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CANADIAN FINISHING & COATINGS MANUFACTURING

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TOSCOT Symposium at the Falls

STORY BY SANDRA ANDERSON
PHOTOS BY PETE WILKINSON

The Toronto Society of Coatings Technology hosted an informative symposium held over two days at the Crowne Plaza, in Niagara Falls, ON, October 29-30, 2009.

Dave Saucier, TOSCOT president, welcomed everyone and symposium organizer Jake Jevric introduced the speakers.

Jim Quick, president of the Canadian Paint and Coatings Association talked about how much things have changed since he was hired by the CPCA in the winter of 2006. At that time there were just a handful of issues, now there are 40, including policies and programs, which Quick put into categories.

"We have our challenges coming up in 2010 and beyond," said Quick.

(Read more from Jim Quick on page 6 of this issue CFCM).

continued on page 10



Nenad Vidovic of Sansin Corp. demonstrates the difference between treated and non treated wood during the TOSCOT Symposium.

ALSO IN THIS ISSUE

- Dip Spin Plating
 - Biocides, Algaecides and Preservatives
 - Paint Kitchen Design
 - Robotics
 - Industry Trade Show & Conference Coverage, CFCM was there!!!
- And More!

Canada's leading **woodworking and design** shows offered joint registration and conference sessions



PHOTOS BY PETE WILKINSON

IIDEX/NeoCon Canada and the Woodworking Machinery & Supply Expo (WMS) collaborated their two events, which took place concurrently this past September 23 to 26.

Richard Taylor, Venjakob, adjusts spray head during the WMS show in Toronto.

The IIDEX/NeoCon exposition at the Direct Energy Centre and WMS at the International Centre. The woodworking expo included a

continued on page 19

IN THE NEWS

The Canadian Paint Industry Gets New Regulations for AIM to Limit VOC Emissions

By Jim Quick, President
Canadian Paint and Coatings Association

In September, Environment Canada (EC) published in Canada Gazette, Part II, new draft regulations for Volatile Organic Compound (VOC) concentration limits for Architectural and Industrial Maintenance (AIM) coatings. This publication is the result of a great deal of work by the paint and coatings industry and EC to develop Canada's first VOC regulations.

Some of the highlights of the regulations include:

Fifty-three (53) categories of AIM products are targeted with new VOC limits.

The manufacture and import prohibitions take effect 12 months after the Regulations were registered (September 9, 2010).

An additional sell-through period of 2 years was agreed to along with the specific labelling requirements applicable to them. The stop-sell date is September 9, 2012.

Four categories received an extension to the stop manufacturing and importing date, including

continued on page 6

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Counting Colours

It is really interesting to note certain traits in a child that will probably determine that child's career. My daughter, who is now 13, has always liked to organize, stack, sort, make lists, play games with numbers, and do math problems for fun. So, it wasn't surprising that when she was 6 years old she started a game at her grandparents' condo, sitting on the balcony or gazing out the window to the busy Toronto streets several floors below, with a clipboard and a hand drawn chart, counting cars and categorizing them by colour. My little future market analyst has played this game several times a year for the past 7 years and sometimes would be out on that balcony doing this for hours. She says her results were almost always the same and went like this. Silver always won. In an hour she might count 100 silver cars on the street. Second was black, which would come out around 90, third was white at roughly 60, followed by red at around 40, then blue and gold were tied around 25 or 30 and the least popular is brown, just after green.

So, comparing my resident market analyst's results with an actual study done by Switzerland's PPG Industries, a leading manufacturer of transportation coatings, she seems to be right on.

For the ninth consecutive year, the silver category, which includes charcoal and gray shades, has ranked as the most popular vehicle color in the world according to data from PPG. In North America, silver and charcoal (25 per cent) were followed by white (18 per cent), black (16 per cent), red (12 per cent), blue (11 per cent), natural colors (seven per cent) and green (four per cent).

This year's annual Automotive Color Trend show included a collection of interior and exterior colors developed globally and inspired by fashion, interior design, industrial design, culture, commercial construction and nature. PPG presented automotive designers with 60 new exterior shades and 10 new interior shades for consideration in their designs of the 2012-2013 model years. The new shades were grouped in four themes based on vehicle type: "Dimension" for compact vehicles, "Perspective" for mid-size vehicles, "Surface" for hybrid vehicles and "Depth" for luxury automobiles.

