

\$12.00 March/April 2011



The Newest in Manual Spray

By Sandy Anderson

Manufacturers of manual liquid spray guns for paint are always finding new solutions to meet the needs of their customers. Several manufacturers talk about trends and their newest guns.

Mike Bunnell, President of **Can-Am Engineered Products**, **Inc.** says, "There is nothing new. We have the best and after 30 years its just now getting wider exposure due to the emphasis on Green Technology and Cost of Operations."

EXEL North America, the Xcite gun from Kremlin-Rexson, brings excellent comfort to the operator. Its ultra light trigger, ergonomic design, along with its swivel fitting, reduce operator fatigue, improve the productivity and stop all risks of RSI (Repetitive strains injuries).

The new Xcite gun uses high quality components which ensure a perfect reliability maintaining a high level of performance. The last generation of Airmix atomization aircap offers unsurpassed finish quality. The sprayer has the ability to signifi-



Xcite from Kremin-Rexson

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ALSO IN THIS ISSUE

- Paint and Solvent Recycling
- Low VOC Wood Finishes
- Testing Equipment for Plating and Anodizing
- **Plating Process Control**

AND MUCH MORE!

What's Next for Paint Product Stewardship

By Jim Quick, President, CPCA

It is no secret that product stewardship is generating increasing interest among Canada's paint and coatings manufacturers. And it's a fact that as more and more complex stewardship programs start up, stewardship is becoming a significant cost driver.

Currently, the paint industry operates stewardship programs in British Columbia, Alberta, Saskatchewan, Ontario, Quebec, New Brunswick and Nova Scotia. With the addition of programs in Manitoba, in November 2011, and Newfoundland and Labrador, in 2012, more than 95 per cent of Canadians will have access to post-consumer paint stewardship programs.

Clearly the paint and coatings industry

takes its stewardship responsibilities seriously. But is that good enough? Is it time to ask ourselves about the next steps for product stewardship in Canada—and if the paint industry should continue to lead product stewardship development here?

I believe there are five very good reasons why the paint and coatings industry needs to play a leadership role in determining the future of stewardship in Canada.

The first reason has to do with reputation and trust. Our sector has a reputation for leadership in the development of product stewardship programs. With partners such as the Product Care Association and eco-peinture, the paint and coatings industry has remained at the leading edge

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IN THE NEWS

Association News

CPCA and CACD Co-host Annual Government Interface— Industry, Government to Explore Critical Issues

The Canadian Paint and Coatings Association (CPCA), representing Canada's paint and coatings industry, and the Canadian Association of Chemical Distributors (CACD), representing Canada's chemical distribution industry, are working together as co-hosts of Annual Government Interface 2011 scheduled to take place at the Delta Ottawa Hotel and Suites, in Ottawa, on Thursday, May 19, 2011.

"The Annual Government Interface brings government officials and industry executives together, to share concerns and plans," says CPCA President Jim Quick. "We are delighted that the CACD has joined us, as our co-host, this year."

"This is an important, new venue for us to network with government and industry colleagues," says CACD Executive Director Cathy Campbell."It offers our Members good opportunities to explore and express viewpoints."

Annual Government Interface 2011 has been designed to focus on product stewardship, security and service delivery along the Canada – U.S. border, Phase II of Canada's Chemicals Management Plan, the Canada Consumer Product Safety

continued on page 4

New, patented Triple-Seal Snap Lock Closure produces an air tight seal that eliminates leaks and product contamination.



Exclusive proprietary surface treatment prevents product skinning.

Available in 4-liter, gallon, liter, quart, 1/2 liter, pint and 1/2-pint capacities.

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The research, engineering and continual improvement behind KW's ALL-Plastic and Hybrid Container family is unparalleled in container manufacturing. Why pay more for less? The KW ALL-Plastic Container clearly delivers performance, protection and value for your water-based coatings.

KW's ALL-Plastic Container is the CLEAR CHOICE for containing and delivering your valuable formulations.



Letter to the Editor

I have decided to devote this space to a Letter to the Editor that we received concerning an article in the last CFCM issue of 2010.

The recently published article, entitled, "Formaldehyde-free Wet-State Preservation for Premium Paints and Coatings: Is it Possible?" contained some potentially misleading discrepancies, particularly with regard to the efficacy of BIT and the formation of formaldehyde during its use.

In the last paragraph under the heading 'Measuring Formaldehyde' the author states that, "Preservatives are one potential entry point for formaldehyde, or for products that can degrade to it under test conditions. The foremost one is 1,2-benzisothiazolin-3-one (BIT)." This statement incorrectly implies that BIT can degrade to release formaldehyde. BIT does not contain or release formaldehyde and there is no evidence that formaldehyde is generated as a BIT decomposition product - regardless of the test conditions selected. In fact, later in the same article, the author correctly identifies BIT as one of the "formaldehyde free" actives. This discrepancy is a potential source of confusion for readers.

In the first paragraph under the heading 'Improved Preservation at Packaging' the author states that, "The complimentary preservatives essentially cover the short term inadequacies of BIT as well as the well known Pseudomonas gap in its range of coverage." The description of BIT as having a 'Pseudomonas gap' is inaccurate.

It is certainly true that Pseudomonas type organisms (Pseudomonads) are an important class of spoilage organisms. Pseudomonads are extremely common, and they can be found in almost any water source that is used in a manufacturing environment. Pseudomonads are very hardy organisms that can metabolize the nutrients found in a wide variety of raw materials that are often used in aqueous formulations (e.g. surfactants, defoamers, thickeners etc.). Pseudomonads grow very quickly relative to other spoilage bacteria, and therefore they tend to be the dominant spoilage organisms in any aqueous formulation. Also, Pseudomonads bave one additional issue relative to other common Gram-negative bacteria in that the outer membranes of Pseudomonas type bacteria are structurally different from those of other Gram-negative bacteria and are less permeable to a variety of small molecules, including biocides.

For all of the above reasons, in the majority of cases, when a spoilage outbreak has occurred in a manufacturing plant the culprit will be identified as being a Pseudomonad. This is true regardless of which preservative is being used. Since BIT is a very commonly used preservative and since most spoilage outbreaks are linked with a Pseudomonad, there is a temptation to conclude that Pseudomonads represent a gap in the microbial spectrum of BIT. This is faulty reasoning.

In fact, BIT is effective against all types of Pseudomonads. Given how extraordinarily common Pseudomonads are any water-based formulation will eventually be challenge by these organisms. It follows that any biocide, which genuinely had a Pseudomonads gap in its microbial spectrum, would not be a commercially viable industrial preservative. Arch Proxel® Preservatives (BIT-based biocides) have been used successfully for over 25 years and have been proven to be effective against Pseudomonads provided that: (1) the preservative dose is optimized using an appropriate test inoculum (including organisms of the Pseudomonas type), (2) the preservative is dosed correctly in the manufacturing plant and (3) good hygiene procedures are in place at the manufacturing plant.

In summary, while it is true that non-formaldehyde protection of zero VOC products represents a more difficult preservation scenario, the use of BIT as a standalone preservative remains an excellent first choice option in the vast majority of cases.

Scott Brown, Building Products Technical Group Leader, Arch Chemicals, Inc. David Tierney, Building Products Global Business Manager, Arch Chemicals, Inc. www.archbiocides.com | 800.523.7391 | sales@archbiocides.com

Feel free to send your Letters to the Editor to sandra.anderson@cfcm.ca.

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Industrial Finishing

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 - Continued from page 1. Manufacturers and Distributors discuss their newest equipment and what customers are asking for.
- **Low VOC Wood Finishes** A look at the newest trends and products.

Plating and Anodizing

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 - Process Controls for the Cleaner/Electro-Cleaner.
- **Testing Equipment**

Manufacturers and distributors discuss their newest equipment.



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Act, and the Globally Harmonized System of Classification and Labelling of Chemicals.

The Interface begins with a Members of Parliament Breakfast, an informal opportunity for MPs to discuss issues of interest with CPCA and CACD executives whose companies operate in their ridings. "The Interface focuses on legislation, as well as regulation," says Quick. "It offers platforms for regulators, legislators and industry executives to meet and learn from one another."

The event concludes with a Chemical Products
Town Hall Meeting led by Quick and Campbell.
"During this open, moderated session, our members will have ample opportunities to voice their concerns in the context of a positive industry — government dialogue," says Campbell.

PRELIMINARY PROGRAM
THURSDAY, MAY 19, 2011
7:30 A.M. – 9:00 A.M.
REGISTRATION AND MEMBERS OF
PARLIAMENT BREAKFAST

Due to the Federal Election on May 2, 2011, the breakfast with MPs has been cancelled, however the CPCA is looking at hosting a day with MPs on Parliament Hill in the Fall 2011. More information on that event to be announced.

9:00 A.M. – 9:15 A.M.
WELCOMING REMARKS
9:15 A.M. – 9:45 A.M.
SUSTAINABILITY: A BUSINESS APPROACH

As the world embraces environmental sustainability, chemical companies are adopting environmental and economic sustainability practices, and embracing corporate social responsibility. A global company, AkzoNobel is regarded as a leader in sustainability. The company has integrated sustainability into every part of its business—for the benefit of clients, shareholders, employees and the world. Hear how AkzoNobel is reducing its impact on the planet and delivering more sustainable products and solutions.

9:45 A.M. – 10:45 A.M.
PRODUCT STEWARDSHIP: WHAT'S NEXT FOR
CANADA MODERATED PANEL OF GOVERN -

MENT AND INDUSTRY REPRESENTATIVES

Stewardship is now part of the culture of the chemical industry in Canada. While industry has led the development of many product stewardship programs across Canada, governments are becoming more prescriptive about program development and management. This has led to increased program costs and complexity. This, in turn, has led industry to wonder about the future of stewardship in Canada and what the next iteration of stewardship will look like. In this session you will hear experts share their thoughts on the future of product stewardship in Canada.

10:45 A.M. — 11:00 A.M.
NETWORKING BREAK
11:00 A.M. — 11:30 A.M.
THE BORDER AND BEYOND: IMPROVED
SERVICE DELIVERY

Canada Border Services Agency (CBSA) was recently reorganized, and important initiatives are now underway to streamline services for business. Four units of the newly formed National Client Services (NCS) Division deal with service delivery. A priority for the NCS is the proposed service strategy. Its service charter will be developed in consultation with stakeholders, to help ensure better service delivery for those doing business at the border. This session offers an update on this important new initiative and how it will benefit industry.

11:30 A.M. – 12:00 P.M. THE CHEMICAL MANAGEMENT PLAN: WHAT'S NEXT?

As the CMP Challenge winds down, the focus shifts to Canada's next phase of chemical management—and its impact on industry. The government is currently devising its CMP, Phase II strategy. In this session, you will hear first-hand the government's approach to CMP, Phase II.

12:00 P.M. – 2:00 P.M. LUNCHEON AND KEYNOTE PRESENTATION: THE FEDERAL AGENDA 2:00 P.M. – 3:00 P.M.
GOODS MOVEMENT: THE NEED TO BE
SECURE AND ON TIME MODERATED
PANEL OF GOVERNMENT AND INDUSTRY
REPRESENTATIVES

Getting goods to market safely and on time can be a challenge, particularly when the goods are the chemicals needed to sustain a strong industry sector. The many rules complicate this work considerably. These include Transportation of Dangerous Goods regulations, border regulations, GHG emissions regulations, as well as trucking regulations, such as the 24-hour and availability of labour rules. The price of getting the products to store shelves is a significant component of the price of products. On-time delivery is critical at point of sale. These and other topics will be discussed in this session.

3:00 P.M. – 3:15 P.M. NETWORKING BREAK 3:15 P.M. – 3:45 P.M. CANADA CONSUMER PRODUCT SAFETY ACT (CCPSA)

The CCPSA is Canada's new regulatory regime for consumer product safety. Administered by Health Canada, it enables regulators to take steps such as ordering recalls, issuing stop-manufacture and stop-sale orders, and disclosing the confidential business information of the companies it regulates. It also imposes incident and document-retention rules on companies that manufacture, import, advertise and sell consumer products. This

session updates the prospective impact of the CCPSA on Canadian industry.

3:45 P.M. – 4:15 P.M.
THE GLOBALLY HARMONIZED SYSTEM OF
CLASSIFICATION AND LABELLING OF
CHEMICALS (GHS)

Countries worldwide have worked to bring harmony to the ways they classify chemicals, according to their hazards, and communicate chemical hazards, through labels and safety data sheets. With other countries, Canada is now changing its regulations to fit the GHS framework. This session addresses the timelines for adopting GHS rules and the implementation process, with a focus on its impact on industry.

