent output. Other features include:

• Fast, contamination-free colour change — Encore HD guns are perfectly suited for use with the ColorMax fast-colour-change powder coating and recovery booth systems, providing reclaim-to-reclaim colour change in generally 5 to 10 minutes

iControl system – provides up to 255 user-configurable presets for part identification and in/out positioning of reciprocators and oscillators, as well as speed and stroke of reciprocators.

Tube mount and bar mount versions - both with a width of only 1.93 in. (4.90 cm) to minimize surface area to clean during colour change.

Optional components to enhance performance – a variety of nozzles and accessories help provide optimum spray coverage; ion collectors can enhance finish quality and coating appearance in some applications.

www.nordson.com/powder

Larson Electronics Releases New Paint Booth Approved Fluorescent Fixture

Industrial lighting specialists Larson Electronics have announced the release of a new two-foot long high output explosion proof fluorescent fixture designed for use in areas where flammable vapours and gases may be encountered. The EPL-24-192 Explosion Proof Fluorescent Light Fixture is Class 1 Division 1 approved, paint spray booth approved, and an ideal solution for operators who want high output in a more compact fixture design.

By utilizing four T5HO lamps Larson Electronics has produced a fixture providing the power of two lamp four-foot fixtures in a design that can be installed in smaller spaces. The fixture is constructed of copper-free aluminum for light weight and high strength, and heavy gauge aluminum reflectors with high gloss finishes provide excellent light distribution. Each fluorescent tube is protected by a heat and impact resistant Pyrex tube cover, and screw-on end caps provide easier relamping and more secure sealing than standard knock off end caps. Mounting for this explosion proof light is provided by standard end brackets for mounting to flat surfaces, and optional pendant mounts are available for operators who need more clearance between the fixture and mounting surface. This fixture is multi-voltage capable and can be run with 120 to 277 VAC current. This light is also 1598 Marine Type and UL 595 Outdoor Marine lighting approved, meaning it can be used in wet and corrosive marine environments, as well. This fixture carries a T6 temperature rating and is an ideal solution for operators who want high power illumination in a shorter fixture that takes up less space without compromising performance.

Larson Electronics carries an extensive line of explosion proof lights, intrinsically safe lights, intrinsically safe LED lights, portable work lights and industrial grade LED area lights.

www.larsonelectronics.com

MICROLOK AO Finish Provides Anti-Galling Component Protection

The MICROLOK AO finish from Birchwood Technologies is a functional coating for iron and steel components. It provides anti-galling protection to aid in assembly and startup along with temperature stability up to 1400°F for high heat applications.

The patented MICROLOK AO coating is a non-toxic aluminum oxide conversion coating that is 0.000060 inches (1.5 microns) thick, silver/gray in color, and tightly adherent to the metal surface.

When compared to room temperature blackening, the MICROLOK AO coating exhibits better corrosion resistance and operates at half the cost, without undesirable pollution hazards. It is safe to apply at a temperature of 120-140° F with no boiling or splattering, no scale or sludge buildup in tanks and simple bath maintenance requiring only pH monitoring.

As a superior functional coating, MICROLOK AO is an ideal finish for brakes, clutches, roller bearing races, assemblies with sliding components including tooling and machine components. It applies easily to small and large components including oil and gas drilling equipment.

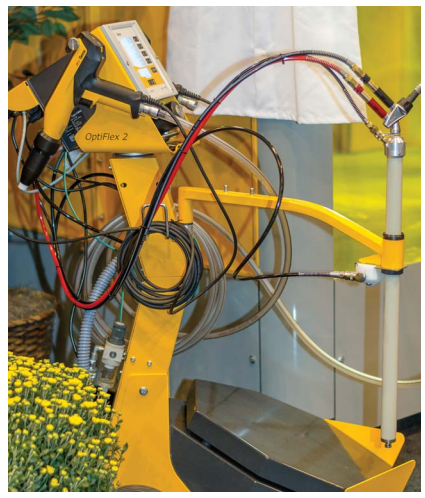
The MICROLOK AO process is safe and easy to operate and avoids the use of EPA regulated chemicals (cold blackening uses toxic copper & selenium – both tightly regulated). Also important, the MICROLOK AO process rinse waters are generally sewerable as non-hazardous discharge and require no waste treatment. Applying the finish requires only these five steps and 18 minutes:

• CLEAN the metal surface using SAFE SCRUB: 120-140°F: 8 minutes.
• RINSE in clean water.
• APPLY MICROLOK AO finish: 120-140°F: 8 minutes.
• RINSE in clean water.
• SEAL in DRI TOUCH AMBER Rust Preventive: 1 minute.