PPG introduced automotive manufacturers to new colors such as Champagne Silver, a tinted silver with a slight warm copper beige cast; Outer Space Blue, a deep, dark blue with a slight sparkle effect; Haute Couture, a black base coat with a high sparkle blue mid-coat that gives it an appearance inspired by a black designer evening gown with blue sequins; Quantum Rose, an interior color close to a neon red; and Hulk, a color developed in Australia that is bright green, just like its namesake.

Meanwhile, for inside the home, Canadian Sico Paints, Longueuil, QC, unveils its 2010-2011 Color Forecast.

It looks like the neutral color schemes of the past are moving over for livelier hues to make a comeback in home décor in 2010-2011. It is all about using color as a mood lifter in the midst of challenging times, according to Sico Paints.

Colorful hues such as deep reds and purples, vivid blues and greens, pigment-infused pastels such as baby blues and pinks, and earthy golds and clays will be among the new colors featured in next year's palette.

The 2010-2011 palette will be divided into four themes. Sico's 2010-2011 color groupings include Back to Basics, Free Expression, Classic Revival and Synthetic Culture.

I thought it would be nice to talk about colour to get our minds off the rough year we have had. Economists say things are stabilizing and the auto market is adjusting itself and remaining optimistic.

We welcome your feedback and Letters to the Editor. We have printed some in this issue along with my comments.

CFCM magazine wishes you a great holiday season and happy New Year.

*Sincerely,
Sandra Anderson
sandra.anderson@cfc.ca*

CONTENTS

FEATURES

Paint and Coatings Manufacturing

- 6 VOC Update**
Carried from page one, Jim Quick president of the CPCA looks at the new VOC regulations and talks about 2010 as a year of challenges.
- 7 Biocides, Algaecides and Preservatives**
A look at current trends.
- 8 CPCA Conference in Niagara Falls**
CFCM was there.
- 10 TOSCOT Symposium**
Carried from page one, CFCM was there too.

Plating and Anodizing

- 12 Manual Plating Lines**
Peter Forth looks at the popularity of manual plating lines.
- 13 Water Wise**
John Seldon discusses regulations.
- 15 What is Dip Spin Coating?**
Brian Glowacki examines the benefits of Dip Spin.

Industrial Finishing

- 21 Paint Kitchen Design**
Today's Dollar-Saving Paint Kitchens by Steve Romer.
- 23 Robotics and Gun Motion**
A look at FANUC and small finishing robots.
- 24 Wood Finishing Training in BC**
Finishing Training via the Web: the UBC Certificate in Industrial Wood Finishing.

DEPARTMENTS

In the News	4
Company News	4
Association News	5
Good News	5
People	22
New Products	25
Calendar	26
Ad Index	26

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Company News

BC Based Industrial Painting Contractor Certified Coating Specialists achieves COR Certification in Alberta

Certified Coating Specialists Inc., (CCS) an industrial painting contractor based in British Columbia, achieves The Certificate of Recognition (COR) for Safety, in Alberta. Certificates are issued by the Alberta Construction Safety Association.

The COR certification is issued to employers who develop and implement health and safety programs that meet established standards such as: employer policy and management commitment, worker competency and training, hazard identification, hazard control measures, inspection programs, incident reporting and investigation, emergency response planning, program administration.

CCS provides lead abatement and corrosion protection to the industrial and marine sectors in Western Canada promoting safe and healthy working conditions and attitudes within their company. CCS has already received the COR Certification from the Construction Safety Association of British Columbia.

R.M. Ferguson Acquires Industrial Colours and Chemicals



R.M. Ferguson (Ferguson) has acquired Industrial Colours and Chemicals Ltd. (ICC), bringing customers and vendors a century of combined expertise in specialty chemical distribution. The transaction complements and builds on both companies' strong market presence in graphic arts, coatings, rubber, plastics, adhesives, and specialty care.

"The combination of Ferguson and ICC integrates two healthy, profitable companies with similar cultures and value systems," said David Jackson, president and CEO of Ferguson and ICC. "Both share a commitment to innovative specialty chemical distribution, customer-focus and opera-

tional excellence."