4:15 P.M. – 5:00 P.M.
CHEMICAL PRODUCTS: A TOWN HALL
MEETING MODERATED BY INDUSTRY

This is an open, moderated session designed to give government and industry opportunities to discuss issues broached during today's sessions—or raise for discussion other current, emerging issues. This Town Hall Meeting is your opportunity to speak your mind. Stand up and be heard!

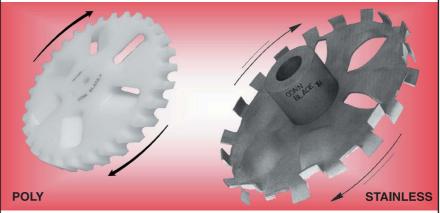
5:00 P.M. – 5:15 P.M. CLOSING REMARKS

Canadian Paint and Coatings Association

The Canadian Paint and Coatings Association (CPCA) has represented major paint and coating

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manufacturers, and industry suppliers, in Canada since 1913. The sector has annual sales of more than \$2 billion. More than 200 paint manufacturing establishments operate in Canada, employing more than 7,500 production and administrative employees. For more information, contact Jim Quick at 613-231-3604 or jquick@cdnpaint.org.

Canadian Association of Chemical Distributors

The Canadian Association of Chemical Distributors (CACD) is a non-profit trade association for the distribution sector of the Canadian chemical industry. As of December 2010, CACD represents 49 member companies across Canada, with 165 sites. CACD's member companies are committed to taking every practical precaution towards ensuring that products and services do not present an unacceptable level of risk to its employees, customers, the public or the environment. For more information, contact Cathy Campbell at 905.844.9140, ext. 21, or ccampbell@cacd.ca.

SUR/FIN 2011, Three Days of Insights, **Collaborations, And Sales**

SUR/FIN Manufacturing and Technology Conference and show, June 13-15, 2011, Rosemont, (Chicago) IL, is the leading conference and tradeshow for the global surface finishing industry.

Now in its 93rd year, this conference offers attendees the relevant knowledge, learning, and networking they need to compete in today's challenging economic and regulatory environment.

Past attendees say the opportunities to network and learn with peers are the reasons they keep coming back to SUR/FIN. The intense, three-day schedule includes technical sessions, panel discussions, exhibit displays, events, and informal opportunities to build and solidify key relationships.

Whether your interest is in aerospace or automotive coatings, light metal finishing or new advanced coating technology, SUR/FIN brings the latest developments from leading edge researchers. Over 200 leading edge companies will be exhibiting and the technical program will also highlight relevant topics such as sustainability and market analysis to help you make your business more successful in today's hypercompetitive environment.

Chicago has always been a very popular location for NASF's biggest event. It is easy, inexpensive to travel to and offers unlimited things to do throughout the Chicagoland area. Conference and Exhibition in June! Registration access and hotel accomodation reservations are now available online. Simply visit the SUR/FIN Registration Site for complete information. Unce registered, we invite you to visit the SUR/FIN Travel Page and "Choose Chicago" for complete up-to-date tourist information.

Contact: Cheryl Clark, Director of Events, National Association for Surface Finishing, cclark@nasf.org, 302.436.5616.

Company News

ITW Gema Technology Open House & Seminar a Success

ITW Gema hosted System Integrators at the ITW Gema Technology Open House and Seminar on Thursday, March 10, 2011 at their Indianapolis, IN facility. The Open House and Seminar featured



demonstrations and presentations to introduce industry partners to the latest Color Change Technology available for powder coating. ITW Gema highlighted the MagicCylinder and MagicCompact Quick Color Change Booths, the MagicCenter and OptiCenter Powder Management Systems, and the OptiColor designed for quick color changes with manual powder coating units. The ITW Gema Opti-Flex Series Automatic and Manual powder coating guns were utilized for all demonstrations.

ITW Gema continues to be a pioneer in the powder coating industry and a global manufacturer of superior quality powder coating equipment. As a business unit of the Illinois Tool Works Corporation, ITW Gema operates its North American Headquarters from Indianapolis, Indiana. www.itwgema.us.

Enthone Automotive Science Corrosion Lab Earns A2LA Accreditation



The Enthone Automotive Science Corrosion Lab (ASCL) was recently approved for accreditation by the American Association for Laboratory Accreditation (A2LA) in the field of Mechanical testing. The ASCL, located at Enthone's West Haven, Connecticut global headquarters, is now accredited to ISO/IEC 17025:2005. The A2LA accreditation makes Enthone's ASCL one of an elite group of laboratories in North America to have earned such a

Specifically, the Enthone ASCL is accredited to perform the following tests on metals, plastics and other metalized substrates, including such



applications as fasteners, bolts, chains, connectors and wheels:

- NeutralSaltSpray
- CopperAcceleratedSaltSpray
- Corrodkote
- CyclicCorrosionTesting
- HumidityTesting
- ThermalCycle
- STEP&CoatingThickness

"Accreditation of these important testing procedures at Enthone's Automotive Science Corrosion

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IN THE NEWS

Lab validates the excellence the Lab exhibits on a daily basis," said Terrence Copeland, Enthone
Vice President, Americas. "With this accreditation,
Enthone can provide our customers and their
customers with even greater confidence in the
performance of Enthone products and processes."

The accreditation reinforces Enthone's analytical capabilities in support of the company's customer-driven research and product development activities.

Trees Ontario and Sansin Partner to Help Re-Green Ontario

According to Trees Ontario, a not-for-profit organization dedicated to the re-greening of Ontario through tree planting efforts, there is an urgent need for more trees and forests in Ontario. To help address this tree shortage in the province, Sansin is partnering with Trees Ontario to launch a native tree seedling promotion, which kicks off on Earth Day.

For every gallon of Sansin Enviro Stain sold from April 22 (Earth Day) through May 31, 2011, at participating Ontario retailers, one native tree seedling will be planted in the province. For a listing of participating Ontario dealers and to learn about the promotion, visit Sansin's website.

The shortage of trees and forests in Ontario is due in large part to urban sprawl and a significant decline in the number of trees planted per year since the 1990s. Tree planting rates in rural areas, especially in southern Ontario, have declined from approximately 20 million trees per year to as low as two million per year.(1) Trees Ontario has played an integral role in helping to rebuild the tree planting infrastructure across the province, and to date has supported the planting of 10 million trees in Ontario since 2004.

Robert Keen, CEO of Trees Ontario, states that the organization is happy to partner with Sansin on this promotional program. "At Trees Ontario we make a conscious effort to work with organizations that are committed to supporting green initiatives and providing environmentally friendly products for today's consumers," said Keen. "We appreciate Sansin's partnership, which will support tree planting efforts across the province this spring and next."

Sjoerd Bos, Vice President of Sansin, says at a time when green building is on the rise, wood is about as green as it gets. "Sansin is committed to environmentally friendly wood finishes for building and remodeling projects, but we also feel it's imperative to replenish wood, our only truly renewable resource. This partnership with Trees Ontario is a natural fit for Sansin, our dealers and customers in Ontario who care about our forest ecosystem."

Ashland Sells Distribution Business to Nexeo Solutions

Ashland Inc. has closed the sale of its global distribution business, known as Ashland Distribution, to Nexeo Solutions LLC, an affiliate of TPG Capital, for a purchase price of approximately \$979 million in cash, including an adjustment for estimated closing net working capital, plus the assumption of certain specified liabilities.

Effective with the divestiture, approximately 42 per cent of Ashland's sales are now derived from outside North America, with nearly 20 per cent originating in the high-growth regions of Latin America and Asia Pacific.

Ashland Inc. and Flint Group sign coatings and adhesives distribution agreement

Coatings and adhesives from Ashland Performance Materials, a commercial unit of Ashland Inc. that are marketed to North American narrow web label, tag and wrapper converters, will now also be available from Flint Group. Effective March 15, 2011, Ashland and Flint Group began a distribution and co-branding effort that calls for Flint Group to begin marketing Ashland products under a co-branded label that will carry the Flint Group trademark or trade name.

The long-term agreement enables Flint to distribute Ashland's full range of radiation-cure, water-based and solventless laminating adhesives and coatings in North America. Flint Group will also acquire the management of some Ashland customers and will provide them with dedicated sales, technical service and customer service support. Ashland will maintain its industry leadership position and continue its focus on innovation and providing next generation technology and products to customers.

"Flint Group is a world-class organization that brings a strong market presence to Ashland's coatings and adhesive products," said Kelly Williams, market development manager for Ashland's Laminating Adhesives and Coatings. "Flint Group's capabilities reach all of our key markets, and they bring top-notch commercial and technical staff with demonstrated abilities to grow business."

Susan Kuchta, vice president of the North American Packaging and Narrow Web business for Flint Group, is excited about the growth opportunity for both companies. "We were chosen due to our strength and stature in the printing industry. We are proud of our broad offering and excellent customer support. This relationship adds other key products to our portfolio in order to better support package and label printers," said Kuchta.

"We see this move as a natural first step in a long-term strategic alliance between two world-class companies," said David Hatgas, global director, Packaging and Converting, Ashland Performance Materials.

ShawCor to Buy Altus Coating Business

Shaw Pipe Protection Limited, a subsidiary of ShawCor.Ltd., has agreed to buy the coating assets and business of Altus Energy Services Partnership, Altus Energy Services Ltd. and Nusco Northern Manufacturing Ltd.

The coating business, formerly known as CSI, provides shop-applied coatings at its facility in Nisku, Alberta, and provides field coating services throughout Western Canada.

CSI specializes in the internal and external coating of bends, fittings, elbows and short spools of pipe, including the internal corrosion coating of long straight lengths of pipe.

The acquisition will also allow Shaw Pipe Protection to provide a full range of custom coating solutions for the oil sands and for pipeline rehabilitation applications.

New Distributor

Coventya, Inc. is pleased to announce our new full service distributor relationship with RFT Technologies Inc.

With service/stocking locations in both the Toronto and Montreal areas, RFT Technologies has been serving the surface finishing industry since March 2003.

Comprised of personnel with more than 75 years combined experience, RFT provides the professional, attentive service their customers expect everyday. Offerings include, but are not limited to, Zinc and Zinc alloys, Electroless Nickel, Decorative plating chemistries, Waste Water Treatment chemistries, pre-treatment chemicals, Anodizing products, and many others. RFT Technologies, as the premier rack manufacturer in Canada, of course carries a full line of standard and custom plating, anodizing, paint, powder, and e-coat racks.

ALTANA acquires can end sealants business of Watson Standard Adhesives Company

The specialty chemicals Group ALTANA has acquired the can end sealants business for the metal can packaging market of U.S. based Watson Standard Adhesives Company (WSAC). By way of an asset deal, ALTANA primarily acquired customer relationships, products, know-how and inventories. WSAC's can end sealants business will be integrated into the ACTEGA Coatings & Sealants

division. The former WSAC can end sealant products will be produced at ACTEGA's existing site near Philadelphia and incorporated into ACTEGA Artística business.

"With the acquisition of the can end sealants business of Watson Standard Adhesives Company, we will further enhance our market position in the United States and strengthen our business in the area of can end sealants for metal packaging," says Dr. Guido Forstbach, President Division ACTE-GA. "In cooperation with other ACTEGA companies, we will continue to provide WSAC's can end sealant customers not only with these well-established products but also further innovative solutions and comprehensive technical service."

Schenck Process acquires Clyde Process Solutions

Schenck Process has grown yet again. Since the end of February the Darmstadt, Germany based company has been the sole shareholder of Clyde Process Solutions, a leading supplier of air filtration, pneumatic conveying and injection technologies. The shareholders of the previously listed U.K. company voted in favor of the acquisition.

Commenting on this result, Dr Jochen Weyrauch, President & CEO of Schenck Process, said, "We are delighted to have received such overwhelming support from Clyde's shareholders and look forward to warmly welcoming the company to the Schenck Process Group." With more than 500 new employees at locations in the US, Brazil, South Africa, the UK and China, Schenck Process now employs more than 2,600 members of staff around the world.

Clyde has a strong market position and technologically fits into the Schenck Process portfolio extremely well, as Dr Jochen Weyrauch explains, "This transaction represents an important milestone in our development and we believe its merits are compelling for both Clyde and the Schenck Process Group. Our combined product offering strengthens our position to deliver energy saving and environmental solutions to key target markets. The complementary nature of the geographic reach and product and systems offerings of the Schenck Process Group and Clyde are fundamental to the strategic rationale for the transaction." North American based, Mac Equipment, Inc., Kansas City, MO, a member company of Clyde Process Solutions, also becomes part of the acquisition by the Schenck Process Group.