Finishers with existing lines can easily convert to the MICROLOK AO process. There are no technical or costly conversion challenges switching from an existing cold process using existing tank facilities. Also, new tank lines for MICROLOK AO are available in any size from Birchwood Technologies at modest cost, ranging from small-scale manually operated lines to large volume CNC operated systems.

www.birchwoodtechnologies.com

OptiFlex2 Q – Colour change in 35 seconds!



Gema introduces the OptiFlex2 Q, an extended version of the successful OptiFlex2 B, enhanced with additional features for even faster colour changes.

The powerful air mover, installed in the frame of the trolley automatically cleans the suction tube as it is raised. The powder dust that is removed is extracted to the booth via an exhaust hose.

The automatic cleaning process is started from the gun or by activating the remote button on the control module. All components that contain powder – from the suction tube, to the injector, powder hose, through to the gun and spray nozzle – are automatically and comprehensively cleaned with pulses of compressed air.

In addition to super-fast colour changes, OptiFlex®2 Q can handle any type of powder and unlimited number of colours, uses minimal space and guaranties a short payback time.

www.gemapowdercoating.com

New Biobased Open Atmosphere Corrosion Inhibitor

Cortec Corporation, a world leader in innovative, green, sustainable technologies has spent many years of dedicated experimentation to develop eco-efficient, biodegradable products made from sustainable materials that have positive effects on the environment and are safe to work with. Latest such innovation is EcoLine 3680, a certified biobased, biodegradable, ready-to-use temporary coating for multimetal protection. EcoLine 3680 is formulated with USDA (United States Department of Agriculture) renewable raw materials; which allows use for corrosion protection of equipment where incidental contact with food is possible. The product is HX-1 approval pending.

This green inhibitor provides premium indoor and outdoor multimetal protection. When applied on the surface, it leaves a tenacious, dry-to-touch protective coating, which provides excellent protection on metal surfaces. The film is self-healing and moisture-displacing, providing superior protection even against aggressive environments. This wax-like film can be removed with alkaline cleaners such as Cortec VpCI-414. EcoLine 3680 is safe, economical and easy to use.

www.cortecvci.com

CPS Colour's TROX Colourants to Mimic Different Wood Types

CPS Colour has introduced two new transparent iron oxide (TROX) colourants to the Monicolor K range. The colourant line is suitable for point of sale tinting of alkyd-based wood stains with low VOC-levels. The new TROX colourants enable the mimicking of different wood substrates.

When decorating wooden surfaces, the desired effect is often one of staining rather than coating to generate a transparent look. The new TROX colourants are the transparent version of the traditional iron oxide yellow and red colourants. They can generate effects that mimic particular wood types and are the first TROX colourants for CPS Colour's alkyd Monicolour K range.

Transparent iron oxide colourants are not widespread on the market as they are difficult to produce and stabilize. Their pigments differ from the opaque iron oxide versions principally in terms of particle size and shape. Opaque yellow and red iron oxide colourants contain bigger pigments and produce a duller appearance on the coated surface. The new TROX colourants, in contrast, contain

inorganic transparent iron oxide pigments with small particle sizes. They help to achieve a see-through effect that mimics different types of wood. For example, white wood can be made to look like rosewood by applying a brownish colourant.

When using TROX colourants, the wood grain is not only enhanced, but the wood substrate is UV protected. Further strengths include high light fastness, weather fastness, high colour strength and outstanding rheology. Just like the Monicolor K range, the new TROX colourants are also based on aromatic-free solvents and comply with the 2010 VOC regulations.

CPS Colour's MONICOLOR K range consists of decorative colourants which are fully compatible in mixed technology systems. They are the first commercially available colourants developed for the tinting of alkyd paints. The MONICOLOR K range consists of the two new TROX colourants and 14 medium to highly concentrated colourants providing optimum economic performance. It is possible to mix the new Monicolor TROX colorants with other Monicolor K colorants to achieve a range of standard wooden shades. All colourants from MONICOLOR K range are ideally compatible with COROB equipment.

www.cpscolor.com.

Graco Introduces Remote Reporting Technology

Graco Inc. a leading manufacturer of fluid handling equipment, has introduced Graco InSite, which allows managers and owners of spray foam and polyurea application companies to view real-time job data from multiple jobsites. The data is transmitted from a Graco Reactor proportioner via cellular network, and can be viewed on a smart phone, tablet or computer wherever a wireless connection can be established. The product is the first of its kind in the industry. The Graco InSite kit is a small box that attaches easily to the back of a Graco Reactor. When the Reactor is turned on, the kit begins transmitting pressure, temperature and volume to the cloud via a cellular connection. Users can view the information on the Graco InSite web site. In addition to transmitting real time data, Graco InSite collects data from all of the user's connected jobsites and emails the user a daily report. The reports can be kept on file and used as spray parameter documentation if clients or homeowners have questions. Graco InSite works with most electric and hydraulic Reactors for spray foam and polyurea applications.

www.gracoInSite.com

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www.fabtechcanada.com

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