Together, Ferguson and ICC will represent a trusted portfolio of products and technologies from industry leaders such as Eckart Effect Pigments, Sartomer Company Inc., Hexion Specialty Chemicals, LANXESS Corporation, Lubrizol Corporation, Rhein Chemie Corporation, Sachtleben Pigments Oy, Barbe America Inc, and other specialty chemical and additive producers.

The companies' short-term transition plans include: an immediate alignment of sales and marketing functions; parallel platforms for operations, logistics and customer service over the next six months to minimize service disruptions and relocating Ferguson headquarters by the end of the 2009 to ICC's state of the art chemical distribution facility in Brampton, Ontario.

As ISO-certified and accredited members of the Canadian Association of Chemical Distributors, RM Ferguson's priority remains a commitment to excellence in the delivery of innovative technical and competitive solutions from around the world.

In a letter to customers Jackson suggested they feel free to contact their Ferguson or ICC representative if they had questions and thanked them for their support of this exciting new venture.

SI Group Announces the Sale of Canadian Business

SI Group Schenectady, NY announces the sale of assets, consisting primarily of its customer list and technology, from its Canadian affiliate, SI Group-Canada, Ltd. to OPC Polymers located in Columbus, Ohio.

SI Group-Canada will remain in production as a toll-manufacturer for OPC over the next three to six months, after which time the company will be shutting down its operations. SI Group-Canada has been a manufacturer of alkyd resins for paint applications. SI Group determined that this market segment is no longer aligned with the company's strategic direction.

SI Group is a family-owned company founded in 1906 and headquartered in Schenectady, New York. A leading global manufacturer of alkyd resins, phenolic resins and other chemical intermediates, SI Group has over 19 operations in 13 countries around the world. For more information about SI Group, visit www.siigroup.com.

Dow Chemical West Hill Site Reorganizes

Due to a recent reorganization The Dow Chemical Company's West Hill, ON facility is closing resulting in the loss of 19 jobs.

The company tells CFCM that, "With the exception of three manufacturing support positions, all of the affected positions were within the administrative functions at the site."

The company further explains, "The decision to reorganize was made in recognition of functional redundancies resulting from the recent acquisition of Rohm and Haas by Dow, and the critical need to achieve synergies within the current economic environment. Manufacturing operations continue with little or no change and a smaller staff will operate within the administration building at the site. The plant has operated continuously at the site since 1954."

AkzoNobel to Acquire Dow's Powder Coatings Activities

AkzoNobel is enhancing its portfolio of sustainable technologies after signing an agreement with The Dow Chemical Co. (Dow) to acquire Dow's powder coatings activities.

The deal will bring key technological know-how and significant synergy potential to AkzoNobel's Powder Coatings business, as well as enhancing the company's position in the United States.

The powder coating activities were purchased by Dow earlier this year as part of its acquisition of Rohm & Haas. This business achieves global sales of several hundred million dollars and employs around 700 people.

Operating powder coatings factories in the United States, Europe and China, Rohm & Haas developed several important new technologies, especially for the automotive and architectural segments. The deal will also add MDF and thermoplastic capabilities to AkzoNobel's existing expertise.

The transaction is expected to close during the second quarter of 2010.

CFS Acquires Rheology Montreal

Canadian Finishing Systems Ltd., based in Burlington, ON, is pleased to announce that they have acquired the intellectual property of Rheology Montreal Ltd.

The product line encompasses a broad range of products for the finishing industry including products for Metal Cleaning, Phosphate & Oxide Coating, Rust Preventatives, Aluminum Conversion Coatings, Barrel Finishing Compounds, (Burnishing, De-Scale, and De-Burring), Paint Stripping & Spray Booth products. There are also a group of Specialty Products.

These products and processes will be introduced into the CFS existing range of successful products during the coming months.

Ashland selects Quadra Chemicals for Canadian PVAc emulsions distribution

Ashland Performance Materials, Dublin, OH a commercial unit of Ashland Inc. has selected Quadra Chemicals to be its sole distributor of polyvinyl acetate homopolymer and copolymer emulsions, acrylic and vinyl acrylic emulsions, wood glue emulsions and wet adhesion monomer technologies in Canada. The agreement began October 19.

Ashland Performance Materials is a global leader in unsaturated polyester resins and vinyl ester resins.

Bayou to Acquire Canadian Pipe Coating Plant

The Bayou Companies, Inc. (Bayou), a subsidiary of Insituform Technologies, Inc., has announced its agreement with Garneau, Inc. to acquire Garneau's pipe coating and insulation facility and associated assets in Camrose, AB, Canada.