Buhler Technology Group Grown

.The global Buhler Technology Group has once again grown markedly in its anniversary year 2010. Order intake increased 21 per cent to CHF 2160 million, sales revenue (turnover) 11 per cent to CHF 1907 million, and operating profits (EBIT) at a higher-than-proportional rate to 10.6 per cent of total sales. The Group owes this success especially to the identification of market trends such as improved food safety and higher energy efficiency. For the current fiscal year 2011, Buhler expects to further increase its turnover.

All three Group divisions contributed to the higher order intake. In sales revenue, both the Advanced Materials division and the Grain Processing division achieved significant growth. On the other hand, the turnover of the Food Processing division slipped slightly due to the delayed market recovery. Overall, sales growth was primarily organically driven.



The Group's global orientation was further strengthened. In geographical terms, Africa, the Americas, and Asia developed very encouragingly. On the other hand, turnover in the mature markets of Europe and in Eastern Europe contracted. Thus, Asia is now Buhler's strongest region in terms of volume, demonstrating the increasing significance of this market. Buhler's regional spread allowed a good balancing of risks.

Identification of attractive market trends: Buhler invested over CHF 80 million in research and development also in 2010. Various strategic initiatives systematically trace global, sustainable market trends.

Investments in global service readiness: One of the areas that developed very encouragingly was the Customer Service business (services, spare parts, expendable materials), whose share of total Group sales has risen steadily over the past years. Buhler customers also benefit from the Group's worldwide sales organization. Buhler further expanded also these capabilities during the past year.

High productivity: Improvement of productivity was further pushed. The "Total Synchro" production system rolled out three years ago has boosted efficiency. As a result, the structural costs increased at a lower-than-proportional rate relative to sales.

The increasing volatility of the global economy and the intensified competition for natural resources will continue to pose a challenge for Buhler in the coming years while at the same time offering a high potential.

Graco announces top distributors for industrial coatings and foam equipment

Graco Inc.'s high-performance coatings and foam (HPCF) business unit recently announced its Top 20 HPCF North American distributors for 2010. The distributors were selected on the basis of annual sales during 2010.

The Top 20 North American distributors for protective coatings equipment are: Advanced Finishing Systems Inc.; Air Power Inc.; Airtech Spray Systems; Bolair Distribution Inc.; Carolina Equipment & Supply Co Inc.; Clemtex Inc.; Coast Industrial Systems Inc.; Corrosion Specialties Inc.; Dove

Equipment; Engineered Distribution Specialties; F & S Equipment & Supply Inc.; Golden State Paint; Howard Marten Company Ltd.; Hydraflow Equipment Co.; The Marthens Company (Marco); Midway Industrial Supply; C. H. Reed Inc.; Spray Equipment & Service Center Inc.; Spray Pump Inc.; Spray Quip Inc.

The Top 20 North American distributors for foam and polyurea equipment are: BASF Corporation; Bolair Distribution Inc.; Burtin Polymer Labs; Coating Holdings LTD; Demilec (USA) LLC; Engineered Distribution Specialties; Foampak Inc; Hesterman Technical Service; Howard Marten Company LTD; InTech Equipment & Supply LLC; LaPolla Industries, Inc.; NCFI Polyurethanes; Parker-Lajoie Industries LTD; Polyurethane Foam Systems Inc.; Service Partners Supply; Specialty Products, Inc.; Spray Foam Distributors; Spray Foam Systems LLC; Trident Distribution; Ultimate Linings Inc.

Arkema: a major supplier in the paint and coating industry in 2011

Arkema plans to assume ownership of Total's coatings resins and photocure resins activity1 mid-2011. On completion of the acquisition, Arkema will have a unique and comprehensive portfolio of coatings materials and technologies. The current acquisition is the latest in a series of acquisitions over four years that will make Arkema a leading supplier serving paint and coating producers around the world. Arkema will present this new positioning through its comprehensive offering focused on innovation and sustainability to the main market players at the European Coatings Show held in Nuremberg from March 29

By end 2011, Arkema's revenue from paint and coating applications will have risen to 18 per cent, up from 3 per cent of its overall sales in 2006. Between these two dates, Arkema will have significantly enhanced its product range for the paint and coating market through major acquisitions: in 2007 Arkema acquired Coatex, a manufacturer of rheology additives, in 2010 Arkema acquired the acrylics and the waterborne resins assets from The Dow Chemical Company in the United States, and in December 2010 Arkema announced the purchase of the coatings resins (water- and solventbased, powders, rheology additives) and photocure resins from Total.

These product ranges complement Arkema's product portfolio for paint and coating applications, which includes Kynar® PVDF, oxygenated solvents and amines, Fascat® catalysts, as well as Rilsan® and Orgasol® polyamide fine powders.

"In the last 5 years, our development investments combined with our targeted acquisitions have confirmed our commitment to the coating and paint market. 2011 will be a pivotal year for Arkema: we will become one of the major suppliers to this market thanks to one of the most comprehensive international product and technology offerings. We will then be in a position to fulfill the specific technological requirements of our customers, wherever they are based in the world", stated Thierry Le Hénaff, Chairman and Chief Executive Officer of Arkema. www.arkema.com

DSM sharpens strategic focus towards the Coatings Market

DSM has announced, following an extensive strategic study, a reorganization that will see its Business Units DSM Powder Coating Resins and DSM NeoResins+ merged into a single new unit, DSM Coating Resins.

In the restructuring towards one coating resins unit, a subdivision will be made based on different market dynamics, which will be reflected in the organizational approach for these subdivisions. The new set-up is designed to help DSM effectively and efficiently grow its position as the leading specialty resins supplier for the coatings industry.

DSM Coating Resins will be headed by Patrick Niels, currently Business Unit Director of the Powder Coating Resins unit, and will be led from Zwolle, the Netherlands. Steve Hartig, currently Business Unit Director of DSM NeoResins+ will move to lead another unit within DSM. The changes went into effect April 1, 2011.

"We believe our new structure makes us better placed to generating value for our customers through innovation as they strive to meet ever increasing end-user demands for sustainability

vww.chemcra

and quality as well as regulatory demands. Importantly, at the same time, it enables us to take steps towards sustainably increasing the financial returns on our activities which is a requirement that needs to be fulfilled for us to be able to continue to invest in these long-term industry trends," said Patrick Niels, Business Unit Director, DSM Coating Resins.

Dow Breakthrough Enables Better Paint with Less TiO2

Dow Coating Materials (DCM), a global business unit of The Dow Chemical Company announces EVOQUE™ Pre Composite Polymer Technology — a revolutionary development for paints and coatings that promises to change the way formulators think about hiding and the use of titanium dioxide (TiO2).

"Hiding is at the heart of every paint formulation and without TiO2, we would not have paint as we know it today," says Joan Schuller, general manager, North America, Dow Coating Materials. "But TiO2 has been stretched to its limits, both in terms of hiding efficiency and supply."

EVOQUE Pre-Composite Polymer Technology improves the particle distribution and light scattering efficiency of TiO2, facilitating improvements in hiding efficiency and allowing for up to 20 percent less TiO2 used in the formulation. Additional benefits include improved barrier properties such as stain and corrosion resistance.

"This is game-changing technology that will make paint formulators rethink hiding," says Schuller.

Depending on their formulation goals, paint manufacturers can use EVOQUE Pre-Composite Polymer Technology to reduce TiO₂ content or improve hiding while they improve paint performance. The technology may also help formulators reduce the carbon footprint of their end products by reducing the energy footprint that comes from mining, processing and transporting TiO₂ to their formulation plants. DCM is conducting a life cycle analysis, which will be verified by a third party, to quantify the full spectrum of sustainability advantages that may result from using EVOQUE Pre-Composite Polymer Technology.

"EVOQUE Pre-Composite Polymer Technology









IN THE NEWS

gives formulators new options and more flexibility when tailoring paint performance to meet the demands of specific markets and applications," points out S. Ashok Kalyana, North America strategic marketing manager, Dow Coating Materials. "For example, formulators can use EVOQUE Pre-Composite Polymer Technology to increase the hiding performance and market value of premium paints. They can also use EVOQUE Pre-Composite Polymer Technology to maintain equal hiding and improve paint performance while reducing TiO₂ content and raw material cost. It truly provides flexibility to the formulators in designing performance in their paint lines."

EVOQUE Pre-Composite Polymer Technology is compatible with ROPAQUE™ Opaque Polymers, which were successfully introduced by DCM 30 years ago. EVOQUE Pre-Composite Polymer Technology works in tandem with ROPAQUE

Opaque Polymers to further increase hiding efficiency and reduce TiO₂.

Titanium dioxide, or TiO₂, is the world's most widely used white pigment due to its brightness and high refractive index. In typical paint formulations, however, the efficiency of TiO₂ is limited by uneven particle distribution. This effect can be due to poor dispersion and crowding. Adding more TiO2 helps, but only up to a point before formulators reach a level of diminishing hiding returns.

"We decided to take a different approach," relates Dave Fasano, research scientist. "Instead of using more TiO₂ to improve hiding, we looked at ways to make it more efficient."

EVOQUE Pre-Composite Polymers surround and attach to the surface of TiO₂ particles. As the two materials come together, they form a composite that makes TiO₂ better dispersed and more resistant to crowding.

"In effect, we're making every particle of TiO₂ work smarter," says Fasano. "That opens up a whole new range of options that formulators do not have with TiO2 alone. Depending on the formulation, EVOQUE Pre-Composite Polymer Technology can also impart improved stain resistance and removal, as well as primer-like properties such as tannin, marker stain blocking or corrosion resistance."

EVOQUE Pre-Composite Polymer Technology is acrylic based and early testing indicates excellent durability properties for this platform. These properties are further enhanced by removal of some of the TiO2, which participates in some of the photochemical processes that degrade films. Samples of paint formulated using EVOQUE™ Pre-Composite Polymer Technology are undergoing exterior exposure testing, and they are performing well. Dow anticipates offering EVOQUE Pre Composite Polymer Technology for exterior waterborne paints by 2012.

Dow expects full commercialization of EVOQUE Pre-Composite Polymer Technology during the third quarter of 2011, with rapid expansion of the line in 2012.

People

The Canadian Construction Association is Pleased to Announce Nadine (Dee) Miller as 2011 Chair of the Board of **Directors**

The Canadian Construction Association (CCA) would like to announce the installation of Nadine (Dee) Miller as the 2011 Chair of the Board of Directors. Miller assumed her new duties on March 11 during the CCA's Annual General Meeting and takes over the Chair position from Wayne Morsky of the Morsky Group of Companies.

Miller joined the Board of Directors of the Canadian Construction Association in 2003, became a member of the Executive Committee in 2006 and an Elected Officer in 2008. She has served as First and Second National Vice-Chair and Honorary Secretary/Treasurer for the Board. During her time on the CCA Board, she chaired the International Business Committee and co-chaired the Membership and Promotion Committee.

In addition to her involvement with the CCA, Miller serves as President of F.A.S.T. First Aid & Survival Technologies Limited. She has worked passionately for two decades to effect positive change and instill within the industry a culture of safety. She was the Founder and Director of the BC Road Construction and Road Maintenance Safety Network, which merged in 2010 to form the British Columbia Construction Safety Alliance.

The Canadian Construction Association is the voice of the national non-residential construction industry. It represents over 17,000 members in an integrated structure of over 70 local and provincial construction associations.

Management Appointments Announced by BWAY Corporation

BWAY Corporation is pleased to report the following changes to the sales and marketing management team.

Michael Noel has been promoted to Executive Vice President of Sales and Marketing. He leads all sales and marketing activities throughout the

Mike Sheppard has been appointed to Vice President of Distributor Sales. He develops and executes the company's distributor strategies.

Mike Bero recently joined the company as Vice President of Commercial Sales. He is responsible for all non-distributor sales.

BWAY is a leading supplier of general line rigid containers and operates 23 manufacturing facilities located across the United States and Canada. To learn more, visit www.bwaycorp.com, call 1-800-527-2267 or e-mail sales@bwaycorp.com.

Arkema Emulsion Systems Hires North American Marketing Manager

Arkema Emulsion Systems has announced the addition of John Hiel as the new North American Marketing Manager. Hiel will be responsible for program management, strategy and tactics across the region for all of the company's emulsion product lines.

He has 20 years' experience in the industry, including positions with both BASF, where he was industry manager for performance chemicals in the Coatings division, and with LORD Corporation.

"John's experience and reputation in the industry made him the ideal candidate for this position," Eric Kaiser, Marketing Director for Arkema Emulsion Systems, explained. "We needed someone who could lead our efforts in North America as we continue to look for new ways to support both industry and customer growth. John brings the perspective that both Arkema and our customers need to accomplish these important goals."

For more information about Arkema Emulsion Systems and how the company is meeting the needs of customers around the world, visit www.arkemaemulsionsystems.com.

New RadTech President Elect

Bayer Material Science LLC scientist Michael Dvorchak has been nominated as president elect for the RadTech International North America board. He will assume the office of president for a two year term beginning in 2013. Dvorchak,

continued on page 20



Together... making waves in the pond

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PAINT AND COATINGS MANUFACTURING: PAINT AND SOLVENT RECYCLING

continued from front cover

of stewardship for more than 20 years. During those years, we have made significant investments in product quality and brand reputation. Carrying forward our work with product stewardship programs maintains the public trust in the products consumers use and enjoy.

The second reason has to do with extended producer responsibility (EPR). Ontario recently cancelled part of its Municipal Hazardous or Special Waste (MHSW) program, shifting financial responsibility to taxpayers. This is a step away from EPR. When a government expands its role through EPR it intrudes in the planning and execution of product stewardship

programs. Industry needs to seriously think about how it can take back control of the EPR agenda.

Third, increased government intrusion has made product stewardship programs more complex. Some programs must now include the industrial, commercial and institutional (IC&I) sector. Other requirements, such as R&D, market development and accessibility, are adding significant program costs.

Fourth, industry recognizes that there needs to be some stewardship program harmonization. The paint industry operates seven programs—with differing product definitions, fees and reporting structures. A good way to increase program efficiency and effectiveness would be to take a harmonized approach within each sector and possibly across sectors. The total stewardship bill for Canada has reached \$3 billion. This is equivalent to the size of the entire Canadian paint industry.

Fifth, concepts such as intergenerational thinking, the carrying capacity of the biosphere and the need for more social justice has driven many corporations to adopt corporate sustainability programs. Businesses with corporate sustainability programs develop business practices to include economic, environmental and corporate social responsibility (CSR)

approaches. As more businesses take on sustainability approaches, how does EPR fit with CSR?

Industry in Canada is at stewardship crossroads. To continue to build on its reputation for product stewardship leadership, it needs to begin taking back EPR and determining how the next iteration of product stewardship will work.

The CPCA has compiled a summary of all Canadian product stewardship programs including reporting and other compliance details. For a copy of the summary, contact Jim Quick at jquick@cdnpaint.org.

Recycling is good for People, Planet and Profit

In 1955, before recycling was popular, back in the time that recycled chemicals were rare and considered inferior and unreliable, Jack McGregor took control of a Toronto based company with roots dating back to 1894, and laid out a plan to collect and recycle solvents that were commonly and prolifically used by the automotive and other industries, used once and then discarded. The methods of disposal of these spent chemicals varied, sometimes with just a little concern for human health and safety. Many forms of disposal were very short sighted, with no regard to consequences to life forms or Mother

McGregor knew that solvent waste had value and that wasteful practices would catch up to society. Regulations, liability and dollars and sense would eventually prove him right.

By 1963, McGregor moved his business to (then) Cooksville, Mississauga and built a plant from the ground up, which today is Canada's oldest and largest chemical and refrigerant gas repurposing facility.

Today Fielding, located in the heart of Mississauga city centre, processes an average of 25 million litres of liquid chemical waste safely every year. The company provides chemical and refrigerant repurposing, global procurement and logistics and customized sustainability solutions to Fortune 500 companies, national and international business, governments, institutions and medium and small business around the world and just around the corner.

Fielding supports the sustainability goals of industries as diverse as paint and coatings, adhesives, printing, pharmaceutical, aviation, automotive, construction, refining, mining and more.

Perhaps the most sophisticated solvent recycling plant in North America, Fielding applies the principles of fractionation, distillation, esterification, chemical reaction and blending organic chemicals to produce products to stringent, consistent specifications while minimizing the use of natural resources and waste residue.

Alcohols, Ketones, Glycols and Acetates, Aliphatics and Aromatics — Custom formulations, such as lacquer thinners, gunwash, printing and process solvents – Fielding toll processes clients spent material and returns a finished product to a prescribed specification. If a generator does not or cannot take back their reclaimed material, the material is repurposed for alternate use. The focus is on maximum recovery of valuable resources and minimal impact on the environment.

The plant operates 5 days per week, 24 hours per day and can flex to emergency on call service. The site is permitted to receive a wide variety of chemical waste and has over three million litres of on site

Fielding continually invests in equipment and technology and adds new capabilities for specific customer needs. The site incorporates fractionation towers, thin film evaporators, refrigerant reclaimers and a refrigerant separation tower. Unique to Fielding, the Drystill, Membrane Dehydrating Technology and a pilot plant for removing water from solvents and alcohols are also located at the Mavis Road site.

Equipped with a library containing over 200,000 compounds and capable of identifying unknown compounds at trace levels, Fielding specializes in solvent identification and quantification and refrigerant gas analysis. Samples that are analyzed include volatile and semi-volatile compounds, refrigerant gases, polychlorinated biphenyls (PCBs) and pesticides. Instrumentation is used to quickly classify organic samples, perform pH analyses, water concentration, Chemical Oxygen Demand (COD) on water samples, flash point determination, low-level airborne contaminants, metals analysis. State of the art equipment and an experienced staff of PhD level chemists and certified technicians work around the clock performing process analytical tasks and conducting research and business development projects. Basic and specialized testing, lab trials and quality control work is done with state of the art equipment such as volumetric and coulomteric Karl Fischer pH, Inductive Coupled Plasma (ICP), Gas Chromatography/Mass Spectroscopy identification, Gas Chromatography (GC-ECD) and a microwave digestor capable of simultaneously preparing 14 samples at one time.

The company has many "firsts". In the 70's the company researched the economic and technical viability of reclaiming refrigerants and was the first solvent recycler in Canada to conduct such work. The Montreal Protocol defined the opportunity for a refrigerant reclamation business and Fielding innovatively embraced the challenge. In the mid-90's Fielding became the first solvent recycler in Canada to build a fractionation column capable of separating mixed refrigerants. Today Fielding is Refrigerant Management Canada (RMC)'s largest service provider and handles over 60 per cent of the total annual volume of spent refrigerant gases collected in Canada under RMC's mandate.

Fielding was "first" in Canada to trademark a phrase that has become their vision — Providing... Cradle to Cradle Care of Chemicals. Today many companies and individuals around the world use that term to explain a full life cycle philosophy of chemical stewardship.





Resisting the FLAME

By Sandy Anderson

ou use water to put out fire, so you use waterbased ingredients in paint chemistry to make a paint or coating flame retardant. Suppliers of these materials recently explained their products to CFCM and answered the question:

WHAT ARE CUSTOMERS ASKING FOR?

Ron Anger, Manager Performance Chemicals, Buckman Canada says, "I believe that customers are looking for any

product that can replace any of the current products under

environmental scrutiny (halogens, decabromes, etc.)" He adds, "They all prefer water-based systems and products that are easy to handle and apply. They want to designate their products as 'Environmentally Friendly', so the fire retardant needs to be, as well."

"Finally, they want to satisfy the ever increasing code requirements that they are constantly working to pass and receive certification for," says Anger.

Anger says that currently, customers' applications of interest involve plastics with the desire to replace DecaBrome and Antimony based Fire Retardant systems. "This is due to environmental and cost issues," he says.

To make the paint or coating fire resistant, the Buckman Flamebloc GS 500 chemistry is based on amino polyphosphate technology. Flamebloc GS 500 is a two part, clear, water based environmentally friendly intumescent coating designed to provide extreme (Class A equivalent) fire protection for a wide variety of substrates. Flamebloc GS 500 has a low activation temperature – as low as 200F, so it will protect substrates with relatively low ignition temperatures, such as cellulose materials and plastics. The proprietary blend of ingredients, based on amino poly phosphate chemistry will, when exposed to heat or flame, produce a thick carbon char foam, up to or in excess of one hundred times the thickness of the original coating. This foam provides a physical fire and heat barrier which will protect the substrate from fire damage.

Anger says, "The unique aspects of the Flamebloc GS 500 are:

- A low activation temperature which allows protection of substrates that most intumescent products cannot offer.
- The degree of intumescent protection provided by the product is much higher than other products on the
- There is a non-flammable tie coat/adhesion promoter (Flamebloc GS 503) that allows the use of the GS 500 on "hard to adhere to" substrates such as plastics.
- There is also an intumescent, fire retardant powder additive under testing for fire retarding paints, plastics and other systems."

Dempsey has polydenes for intumescent coatings that they supply to coatings manufacturers.

The company's polymers (that go by the brand name of Polidene) serve as the binder in the coating and, due to its halogen content, offers improved flame retardant performance as compared to acrylic or vinyl acrylic polymers. These water based polidene polymers, which are vinylidene chloride copolymer latices go into the paint or coating to make it fire resistant.

FIRE RETARDANT AGENTS IN GENERAL

"We have been working on Fire retardants and in tumescent water based coating for a little while now at Inortech," says Roger Mouhanna, Inortech Chimie Inc.

Inortech has developed a presentation that introduces fire retardant agents in general to their customers.

"Evaluations were made on a set of starting point formulations of water based in tumescent coatings formulated at Inortech laboratories. Independent institutions carried out evaluations and the presentation includes the results. The rest of this article includes information provided by Inortech's presentation.

The Function of Flame Retardants is to interrupt or hinder the combustion processes of a fire allowing more time to escape. In other words, the presence of a flame retardant delays/slows:

- time to ignition (flash over)
- smoke development
- spread of flames
- release of toxic gases
- release of corrosive chemicals
- release of heat.

Thus, flame retardants interfere with the combustion at various stages of the process, e.g. during heating, decomposition, ignition or flame spread.

Flame retardants work by promoting the formation of char to create a glassy protective layer and form an upper intumescent coating.

The chemistry of fire retardants includes:

Halogen-containing compounds (chlorine or bromine) remove hydrogen and hydroxyl radicals in the gas flame phase. Efficiency depends on the type and number of halogen atoms contained in the flame retardant and the rate of halogen release.

Brominated flame retardants:

- usually containing 50-85 per cent of bromine
- performance considered superior to that of chlorinated
- some use restrictions based on environmental concerns.

Phosphorous containing compounds act in the solid phase of burning materials. When heated, the phosphorus reacts to give a polymeric form of phosphoric acid (PO3), causing the material to char. Examples of phosphorous containing flame retardants include ammonium polyphosphate, red phosphorous metal and organics. Ammonium polyphosphate is preferred for coatings applications.

Nitrogen containing compounds form cross-linked molecular structures within the coating, release of nitrogen gas which dilutes the flammable gases and thus reduces flames and work in synergy with phosphorus containing flame retardants.

Inorganics interrupt burning by physical processes e.g. by releasing water or noninflammable gases, absorbing heat or by producing a non-inflammable surface layer.

Inorganic flame retardants which may be used in coatings include aluminium trihydrate, magnesium hydroxide and boron compound.

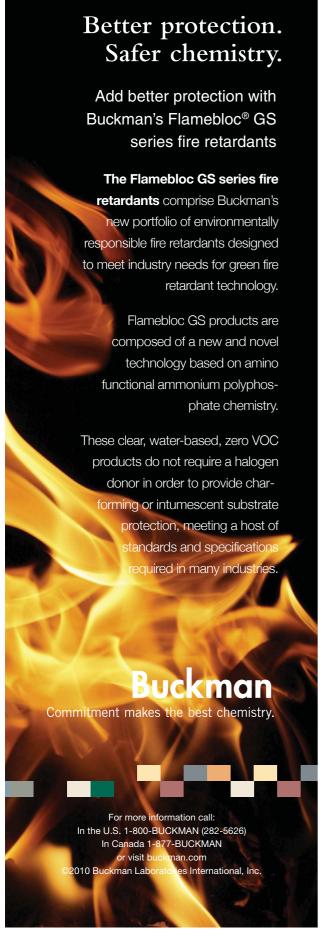
Intumescent coatings provide an appearance similar to that of a paint finish, and remain stable at ambient temper-

Such coatings normally consist of a primer to create good adherence, an intumescent base coat and a protective decorative top coat.

Some suppliers do not recommend the use of a protective top coat as it is may lower the effectiveness of the intumescent coating.

Also, an intumescent fire resistive coating can be quite expensive and the thickness of the intumescent coating is critical regarding its flame-retarding efficiency.

These intumescent coatings act as a polymeric binder, an ammonium polyphosphate that releases an organic acid when heated, a carbonizing agent – polyols as starch, pentaerythritol and melamine which release





gas to expand the coating.