Bayou Perma-Pipe Canada, Ltd., a joint venture between Bayou and Perma-Pipe, Inc., will acquire the Garneau facility and assets, and will serve as the operating company for Bayou's Canadian operation. Bayou is based in New Iberia, LA, and provides pipe coating, fabrication, and logistics capabilities to oil and gas companies in the Gulf of Mexico.

Viking service enhancement

To serve customers better, Viking Pump of Canada Inc. is pleased to announce its improved aftermarket service capability. With a 35,000 square foot service centre located in Calgary, 10 service trucks and 20 certified technicians, electricians, machinists, millwrights, and mechanics, fully equipped repair shop, and local inventory, Viking Pump Canada will provide its customers 24-7-365 aftermarket service covering all of Southern Alberta from Red Deer south.

The service centre is a state-of-the art facility equipped with the latest in repair and testing capabilities and can provide repair, on-site service, inspections, millwrighting, laser alignment, motor rewinds, vibration analysis, balancing and maintenance for the Viking Pump Canada product lines.

James Electric Motor Services Ltd. of Calgary, AB is the Authorized Service Representative for Viking Pump Canada in Southern Alberta. motors@jameselectric.ca

New Web Site Launch for PPC

Powder Coating Consultants, Division of Ninan, Inc. (PCC) is pleased to announce the launch of their new website at www.powdercc.com. This website provides information on the numerous services that the organization offers to individuals and companies using, or intending to use, the powder coating process. Features include an expanded "Tech Talk" section, trade publication articles for free download, "Tools and References" section with industry specific handbooks and

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RONA launches line of recycled latex paint

Former Boomerang brand now available nationally as RONA ECO product

Home improvement store chain RONA, Boucherville, QC, has added a line of recycled latex paint to its range of RONA ECO products, made in Quebec by Peintures récupérées du Québec. The new product is available in 16 interior colours with more colours planned, and is also offered in a floor and patio grade.

"In response to Canadians' growing concern over respect for the environment, we wanted to be able to offer ecologically responsible paint across Canada," says RONA executive vice president of merchandising Normand Dumont. "This new paint line available nationwide now joins the extensive selection of paint products available in our stores and will do its part to strengthen RONA's position as a leader in the retail paint sector in Canada."

Brenntag Acquires East-Chem Inc.

Brenntag, a leader in chemical distribution has acquired 100 per cent of the outstanding shares of its former joint venture partner East-Chem Inc., effective October 1, 2009.

"This acquisition provides us with the opportunity to fulfill a long-standing need to have a Brenntag facility in Newfoundland, to better serve our industrial chemical customers, as well as the offshore oil and gas industry. Our expanded presence in the Atlantic Provinces complements our commodity and specialty industries position across the country," says Michael Satey, President of Brenntag Canada.

Brenntag Canada Inc. is a member of the Brenntag North America family of companies.

DuPont Merges Two Businesses

DuPont (Wilmington, DE) has announced the merger of two of its businesses, DuPont Chemical Solutions Enterprise and DuPont Fluoroproducts, into a single unit named DuPont Chemical Fluoroproducts.

The merger will integrate the company's fluorine business and develop new products and technologies, including next-generation fluoroproducts and other chemicals for use in high performance coatings for steel and concrete.

Gary W. Spitzer, who was serving as president of DuPont Chemical Solutions Enterprise, will lead the organization as president.

Wagner announces New Distributor Relationship with Sherwin-Williams

Wagner Systems, Inc. is pleased to announce a synergy between Wagner's Industrial Solutions Group and The Sherwin-Williams Company. Sherwin-Williams will now distribute Wagner's line of manual industrial powder coating equipment. Industrial users will now be able to purchase Wagner manual powder coating systems including the newest addition to the line PrimaSprint. The Wagner powder cup gun set will also be available through the Sherwin-Williams ProVisions one-stop shopping program as well as spare and wear parts for Wagner manual powder coating systems.