FLAME RETARDANCY PROCESS

Above a certain temperature, chemical reactions occur within the intumescent coating causing it to expand many times its original thickness to provide an insulating foam-like coating or 'char' to protect the substrate.

The following processes occur:

- initial softening of the polymeric binder.
- release of an organic acid
- carbonization of the binder
- · expansion of the coating through release of gas
- strengthening of the expanded coating through a cross-linking reaction.

POROUS SUBSTRATES

Wood, being an absorbent substrate, can also be treated in other ways to improve flame retardance.

Three general treatments exist:

- 1. Retardants incorporated integrally into wood composites in the manufacturing process (usually borates).
- 2. Retardants impregnated into solid wood, plywood, particleboard and hardboard afternanufacture (usually borates).
- 3. Flame retardant paints/coatings applied on existing wood structures (usually intumescent compositions).

As the surface of the substrate burns first, the coating approach should give the best protection. Intumescent coatings are probably the most effective.

There are some open issues to be resolved such as:

· Adequate efficiency and durability for

outdoor use.

- Reduction of cost of the coatings / paints to encourage wider use.
- Effectiveness of introducing nanotechnology to improve flame retardancy efficiency (clay composites, inorganic nanoparticles).

In a test for the development of Fire Retardant Wood Composites, Inortech Chimie tried water based intumescent coatings formulations:

• CB-533 and CB-534 are two different intumescent base coatings containing a full loading of intumescent pigment fillers. These white opaque coatings are designed to give the maximum fire

retardance.

- CB-535 and CB-536 are respectively urethane-based and urethane- modified acrylic top coatings. CB-535 is more suitable for exterior applications, while CB-536 is designed suitably for both exterior and interior applications.
- CB-533 or CB-534 (base coating) can be applied with or without CB-535 or CB-536 (top coating).

At room temperature, it will take 15 to 30 minutes to dry each coating. The base and top coatings can be applied using WET/WET method, but it is preferable for the base coat to be dried prior to applying the top coating. A spread rate of 75 g/m2 is preferred for each coating.

Conclusions: The most effective coating combinations against flaming were CB-534/CB-534 (three-layer base coating) among the six base/top coating combinations.

CB-534/CB-535 (two-layer base coating/one-layer top coating) performed better than the remaining four combinations.

It is comforting to know that formulators are working on water-based fire retardant paint and coatings that slow flash over, smoke development, spread of flames, release of toxic gases, corrosive chemicals and heat, while at the same time being eco-positive.

SUR/FIN 2011 SHOW ISSUE

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BUHLER

continued from front cover

cantly vary the pattern without changing the tip while using minimum atomization air and pressure. It's really useful when painting complex shape parts.

Carrie Cotch, Manager, Advertising & Communications, Graco Industrial Products Division says, "The newest advancement is to combine the spray gun with the pump. Graco's TrueCoat Pro is a cordless airless paint sprayer which combines an airless gun and piston-pump into a gun body. This allows the operator to spray without being attached to hoses or a pump. The entire sprayer is in the palm of the operator's hand."

She says customers tend to be asking for features that improve transfer efficiency, especially with waterborne materials.

"Air assist spray guns can have improved transfer efficiency and spray performance for waterborne materials by using a tip with a pre-orifice," says Cotch. "A pre-orifice tip allows for lower pressure settings, reducing overspray and increasing transfer efficiency."



Graco's PRO Xs WB External Charge Gun is the new alternative for spraying waterborne materials with electrostatics is an external charging electrostatic applicator. Graco's PRO Xs WB external charge gun is ideal for spraying waterborne materials on circulation systems, reducing

for a high quality finish while the internal power supply allows for quick installation and easy service. Because the fluid remains grounded in the gun, no isolation system is needed for operation.

By delivering higher transfer efficiency and higher productivity than a conventional air spray gun, the PRO Xs WB offers exceptional cost savings. And because of this, smart consumers are replacing existing conventional air spray guns with waterborne electrostatic spray guns on a circulation system like the PRO XS WB.

Anthony Alexander Sheng, National Sales Manager, Lemmer Spray Systems says some of the most common questions asked by customers regarding manual-liquid spray products are: "Is it easy to use? (i.e. does it have a steep learning curve that employees will waste time on?)

Will it work with this/that/or the other product? (i.e. wide range of compatibility)

If there is a problem, is there someone we can call to get help? (i.e. strong after sales support for the product)."

Lemmer Spray Systems Ltd. has available the T-90Q HVLP spray system. This powerful four-stage HVLP turbine sprayer is among the quietest in the industry and runs much cooler thanks to its innovative, patented motor control system.

Unlike competing units where the turbine motor operates at a constant high speed and vents excess airflow, the T-90Q slows to an idle mode when the trigger of the non-bleeder gun is released. This lower motor speed maintains system pres-





sure while greatly reducing heat and noise. Another unique feature of the T-90Q is a selector switch on the front panel control offering four user selectable speeds, each corresponding to one stage of turbine compression. This practical design approach makes the T-90Q very simple to adjust for the widest range of materials and job conditions.

New for 2011, the T-90Q now features the innovative PPS system from 3M, which uses a disposable liner for the paint container. Along with ease of cleaning, this flexible liner allows the gun to spray on any angle without spray flutter, greatly enhancing the performance of the T-90Q HVLP system.

Eurotech Spray Products is the exclusive importer and distributor of SATA products in Canada. Though they have a large line of automotive refinishing equipment utilizing industry leading technology, larger still, is their line of industrial equipment with state of the art technology and user support program. The company also covers a wide range of coating products outside of automotive and industrial - from small airbrushes and conventional spray equipment, right up to high end filter systems, breathing systems and worker health protection systems, compliant with all Canadian legislation.

The liquid paint guns have a wide range of nozzle configurations to compensate for the very wide range of materials available, and can compensate for any material viscosity.

The company finds that customers are looking to make a smart, economically wise investment in their tools. They need ergonomic, lightweight equipment that offers high transfer efficiency and outstanding atomization – which in turn will provide excellent colour-match precision. They need a gun that is both solvent and waterborne ready with stainless steel working components, and that will allow them to be environmentally conscious. They need equipment that keeps their shop running efficiently, with less air consumption, higher material savings, and cleaner breathing air; all lending to overall customer satisfaction The SATAjet 4000 B is superior in all fields of application. With the 4000 B one can achieve perfect finishes with all available paint systems: whether it be in automotive, commercial transportation, coating furniture, marine vachts or high quality







industrial components.

SATA presents their latest spray gun generation: the SATAjet 4000 B, replacing the successful SATAjet 3000 B. The SATAjet 4000 B has a distinctive, modern design and a compact, small size. The new, curved gun handle of the SATAjet 4000 B has been designed to fit the hand like a glove. The low centre of gravity improves the balance of the gun, thus minimising the strain on the wrist. The weight of the SATAjet 4000 B has been reduced by 15 per cent compared to its predecessor. With integrated digital pressure gauge and RPS disposable cup, it becomes the lightest gun of its class. The round/flat spray control has been completely redesigned needing only one quarter turn from open to closed and the spray fan can now be precisely tuned with linear effect to the shape of object to be painted. The recommended spray gun inlet pressure of the RP version has been reduced, now ranging between only 2 to maximum 2.2 bar. The new nozzle concept helps reduce the noise level by up to 50 per cent.

The SATAjet 4000 B fully complies with the strict VOC regulations, with transfer rates far exceeding 65 per cent. It is also equipped with a trigger cover element to protect the paint needle from overspray,

thus increasing the lifetime of the paint needle packing. Furthermore, selftensioning paint needle and air piston packings minimise time-consuming maintenance repairs.

In combination with the corrosionresistant chrome surface of the dropforged gun body, the spray gun is extremely robust and waterborne proof.

Walther Pilot has developed the new PILOT Premium AR spray gun with a special air cap for optimum atomization and a wear resistant nozzle insert designed for the extreme requirements of abrasive media such as ceramics, enamel or slurries.

Advantages of the gun include:

- all wetted parts made of stainless steel
- special Type AR nozzle insert
- material duct with a particularly large cross-section



- grease packing adjustable
- low maintenance only a few single parts
- body made of forged aluminum
- high-quality chrome surface

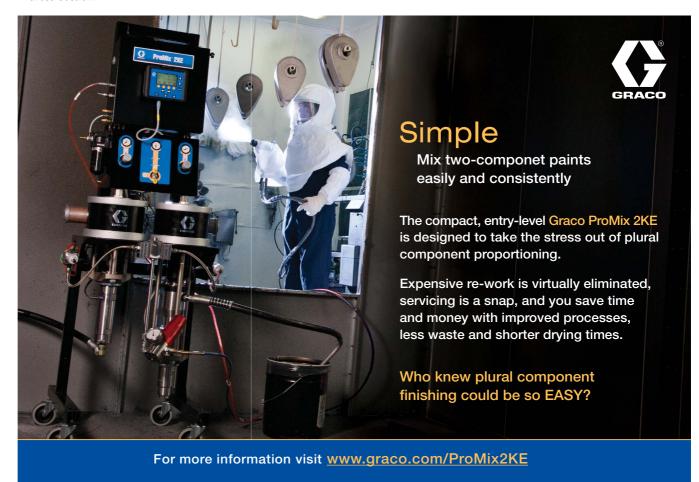
Areas of application include brickworks and tile manufacturing, enamel processing, porcelain manufacturing and ceramic processing. It has a net weight of 490 g., a max. material pressure of 87 psi, a max. operating temperature of 109.4 °F a max. atomizing pressure of 87 psi and a choice of nozzle sizes: 1.0 / 1.5 / 1.8 / 2.0 / 2.5 / 3.0 mm.

Manufacturers have provided a liquid paint pray gun for every need.

Editors Note:

The companies in this article can be reached at:

www.canamengineered.com www.exel-na.com www.graco.com www.lemmer.com www.sata.com www.waltherpilotna.com





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Can-Am's Turbinepowered Liquid Spray application system is unique. Its variety of spray guns works very well at pressure ranges of 0.5-8.75psi and cfm outputs of 9-28. These spray guns are used in many industries utilizing liquid spray application. ENGINEERED PRODUCTS INC. Phone: 1-800-229-7551 Fax: 734-427-4282 E-mail: turbo@canamengineered.com www.canamengineered.com

Water, Wood and Low VOC

By Sandy Anderson

here is more demand than ever for low volatile organic compound (VOC) wood finishes due to government regulations and the desire to be good to the environment. The water based products have come a long way since their

first introduction into the marketplace. Manufacturers and suppliers talk about trends and their products that adhere to this important low VOC market.

Rob Penfold, Product & Marketing Manager, Wood Coatings Group - Canada, The Valspar Corporation says, "Customers are

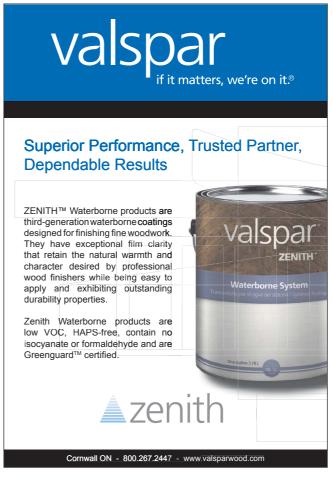
looking for low VOC finishes that are low in odour and that meet the new AIMS VOC regulations without compromising the application characteristics they are accustomed to or the durability properties that their customers expect."

Penfold explains that Valspar's focus with respect to low VOC wood finishes is waterborne technology as we believe that to be the future of the wood coatings business. The Zenith Waterborne line is a comprehensive offering of approximately 80 products ranging from waterborne lacquers, waterborne pre-catalyzed lacquers and waterborne conversion varnishes to a full complement of waterborne stains, glazes and colour systems. These waterborne products approximate the performance characteristics of the solvent-based counterparts without sacrificing ease of application. All the Zenith products are Greenguard Certified.

"The interest in water based products has grown considerably in last year or so," says Penfold. "Finishers recognize that water based technology has improved greatly from the products that were on the market five years ago. As a result, customers are really looking at water based to at least offer a 'green' option in addition to their regular products. Additionally, woodworkers are seeing the consumer demand for 'green' alternatives like water based and realizing they can utilize that as a marketing tool." Penfold adds, "We have yet to see a lot of customers switch completely to water based finishing systems. While there are some that have, many are still reluctant and feel that water based still cannot offer the applicability and durability that traditional solvent based finishes can. While that is not necessarily true, it will take more time and







experimentation from the finishers before customers realize that water based wood finishes are a viable alternative."