DuPont Realigns Organization and Focus

DuPont CEO Ellen Kullman has announced that the company is being streamlined to focus on four emerging trends: to meet the demand for food,

protecting people and the environment, decreasing dependence on fossil fuels, and capitalizing on the growth of emerging markets. To that end, the company is streamlining its organization. Steps include: eliminating the five group vice president positions and existing support structure associated with the platforms that house DuPont's businesses; consolidating the company's 23 businesses into 14, each with clear accountability for profit and loss and cash management and a direct reporting line to the company's senior leadership team; and streamlining the 14 businesses to drive decision making closer to customers by increasing regional business responsibility and accountability.

Industry New Briefs

VOC Regulations Next Phase

Regulation of VOC limits for coatings in Canada has entered the next phase. On September 30, Environment Canada and Health Canada announced the publication in Canada Gazette Part II of new regulations governing VOC concentration limits for 53 categories of architectural coatings. The new limits, developed in consultation with the paint and coatings industry, are designed to reduce annual VOC emissions by an average of 28 per cent, or approximately 506,000 tons over 25 years. The announcement follows the adoption of similar measures to reduce VOC limits in automotive refinish coatings by up to 40 per cent annually.

The new regulations include an exemption for the solvent tertiary butyl acetate (TBAc), a substance that was excluded from VOC regulations in the US by the EPA in 2004. Other aspects of the regulation include placing a 150 g/L concentration limit for traffic marking coatings and a two-year sell-through period for non-compliant coatings manufactured prior to the regulations taking effect. www.ec.gc.ca

Global Coatings Consumption Increase Into 2014

According to the consulting firm of Kusumgar, Nerfi & Growney, global coatings consumption is forecast to be off sharply in 2009 owing to the effects of the financial crisis and resulting worldwide recession. Consumption in 2009 is a projected 58.7 billion pounds, which is valued at \$88.4 billion. Volume is down six per cent from 2008 and dollar value is down eight per cent. Recovery of the global economy will give coatings consumption an average annual increase of 5 per cent in volume through 2014. In 2014, coatings poundage is forecast to be up 30 percent over 2009 and dollar value up 26 percent. However, when compared to the pre-recession year of 2008, poundage in 2014 is projected to be up 21 percent and dollar value up 15 percent.

Association News

TOSCOT Votes to be Part of CPCA

On October 19, 2009, the Toronto Society for Coatings Technology convened a special general meeting in Toronto to discuss and vote on the future direction of TOSCOT. This past spring, the membership of TOSCOT heard merger proposals from the Oil Colour and Chemists Organization of Ontario (OCCO) and the Canadian Paint and Coatings Association (CPCA). At the Annual General Meeting in May, the membership voted to allow the board to enter into discussions about merging TOSCOT with one of these organizations.

After a summer of discussions and careful

continued on page 22

Good News Briefs

GM Builds Regals in Oshawa

General Motors of Canada Ltd. will start building the Buick Regal in Oshawa in the first quarter of 2011, which could create up to 750 jobs.

This could bring back some of the 1,300 workers laid off after GM closed its truck plant and consolidated output at two car operations in Oshawa. The company also plans to assemble another vehicle at the plant in 2013.

The front-wheel drive Regal will be based on the award winning Opel Insignia design and technology (GM's subsidiary in Europe), where the Insignia received the honour in 2009 of "Car of the Year".

The Oshawa plant currently makes Chevrolet Camaro and the Impala mid-size model, which it will gradually phase out. A convertible version of the Camaro is expected in early 2011.

Ontario BioAuto Council

The Ontario BioAuto Council is open for business, on the strength of a \$5-million investment fund sponsored by the Government of Ontario. The council is now seeking applications that support biomaterials commercialization and market development.

Applications must include a market analysis, business plan and budget for the proposed product or technology. Only Ontario-based, for-profit ventures are eligible. The council will partner with existing companies for projects valued up to \$2 million.

Funding will be geared towards securing Ontario's global leadership in product development from renewable feedstocks. Priority will be given to the commercialization of near market-ready products and processes.

The Ontario BioAuto Council aims to ensure Ontario companies lead the green evolution of biomaterials – especially when it comes to bioplastics, biocomposites and other materials headed for the auto sector. Applications are also welcomed for development of biobased construction and packaging materials, as well as other consumer goods (excluding biofuel).

Applications for funding are accepted the first business day of every month. The fund will remain open until all funds are committed.

The Ontario BioAuto Council Investment Fund is administered by the BioAuto Council investment committee and Board of Directors.

bioautocouncil.com

Letters to the Editor

Hello Pete and Sandra:

Just finished looking at your new Buyers Guide. A great job!! You certainly did a fantastic compilation of the related processes with each manufacturer.