Valspar has been manufacturing a line of solvent based low VOC finishes that were originally designed for the SCAQMD requirement in California, which do meet Canadian **AIMS** requirements. However our focus has really been waterborne technology in Canada as we feel that is the future of the industry. Of Zenith Waterborne line not only meets the low VOC requirements, but also L.E.E.D.s and is Greenguard certified.

All of Valspar's wood finishes are designed for spray application (conventional, HVLP, airless, air-assist).

Rick Kravetz from RKR Coatings says, "Less than 550 g/lt. seems to be the current trend in the wood finishing sector." He adds, "Waterbornes of less than 150 g/lt. are becoming very popular."

RKR manufactures many types of solventborne wood coatings (I.E. Acid Cure,

Conventional Acrylic, 2K Polyurethane) Most of the solventborne finishes offered are available in a LOW-VOC formulation, ranging from 200-500 g/lt. VOC. Many types of waterborne systems are also available such as (Acrylic, Acrylic Urethane, 2K Urethane) VOC.s range from 50 g/lt. to 150 g/lt

"Current Raw Material Technologies have enabled waterborne formulations to perform very similar to their Solventborne counterparts," says Kravetz. "Lower grain raising and faster dry times have made these products very acceptable in today's market."

"This is dependant on which industry sector is in question, as different sectors demand different VOC," says Kravetz.

The company's topcoats are developed for spray application - conventional, airless, air-assist, hand spray or automated systems.

Several RKR Waterborne products can

"This is very appealing since the regulations would have to drop near to zero VOC for it not to be compliant, making it a product suited for future rounds of tightening compliance."

be brushed or rolled. RKR has a complete line of wiping stains, spray stains, glazes, toners, shaders etc. available in Waterborne and LO-VOC Solvent systems.

John L. Murray, Prime Coatings says, "We have many waterborne technologies; each has its specific application. We have some as low as zero VOC, some that cure with the aid of UV light, and others that are developed especially for the hydrographic industry. Our waterborne coatings are our workhorses in the aqualac series. We have been decorating and protecting a wide variety of product both interior and exterior for many years with it."

He says the response has been good for water based products for wood. "Having the right partners helps. We are able to do nearly anything with water that was tra-

ditionally done with solventborne coatings" says Murray.

"We have products that are Curtin coated, roll coated, sprayed, conv. hvlp as well as airless."

Murray says, "If green technology is what you are looking for, today's waterborne coatings are better than ever and worth a fresh look."

Ron Wilson, general manager of Can-Lak Inc. Ontario Branch says, "Low VOC products are in demand by manufacturers to achieve compliance, however in order to compete in their own markets, manufacturers are focused on the best cost versus performance when it comes to any finishing product including low VOC."

He says that the cost factor comes in several forms, including cost per liter,











INDUSTRIAL FINISHING: LOW VOC WOOD FINISHES



mileage, any change in equipment and or procedures for proper application.

"Performance is related to physical, chemical, and UV resistance and the look and feel of the product," says Wilson.

"Low VOC products can be achieved through a number of different technologies including waterborne, UV and some solvent borne products. The manufacturer

is looking at their own market niche in order to determine the optimal price/performance combination for compliance through low VOC," says Wilson

Advanced technology has resulted in a self seal waterborne UV, Canlak's 226 series, which is designed for high production manufacturers in order to achieve the best price/performance combinations.

The manufacturer gets the benefit of compliance and speed using a waterborne UV. "The 226 series has been designed to give the additional benefits of curing with minimal energy consumption and recyclability which can result in major cost savings," explains Wilson. "The product delivers excellent build through superior intercoat adhesion with little or no shrinkback. Finally the clarity, feel and depth of the product matches the consurmers' tastes. This helps increase the manufacturers' sales while achieving compliance and efficiency." The 226 series of self-sealing waterborne UV products is well below Canada's latest VOC limits of 350g/Litre effective last September, 2010.

"This is very appealing since the regulations would have to drop near to zero VOC for it not to be compliant, making it a product suited for future rounds of tightening compliance," says Wilson. This product line is designed for automated equipment including reciprocating carousel and robotic.

Wilson explains the reaction to water based coatings for wood, "Historically water based coatings had created a bad image for itself, with the initial formulations resulting in an inferior finish in all respects compared to solventborne products. Compounding the challenge for waterborne coatings is the perception that it should be simple to make a waterborne product, which is just as good as solventborne and even costing less. Water is cheap right?" He adds, "Yes, water is cheap, but not simple. The chemistry behind waterborne is much more complex than solventborne chemistry. Today enough time has gone by that waterborne products do have the characteristics and benefits that industry needs and, as a result, especially with the larger manufacturers, water is in demand. This is especially true with the larger manufacturers."

"Waterborne products are here to stay and for good reason," says Wilson. "The chemistry of these coatings has advanced to the point where meeting new and tougher environmental regulations while meeting the end user's demands has been achieved." He adds, "A large percentage of the wood manufacturers market can take advantage of this now."

Wilson says, "The new challenge for waterborne products is to emulate the same quality and cost of the highest end such as solventborne polyurethanes or specialty markets, which have very unique requirements." He adds, "The key for the manufacturer is to have the mindset that they are willing to go through the learning curve of using a new set of products."

Jeff Snyder, Sales and Marketing Manager, Port Hope and Western Canada Operations, Wood Coatings Canada for AkzoNobel Wood Finishes and Adhesives and Akzo Nobel Wood Coatings Ltd. says, "The Canadian Industrial Wood Coatings market continues to look at water base coatings to lower their VOC's in finishing. The customers are looking for suppliers that have access to a global toolbox of water base technology and want the complete system including stains, glazes, sealers, primers and topcoats." He adds, " Along with the products the customers require the technical service to help them in the transition from solvent base to water base finishing." Snyder explains that the US market has looked at VOC reduction through changes to conventional solvent based wood coatings.

"AkzoNobel has tapped into our global expertise in water base coatings to meet the various legislations around the world. We have custom designed water based products for OEM application which included conventional, thermoset, urethane and UV," says Snyder. AkzoNobel has also recently launched, through distribution and the Chemcraft brand, a complete line of water base coatings including ProMatch Aqua spray stains, wipe stains, dry glaze and wet glaze. The Chemcraft topcoat water base products are under the Aqualux product line. The Aqualux line includes several qualities of clear and opaque topcoat including both pre catalyzed and post catalyzed qualities. The new Airguard product is a low VOC water base self seal product that has Greenguard approval.

"This is one of the most complete lines of water base products in the market," says Snyder.

He says, "Customers continue to be extremely open to water base coatings, to ask questions and to learn more about what is available to them through water base coatings. The transition is a true learning experience for the finisher which requires help from the coating manufacturer as well as the application equipment suppliers."

The AkzoNobel and Chemcraft brand water base coatings currently meet the VOC legislation requirements. Stains are applied by spray and or spray and wipe. The sealer and topcoat products are applied by spray, both manual and automatic. Several application equipment manufacturers have come up with new guns and/or gun set ups to help with the application of water base coatings.

"Water base coating technology projects are the most active in our R & D labs," says Snyder.

Most all manufacturers have been to the research and development board in the last few years and now have products that will meet the needs of any finisher interested in low VOC coatings for wood.

Editors note: The manufacturers in this article can be reached at:

www.akzonobel.com www.canlak.com www.primecoatings.net www.rkrcoatings.com www.valspar.com

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Process Controls for the Cleaner/Electro-Cleaner

s we all know, the process solutions used in the finishing industry never give better results than the instant after make-up, just before using them for the first time.! Consider a typical finishing line and when it is time to do some analysis to be sure the cleaner chemistry is working as it should. One would pull a sample of the alkaline cleaner and start titrating.

SAMPLING

Before titrating this cleaner or any other bath, here is a quick word about sampling: Any analysis is only as accurate as the sample. Does the sample represent the solution as a whole? Before sampling, is the tank at its proper working level? Every process tank in the shop should have reference marks indicating the correct upper and lower levels for the solution. The bath chemistry must always be between these two marks/levels before the sample is taken. Mix the solution thoroughly before taking core samples (use a glass tube just short of a meter long or as long as can be safely handled) from two or more locations in the tank. Carefully transfer the solution to a clean, labeled container and cap it before taking it back to the lab for analysis. Allow hot samples to cool to room temperature before titrating.

REACTION OF CLEANERS

Cleaners react with oils and greases through:

Defloculation – breaks up soils into extremely small particles which are then suspended in the cleaner.

Detergency - Surfactants reduce the grip of oils on the metal surfaces which helps other cleaning compounds to break through the surface oils and displace soils **Emulsification** – is the suspension of oil particles in the aqueous solution

Saponification - sodium and potassium hydroxide turning organic fats into soap which is water soluble

Solvent Action – the cleaner can dissolve the oils present on metal surfaces.

It is obvious that acid & alkaline cleaners have a lot of stuff going on at the same time. And most shops measure the acid or base content of the cleaner using a simple acid/base titration. So, out of all the stuff listed above, we are really measuring the power of saponification because we are measuring the sodium and potassium hydroxide content. This is a pretty good guess because the manufacturers of the

cleaner adds the other goodies back at a fixed ratio.

IMPROVE CONTROL

Another test or two can be added to improve the control over cleaner/electro-cleaner. This additional test for the surfactant content of cleaners has proved to be useful to give one an idea of the oil capacity remaining in the cleaner. The first time this test is done, a fresh, new cleaner must be used. The new bath results are used as the 100 per cent standard. Use a 100-mL graduated cylinder with a stopper; add 50 mL of the cleaning solution. Next, add 2 mL of light oil (you can raise or lower the number of mL's of oil to fit your cleaner/electrocleaner) and shake the stoppered graduated cylinder. Continue adding 2 mL increments of the light oil and shaking until there is no foam. At this point the cleaner can be considered spent/loaded with oil. Now by testing the used cleaner the same way, you will have an indication of the percentage of useful life left in the cleaner. This test replaces the sulfuric acid test, which yields the percentage of oil in the cleaner, because it is safer to use and likely to be run more often.

This is control for the electro-cleaner using specific gravity. In reverse current electro-cleaners the parts lose a little metal and the bath gets heavier as you use it. Plus, soils are still being removed from the metal surfaces, which also adds to the weight of the bath. There are two ways to do this test. First you can find the weight of 100 mL's of the well mixed solution. Then chart the weight of a fresh bath and a spent bath on graph paper in order to track the "age" of the electro-cleaner you are currently using to clean parts. Or, add the elecro-cleaner solution at about 100 degrees F (38 degrees C) to a graduated cylinder, leaving enough room at the top of the cylinder to "float" a hydrometer. Accurately measure the specific gravity by using the proper range hydrometer. The reading will be meaningful if the electrocleaner solution is always at the same temperature. Again, compare the new/fresh solution and the spent solution and record and chart the specific gravity readings. These efforts will yield you the practical service life of the electro-cleaner.

A HULL CELL

Stephen F. Rudy, CEF from Hubbard-Hall Inc. can be thanked for the next electrocleaner test when he suggested running a Hull Cell to solve a problem. Start with a porcelain Hull Cell (the oils and greases and heat of the electro-cleaner are not good with a plastic Hull Cell). Both the cathode and anode should be mild steel. Calculate in advance the approximate current density so the rectifier can be set to the correct voltage for the test. Clean and prepare both the anode (Hull Cell Steel Panel) and cathode and examine the panel for cleanliness using the "good old water break test." The panels must be free of any water pull back on the surface and, if not, must be recleaned.

"Any analysis is only as accurate as the sample."

- 1. To get the same results as the bath, heat the electro-cleaner to the temperature being used to run production parts, and maintain throughout the test.
- Next, insert the cathode (normally this is the anode in a plating Hull Cell test) into its position in the Hull Cell and attach the negative clip. (Remember that most electro-cleaning is done in "reverse" and as such are anodic).
- 3. Insert the anode (this is the Hull Cell Steel Panel) into its normal position in the Hull Cell and connect to positive clip.
- 4. Start the test by adjusting the rectifier to the calculated voltage. Run for the same time as for the process cycle or longer, if necessary, to identify problems.
- 5. When the test is done, remove the anode first (because this is were the results are to be found) and rinse thoroughly, but not too forcefully.
- 6. Observe the surface of the steel Hull Cell panel for any defects, such as water breaks, dark shading or other discoloration, pits, or etching
- Next, remove the cathode and rinse thoroughly. There will be a smut because of the dissolved metals in the electro-cleaner plating out.

What might be seen on the panel and what it might indicate:

• Darkness – If it is on brass, it may be due to a low electro-cleaner concentration.