Hopefully many will look at the Buyers Guide and find the material that will enhance their business. Of course, I am prejudice that they will see our contribution from Electro Steam Generator. Business in Canada was increased this year despite the financial conditions. See you in Tennessee,

Myles Compton

Electro Steam Generator Corp.

Editor's Note: Mr. Compton's mention of Tennessee is in reference to the Coating East show. Please find coverage in this issue on page 18. Our online Buyers' Guide is available at www.cfm.mercuryemail.com. Here you may add and update listings at any time.

Hello Sandy:

Went and got my daughter and granddaughter from the Buffalo Airport yesterday to be here for the Thanksgiving weekend; very nice indeed.

I received my copy of the September issue of CFCM and immediately read the "Distinctive by Design and Flatline" article you wrote and Pete did the photos. I really enjoyed it - we hope to re-do our own kitchen "sometime" when funds permit - and so it was interesting to read about the DBD group.

Also read your editorial - appalling!! They offer you a chair that isn't yours and require you to pay for its refinishing without an apology or reimbursement for the one "lost" by their firm??? I hope this is all settled to your satisfaction in the end - any access to the salesman who first got you into this bad player?? Is there an association for this type of firm to whom you could plead your case??

Have a wonderful Thanksgiving weekend. I will as I have so much to be grateful for and am smart enough to know it.

Best regards,

John Seldon

Editor's Note: Mr. Seldon is a writer for CFCM and you can find his column in this issue on page 13. In this letter he is referring to Canadian Thanksgiving. Also, there is the Better Business Bureau, which has a forum in which to "plead your case" as he puts it. Also the issue with the furniture refinisher as mentioned in the September editorial has since been resolved and it is quite a story. If you are curious, I would be happy to share it with you personally. Just drop me a line at sandra.anderson@cfcm.ca or give me a phone call at 519-442-4071. It was a lesson well learned.

Hello, Pete – I just wanted to compliment you on your September issue. I think you are doing exceptional work with the magazine – it is truly a first class publication. Hope we have the opportunity to work with you again sometime!

Best regards,

Barbara (Unruh) Reaman

Marketing Services Inc.

continued from page 1

Interior wiping stain, exterior wood stain, clear or semi-transparent, floor enamels (a high-gloss opaque floor coating for application to surfaces that may be subject to foot traffic), all prohibitions fall on the third anniversary date of the coming into force of the regulations: September 9, 2012. For recycled coatings (not less than 10% of the total weight consisting of post-consumer paint, not less than 50% of a secondary coating), all stop-manufacturing prohibitions take effect on the fifth anniversary date or on September 9, 2015.

1-liter exemptions were given to seven categories: faux-finish, low solids coatings, lacquers & lacquer sanding sealers, varnish, quick dry enamels, interior wiping stains, exterior wood stain and any other stains, rust preventive coatings, and high temperature coatings.

Traffic paints exceeding 150 g/L must not be used between May 1st and October 15th. This pro-

hibition will take effect three years after the regulations come into force (September 9, 2012).

Any laboratory that performs an analysis for the purposes of these Regulations (testing of conformity by the Government) must be accredited under ISO/ IEC 17025:2005.

On the stop manufacturing date for manufacturers and on the stop-selling date for sellers, all coatings set out in the Schedule should contain the date of manufacture or a code representing that date on the container's label or lid (and displayed legibly in both official languages).

Manufacturers, importers and retailers must keep records at their principal place of business in Canada or at any other place in Canada where they can be inspected.

CPCA and its member companies have cooperated for two decades with federal government initiatives to reduce VOC emissions from paints and coatings. The industry voluntarily reduced VOC limits by 54 percent over the last 20 years. With

the implementation of these new regulations the paint and coatings industry will achieve an additional 30 percent reduction in emissions for a total reduction of 84 per cent.

The Canadian coatings industry is committed to protection of the environment, enhancing human health and the quality of life through the responsible formulation, production, and sale of high quality, safe products.

2010: A Year of Challenges for the Paint and Coatings Industry

As the Canadian paint and coatings industry prepares to enter a new year, the CPCA is reporting that 2010 will see an unprecedented level of activity by government that will have implications for the paint and coatings industry in Canada.