- Another possibility is a problem with the ratio caustics to inhibitors. The surface of brass can be dezincified, this condition shows itself by forming copper patches on the surface. Solve the problem with one of two ways: 1) adjust the electro cleaner concentration or if this doesn't work, 2) change the formulation of the electro-cleaner components (check with your supplier).
- **Discoloration** A brown film or soft, sludgy material on steel could happen if the electro-cleaner is low in reserve alkalinity. When alkalinity at the steel surface drops below its normal level during the anodic treatment an iron hydroxide film can form on the iron surfaces. This film can be dissolved by dipping the panel or the part in acid. Removing the film often reveals an etched surface on the base metal. Solve this problem by 1) adjusting the concentration of the electro-cleaner (perhaps switch to a formulation with a higher caustic content. Or, 2) since it is the current that depletes the alkalinity, the current density can be lowered (if it is still in range).
- **Etching** As noted previously, one problem with etching is low electro-cleaner concentration. "Grease etch" is caused by the soak cleaner. Any grease/oil not completely removed leaves a stain or blemish that then blocks out the electro-cleaning action which results in etched spots. Step-up the detergency/solvent action in both the soak cleaner and electro-cleaner.
- Pits White dots on zinc parts can be caused by either low alkalinity or by the ratio of caustic to inhibitor. If adjusting the alkalinity does not help see the supplier about a change in formulation to something more suitable for zinc. Pits can also be caused by the drag-in of chlorides from acids in the line. If better rinsing does not help, the anion of your acid may need to be changed. (Sulfuric vs. Hydrochloric acid)
- Water breaks are most often due to an excess of oils and grease so an increase in the detergency/solvent action of the electro-cleaner may be required. But, the root cause may be that the soak cleaner is not getting the job done and too many oils are being carried over.

Using these process controls can make a big difference in the overall quality of the work. This is what a little more control can buy.

Getting to the Surface of

TESTING EQUIPMENT







CMI730 Kocour 6000 Fischer's ISOSCOPE FMP30

Manufacturers and Suppliers of testing equipment for those in the plating and anodizing industry highlight some of their newest products.

Folio Instruments has available the CMI730 Bench Top Coating Thickness Gauge. The CMI730 package enables control of plating/coating processes using advanced magnetic induction and eddycurrent technology. The CMI730 provides non-destructive coating/plating thickness measurement for non-magnetic coatings over magnetic substrates, non-conductive coatings over non-magnetic substrates and metallic coatings on ferrous substrates. The system was specially designed to handle the needs of platers, coaters,

and quality professionals. The standard package consists of a CPU unit, an

ECP-m eddy current probe. The ECP-m probe is specifically tailored for metallic coatings on ferrous substrates such as Zinc on Steel. Further probes and standards can be added to suit the metrology needs of the user.

www.folioinstruments.com

A popular tester for Kocour Co., is the Coulometric Tester Model K6000. The 6000's microprocessor based circuitry has over 300 coating/substrate applications. Product features include 98 per cent accuracy, direct readout, print capability, evaluation of inter-metallic layers, digital calibration, STEP (Simultaneous

www.fischer-techn

Thickness and Electochemical Potential) and RS232 Interface to PC.

It measures almost all electro-deposited metals on metallic or non-metallic substrates and multiple coatings and gives individual readings. It also measures plating thickness on wire and very thin coatings such as decorative chromium and gold and more.

The Kocour 6000 digital thickness tester utilizes the coulometric principle. A small test area is anodically deplated with an electrolytic solution applied at a constant current. Because the testing solution is selective, it removes only the plating. Thickness is determined by the current and time required to remove the plating. When the substrate is exposed, the 6000 turns off automatically and displays the thickness on the instrument panel. Regardless of the number of plated layers, each can be individually measured from 0.002 mil (0.05 microns) to 2 mils (50 microns). It takes 30-60 seconds per test. Base material, shape, surface roughness, electrical or magnetic properties do not affect results.

Kocour Stalagmometers are used to measure surface tension for control of wetting agents in nickel, acid copper, acid zinc, acid dips, acid pickles and chromic acid Electroplating Baths.

www.kocour.net



Kocour Stalagmometers

the anodizing process.

Fischer's ISOSCOPE FMP30 is used for the measurement of electrically non-conductive coatings such as anodic, paint or plastic coatings applied to non-ferromagnetic metal substrates with either a USB port or Bluetooth for data transfer to a PC or printer. It is compatible with a wide selection of separate probes for easy adaptation to the shape of the specimen. The FTD3.3 probe compensates for curved surfaces. The FTA3.3FG probe is especially suited for anodized coatings with acidic contamination of the test surface since the probe and cable connector are protected from moisture infiltration. In addition, Fischer's FMP series instruments include measurement specifications in accordance with industry

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Manufacturers and suppliers see that all customers' needs are met when it comes to testing equipment in the plating and anodizing industries.

FMP Coating Thickness Instruments The Flexible Solution for your Measurement Applications • Optimum accuracy • High precision probes • Instant base material recognition • USB communication • Ultra shock resistant case • IMO-PSPC and SSPC-PA2 specifications Fischer Technology, Inc. (860) 683-0781 info@fischer-technology.com www.fischer-technology.com

Fischer Technology, Inc has many coating thickness measurement instruments that are portable and easy to use. The company offers a wide selection of eddy current, magnetic induction and dual probes for expanded measurement ranges, complex shapes, probes that can compensate for curved surfaces, surface roughness, edge effect and parts that may still be wet from

Coating Thickness Material Analysis Microhardness

IN THE NEWS

continued from page 8

strategic technology manager UV Cure Oligomers & PUDs, Government programs, Bayer Material Science LLC, has been a RadTech member since 1992. Dvorchak served as the secretary of the RadTech board from 2008 until his recent election. He also has been co-chair of the RadTech North America Transportation Focus Group since 2004 and the Emerging Applications Group since 2009.

RadTech North America is a non profit organization dedicated to the advancement of ultraviolet (UV) and electron beam (EB) technology through industry education and discussion.

Pricing Updates

Protective and Marine Coating Prices Face Global Increase

The impact of rising raw materials prices on companies' bottom lines has been a common refrain in every recent industry earnings report.

Hempel, International Paint (International Protective and International Marine), Jotun, PPG Industries, have all recently announced global price increases for their protective and marine coatings.

The manufacturers blame increased global demand, price increase and shortage of raw materials and high oil prices.

As for raw materials, market price of epoxies, titanium dioxide, acrylics, metal-based materials and other materials used in coatings have increased by up to 50 per cent in 2010. Shortages of methyl methacrylate (MMA) and titanium dioxide (TiO₂), two critical ingredients in acrylicbased traffic paint, stalled shovel-ready road

projects worldwide throughout last spring and summer. Then it was thermoplastics, a key component of yellow and white line markings.

Jotun reports a worldwide imbalance in the raw materials market for coatings, due to high global demand and the downscaling of capacity following the 2007 financial crisis.

Copenhagen-based Hempel A/S, which has a vast protective and marine portfolio, said that the average price of the key raw materials it uses had increased by up to 60 per cent in the last year and high crude-oil prices would cause cost increases of petrochemical-based products industry-wide.

DuPont Industrial CoatingSolutions Announces Price Increases for its Liquid and Powder Coatings

DuPont Industrial CoatingSolutions is facing an increasing imbalance of supply and demand with critical suppliers, driving broad cost increases in raw material costs, operating expenses and growing inflationary pressures. Throughout the last several months costs have shown significant increases and are anticipated to continue to rise throughout the year, impacting the DuPont liquid and powder coatings products.

These increases have necessitated an adjustment of liquid and powder coatings' selling prices for DuPont Industrial CoatingSolutions, North America. Consequently, selling prices across all liquid and powder coatings products will be increased by up to 15 per cent by April 18. Detailed customer communications will take place during the coming weeks.

DuPont Industrial Coating Solutions will

continue to aggressively pursue ways to mitigate the impact of these costs on its customers, and will continue to deliver top performing products, service and value to its customers. www.dupont.com

OMNOVA Announces Price Increases for Specialty Chemicals

OMNOVA Solutions' Specialty Chemicals business recently announced a price increase of \$0.06 per dry pound for styrene butadiene emulsion polymers. The increase is effective March 14, 2011 for all specialty markets including coatings, tape & adhesives, nonwovens and construction, and is necessitated by the continuing escalation of chemical feedstock costs, specifically styrene and butadiene monomers.

Also effective March 14, OMNOVA is announcing a 2 per cent price increase for Plioway and Pliolite acrylic copolymer dry resins, and a \$0.03 to \$0.05/lb. increase on Pliotec acrylic and styrene acrylic lattices, depending on the grade. This increase is necessary to offset the rise in the cost of raw materials, which are used in the production of these products.

OMNOVA Solutions is a technology-based company with 2010 pro forma sales (including the recent ELIOKEM acquisition) of over US\$1.1 billion and a global workforce of approximately 3,060. OMNOVA Solutions is an innovator of emulsion polymers, specialty chemicals and decorative and functional surfaces for a variety of commercial, industrial and residential end uses. Visit OMNOVA Solutions at www.omnova.com and www.eliokem.com.

Huber Announces Price Increase For Industrial Ground Calcium Carbonate And Barium Sulfate Products

Huber Engineered Materials, a division of J.M. Huber Corporation, announces a price increase for its industrial calcium carbonate and barium sulfate products. The price increase does not apply to Huber's food and USP calcium carbonate grades. The increase is effective April 18, 2011, or as current contracts allow. List prices will increase an average of 6 percent for calcium carbonate products and an average of 9 percent for barium sulfate products, depending on product grade and packaging.

"Huber continues to work diligently to improve productivity and processing efficiencies to minimize the impact of continued rising costs for raw materials, energy, packaging, product development and freight," says David Riley, General Manager of Huber's Industrial Calcium Carbonate business unit. "Unfortunately, despite these efforts, a price increase is necessary to ensure the high level of product quality and consistency and industry-leading service our customers expect."

Huber's industrial calcium carbonate products are used in a variety of consumer and industrial applications, including adhesives, caulks and sealants; paints and coatings; drilling fluids; rubber; thermoset composites; thermoplastics; swimming pool aggregate; and cultured marble. www.hubermaterials.com.

Industry News

Paint Industry Strikes Out Arthritis by over \$12K

The Paint industry held its successful Strike Out Arthritis event on February 19, 2011, at Classic Bowl in Mississauga to the tune of just over \$12,000 this year, bringing the 12 year total of the event to more than \$300,000! There were five tables of prizes for the 18 teams who hailed from Unipex, Univar, Serif, Microcolour/Protek, Akzo Nobel, Dulux, Ferguson Chemical, Brenntag, Dominion Colour, Chemroy, and Northspec Chemical. The sponsors of the event were TOSCOT, CAPO Industries and AS Paterson. The organizing committee was Lisa Martella and Chris McDougall of Unvar, Pasky Oliveria of Serif Coatings and Jason Young of Ferguson Chemical Innovation.

The charity's coordinator of the event was Lorna Catrambone, Manager, Community Engagement, The Arthritis Society, Halton-Peel-Region.



Brenntag Canada team, from left to right: Judson Lew, Mary Bray, Ieresa Cooke, Jennifer Sykes, Patrick Lennon, Margaret Palak, Ron Koo and Marg Sutherland.



Winners of the top fundraisers trophy for raising \$1500 as a team. From left: Lorna Catrambone — The Arthritis Society, Jason Young - Ferguson Chemical Innovation, Therese Giaschi, Frank Ansilio, Greg Anderson and Martin Wolf - Akzo Nobel





The Univar Group had the most teams with four, from bottom up, left to right: Adam lasenzaniro, Lisa Martella, Sarah Komejan, 2nd row - Liam Jailal, Mervyn LiYing, Jamie Canfield, Diane Raines, Chris Mcdougall, Hollis Jailal, Donovan Powell, Tim Pal, Pat Martin, Chris Halberg, Stephanie Hunter, Derek Lord.



The Serif Team, Left to Right: Richard Pallarca, Ned Manalili, Celso Rabino, Ricky Colour Corporation.



Organizing committee member Jason Young, Ferguson Chemical with customer Suzanne Letrondo, Dominion

NEW PRODUCTS AND TECHNOLOGIES

Announcing the NEW PosiTector 6000 Coating Thickness Gage

The new PosiTector 6000 available from Stone Tucker Instruments is now smarter, faster and more powerful than ever before.

Both Standard and Advanced models feature built-in memory, on-screen statistics, USB mass storage, and new Fast mode. Advanced models also include hi contrast reversible color LCD, Scan mode to store continuous readings, on-screen help, real time graphing, picture prompting and more.

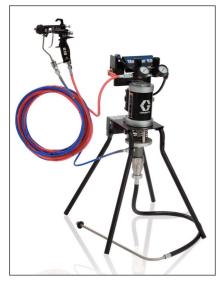
PosiTector.net allows you to upload stored measurements, generate detailed and customizable reports, and share your results with your colleagues via a secure internet connection. Alternatively, stored readings and graphs can be accessed using universal PC/Mac web browsers or file explorers. No software required.

www.stone-tucker.com



Graco introduces a more efficient air-assist and airless spray package

Graco Introduces a new low profile, efficient spray package.



Graco's Merkur ES is an efficient spray package designed for wood and general metal finishing applications.

These Air-Assist and Airless Spray Packages use 45 per cent less material to fill the system than leading competitors, delivers a superior spray finish, and reduces air usage and pulsation.

The proven reliable air motor and pump lower, available in plated or stainless steel, makes the pump last longer resulting in less downtime. The Merkur ES system requires less than 1 minute to flush, reducing material and solvent usage.

The low profile of this spray package is great for smaller finishing jobs and makes it easy to transport with its integrated carrying handle. The

Merkur ES also converts easily from stand mount to wall mount.

When used with the G15 or G40 Spray Gun, the Merkur ES spray package delivers superior spray performance.

www.graco.com

Dow Introduces ECOSURF LF APEO-Free Pigment Grind Surfactant

Dow Coating Materials (DCM), a global business unit of The Dow Chemical Company, announces a new addition to its product line of APEO-free surfactants. ECOSURF™ LF Surfactants are low-foam, high-performance additives for pigment dispersion that offer excellent pigment wetting and color acceptance, plus additional foam control through cloud point defoaming. Cloud point refers to the temperature at which ethoxylate surfactants become insoluble in an aqueous solution. ECOSURF LF Surfactants are initially soluble and offer excellent wetting with low foam during pigment addition. As temperatures during pigment dispersion rise above cloud points, ECOSURF LF Surfactants become insoluble.

ECOSURF LF Surfactants are also readily biodegradable.

ECOSURF LF Surfactants are marketed under the TERGITOL™ brand in Canada and Japan. All components of ECOSURF™ LF Surfactants are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30. This product contains a substance that will be subject to a TSCA Section 5(a)(2) Significant New Use Rule (SNUR) and export notification under TSCA 12(b). Architectural coating formulation processes that operate under zero-discharge of wastewater should not trigger the SNUR conditions but each user should assess their operations to assure compliance. The SNUR will limit release to water to no greater than 14 ppb as calculated after waste water treatment. The total removal during wastewater treatment is estimated to be > 90per cent based on Episuite models and demonstrated ready biodegradability. In addition, EPA does not expect significant adverse environmental effects during the uses stated in the PMN submission. These uses included formulation at less than 1per cent in industrial, commercial and consumer architectural coatings. TSCA 12(b) export notification is not needed when this substance is

www.dowcoatingmaterials.com/surfactants

present in mixtures at less than 1 per cent.

DuPont Protective Primer is Zinc Free

DuPont Coating Solutions has introduced Alesta ZeroZinc primer, an anti-corrosion powder coating system designed to combine protection in severe climatic and environmental conditions with greater environmental safety.

The zinc-free, anti-corrosion, chemical-resistant, epoxy primer has been developed to protect ferrous metals against corrosion in a wide range of environments, from heated building interiors to external industrial areas with high levels of humidity and pollution—environments often classified from C1 to C5-I, according to ISO 12944.

The system is formulated with High Density Crosslinking (HDC) technology to strengthen the primer's barrier effect and create a completely sealed, flexible coating that resists impact and adheres well.

With proper preparation and application, the coating isolates the steel from its environment and provides durable corrosion protection, even under the most severe conditions, for at least 15 years, the manufacturer says.

Free of zinc and heavy metals, Alesta ZeroZinc lacks the abrasiveness that leads to wear on equipment and is designed to satisfy environmental legislative demands, according to the manufacturer. The primer can be recycled, and its low density improves efficiency as more square meters per kilo can be coated, according to DuPont.

The protective layer is easily overcoated with powder and liquid topcoats within 12 hours without sanding or any other preparation and cures within minutes.

Applications include general construction such as metal structures, iron work, the transportation industry and industrial machinery.

EXEL North America New Kremlin Rexson EOS Pump Range

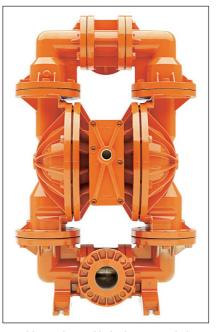
Kremlin Rexson has set the standard again for medium pressure solutions. We are introducing the new EOS Pump Range with two pumps: 15-C25 and 30-C25. The New EOS Pump "Accelerates Performance" by delivering Efficiency, Optimization, and Simplicity through its advancements in design, operation, and easier maintenance procedures.

The innovative design and quality components provide reliable performance and allow for simple maintenance, easy cleaning, and fast color changes while using minimal solvents. The cost of ownership and operation is reduced to a minimum.

exelnasolutions@exel-na.com



Wilden Bolted Design on Advanced Series AODD Pumps Offers **Paint & Coatings Operators with Superior Protection**



Wilden, the worldwide leader in air-operated double-diaphragm (AODD) pump technology, is proud to announce that its Advanced Metal Series AODD Pumps are available in a bolted design. This bolted design provides Paint & Coatings operators with superior containment of products during the manufacturing and transfer of Paint & Coatings.

Wilden Advanced Metal Series AODD Pumps are currently available in a bolted design on the PX200 25mm (1"), PX400 38mm (1-1/2") and PX1500 76mm (3") stainless steel or aluminum models. The bolted configuration on the Wilden AODD pumps deliver better leak resistance at higher pressures than traditional clamp-banded designs. This is a crucial consideration in Paint & Coatings production where the products are often hard to seal, thick and viscous.

Wilden's Advanced bolted pumps include a variety of elastomer options, as well as the Pro-Flo X air distribution system which allows the pump user to control the flow rate and maximize efficiency to reduce processing costs. Other product options such as full-stroke PTFE diaphragms and DIN flanges are available for specific application requirements.

www.pumpsg.com.

Double oven does double duty

Precision Quincy's model #49C 650D is an electrically heated oven, available in NFPA 86 Class 'A' or Class 'B' configuration. Known for its ability to successfully process a wide range of materials, the 49C 650D is a popular choice among heat processors for most curing/drying/pre heating needs.

The 49C 650D's compact design (shown here in a powder coated Silver Vein finish) features two independent oven chambers stacked one above the other, each with separate controls and sharing a single dampered exhaust system.

A robust piece of equipment, the 49C 650D weighs in at 1,180 lbs. with two internal working

spaces of 32"W x 18"D x 18"H and exterior dimensions of 43"W x 29"D x 45"H.The oven is capable of reaching and maintaining a maximum temperature of 650°F. An optional matching heavy duty stand (shown) provides a stable base that adds an extra 24" to the overall the oven - a useful feature making for easier pro loading and removal.

All of Precision Quincy's ovens meet or exceed NFPA 70, OSHA & UL requirements and are fact tested and balanced before shipping to ensure ble free start ups.

www.precisionquincy.com



Perstorp launches portfolio dedicated to performance adhesives and sealants

Leading specialty chemicals company Perstorp launches an extensive range of solutions enabling adhesive and sealant manufacturers to differentiate their formulations with performance advantages.

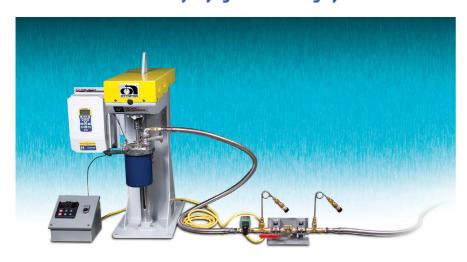
High-strength adhesion, flexibility, fast bonding times, low VOC content and non-yellowing qualities are among the advantages offered by the new portfolio. Its introduction reflects Perstorp's ongoing commitment to grow into new markets with its high performance essentials and specialties.

The new portfolio is dedicated to the formulation of the full range of adhesives and sealants, covering solvent-based polyurethanes adhesives and sealants, thermoplastic and reactive hot-melt adhesives, waterborne polyurethane adhesives and expandable sealants.

Perstorp's offer for adhesives and sealants covers polyols, isocvanate monomers, dispersing monomers, isocyanate cross-linkers and more — and it is has been significantly enhanced by a number of key acquisitions made in recent years.

www.perstorp.com

Union Process Laboratory Cryogenic Grinding System



Union Process, Inc., known globally as a manufacturer of size reduction and dispersing equipment for a broad range of industrial applications, has developed a system for controlling the flow of liquid nitrogen into the grinding chamber for customers performing cryogenic grinding.

The engineered system includes a probe inside the grinding chamber that monitors the temperature, and at the same time, regulates the flow of liquid nitrogen into the mill to maintain the desired temperature. Raising and lowering the temperature is accomplished by simply adjusting the dial up or down. The device is then able to change the rate of flow of liquid nitrogen into the chamber to

The system pictured was designed for use with Union Process 01-HD and 1-S Laboratory Attritors, however, the system can also be adapted for use with production-sized mills as well.

Union Process is the original developer of Attritor technology and manufactures wet and dry grinding mills as well as small media mills.

Rhodiasoly Infinity Reduces Costs In Cleaning Formulations

Global specialty chemicals producer Rhodia is promoting the use of Rhodiasolv Infinity1 as an ingredient that delivers significant total formulation cost reductions in d-limonene2-based cleaning products without compromising performance and while enhancing sustainability profiles.

Rhodiasolv Infinity is an innovative non-VOC3 ingredient targeted at industrial and institutional markets. It is a microemulsion concentrate based on eco-friendly and biodegradable ingredients that enables formulators to develop high performance cleaners with an improved safety profile.

www.rhodia.com

New VarioLoc Modular Skid Conveyor System Offers **Intelligent Design for Conveyor Buffer Zones**

The new Eisenmann modular skid conveyor system VarioLoc is manufactured with fewer components drastically reducing the maintenance required. Thanks to the flexibility of the system, it is also possible to vary production throughput requirements.

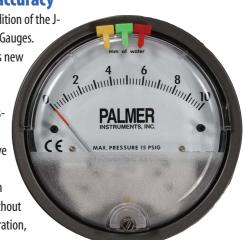
Conventional conveyor systems are comprised of many different components such as drives, actuators and sensors. In buffer and storage zones, it's important to maintain each system, even though they may only be used sporadically. It is estimated that approximately 1,650 drives and actuators are installed in a paint shop with a capacity of 60 units per hour.

Combined with the number of sensor systems for each individual conveyor element, one can assume that of a total of approximately 6,500 electrical components installed, only around 400 drives and actuators are in operation at any one time.

www.eisenmann.com/usa

New Palmer Aero Type Differential Gauges for the HVAC industry measure within 2% accuracy

Palmer Instruments Inc. announces the addition of the J-2000 Series of Aero Type Differential Pressure Gauges. Designed with the HVAC industry in mind, this new series of gauges features a frictionless gauge movement. Palmer Aero Type Gauges respond quickly to indicate low pressures, whether positive, negative (vacuum), or differential. Magnetic components of the spiral movement have been replaced with a rubber film, a sensitive component in measuring pressure. This design resists shock, vibration, and over pressures without fluid fill. The result is no difficulty with evaporation, freezing, or leveling that as found in other gauges.



Featuring patented safe-slide pointers in green, yellow, and red, the J-2000 Series of Aero Type Differential Pressure Gauges from Palmer Instruments, Inc. allows the user to set visible reminders of safe, warning, and danger ranges with this unique feature. Combined with the easy-to-read red tipped aluminum pointer, the gauge features excellent readability, even from a distance. www.palmerwahl.com.

Calendar of Industry Events 2011

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May 19: The Canadian Paint and Coatings Association (CPCA), and the Canadian Association of Chemical Distributors (CACD), co-host the Annual Government Interface 2011 scheduled to take place at the Delta Ottawa Hotel and Suites, in Ottawa, on Thursday, May 19, 2011. www.cdnpaint.org, www.cacd.ca

June 13-15: SUR/FIN 2011 in Rosemont IL. (Chicago) www.nasf.org

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

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

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

November 14-17: FINISHING TECHNOLOGIES Pavilion and Conference at FABTECH Chicago II. www.ccaiweb.com

Calendar of Industry Events 2012

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

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

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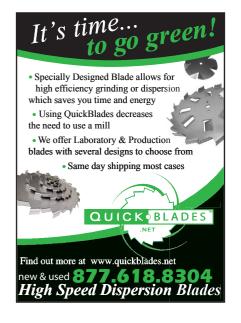
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Paint Product Stewardship







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