At the recent TOSOT Technical Seminar I provided details of CPCA's 2010 Environmental Scan. It included a report on more than 40 regulatory, legislative and program initiatives that govern-

ments across Canada have planned for the paint and coatings sector. Add to that an economy emerging from the largest recession since the great depression, 2010 will be a challenging year.

Industry veterans tell me that this is an unprecedented level of activity.

Claims of the impact of humans on the global climate are supported by sound science. New generations of Canadians see a direct link between environmental sustainability and quality-of-life, and they demand that governments develop strong public policy frameworks to protect it.

In 2010, governments will be focusing on solvents as a top priority - assessing their impact on the environment and the health of Canadians. On chemical management alone we have identified 12 separate initiatives that will consider the assessment and risk management of chemicals. Other areas where governments have plans include extended producer responsibility (Product Stewardship); the workplace, air and water quality; toxic reduction and sustainability plans; climate change; GHS and labelling.

As we enter 2010, the question is: What do we do as a sector to meet the challenges of this new chemical world order and the government programs that come with it?

To start with, we don't run and hide. New chemical management strategies like the European Union's REACH and Canada's CMP will happen with or without us. Our options are to be proactive—and help frame outcomes for the sector—or to live with outcomes developed in our absence.

CPCA has made a fundamental decision to be proactive. Our 2010 business plan includes new, proactive strategies that include working with government on sector approaches - demonstrating that we are prepared to live up to our commitment to protection of the environment, enhancing human health and the quality-of-life through the responsible formulation, production and sale of high-quality, safe products.

Our approach begins with recognition that the heightened environmental awareness has fundamentally changed the chemical sector in Canada and, with it, our relations with governments. To be an effective force in this new world order, the paint and coatings industry must continue to move away from a traditional, issue-based to more analytically based approaches. In our work with governments, we must create a balance of ensuring they meet their public policy objectives while we meet our business and sector objectives.

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

Companies wanting to review the CPCA's 2010 Environmental Scan should contact Jim Quick at jquick@cdnpaint.org or 613 231 3604.

Jim Quick is President of the Canadian Paint and Coatings Association.

Big Changes at CFCM

CFCM Goes Electronic

All future regular Issues will be available for electronic delivery in PDF format or on-line as an archive on the website www.cfc.ca.

Web Addresses in ads and editorial will be active links.

Readers can sign up for an email notice of the publication of the Electronic Edition and qualified Canadian readers can also receive the print edition by post.

Please send an email to brian.jones@cfc.ca stating you would like to receive the electronic Edition including:

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GREEN NANO

Manufacturers and suppliers of biocides, algaecides and preservatives comment on trends.

BY SANDRA ANDERSON

David Saucier of Unipex Solutions Canada says one of the trends in biocides, algaecides and preservatives is the emergence of nano technologies that are green (Nano Silver, as an example). Unipex has just signed a new supplier Nano Horizons.

Michael Morden, Regional Manager - Canada for Troy Canada Company Ltd. says, "With the trend to lower VOC's, Troy has come out with an O VOC in-can preservative called Mergal K 10 N." Troy has several in-can preservatives and dry film preservatives available around the world.

Dr. Ioana Annis, Senior TS&D Specialist for Dow Microbial Control says, "Across the world, consumers are becoming increasingly aware of their impact on the environment, and are demanding eco-friendly products that also meet high standards of performance." She adds, "For the Paints, Finishings, and Coatings industry this translates into stringent requirements for the decrease of volatile organic compound (VOC) levels and strict restrictions on the use of hazardous materials. Alignment with eco-standards such as Green Seal, Blue Angel, Nordic Swan, Greenguard, and Design for Environment (DfE) is valued, especially when the eco-standard also establishes product quality criteria, not only restrictions on the use of raw materials."

THE DEMAND

When asked what customers are asking for when it comes to biocides, algaecides and preservatives Saucier says, "They want to be compliant with PMRA and have an effective product at reasonable costs."

Morden says that customers tend to be looking mainly for lower VOC biocides.

"The move towards decreased organic content and use of more readily biodegradable or naturally-derived raw materials, which are inherently more susceptible to microbial attack, has resulted in products becoming increasingly harder to preserve. Additionally, the strict restrictions on the use of time-tested biocides, such as the formaldehyde releasing preservatives, are putting a strenuous demand on the paints, finishings,

and coatings manufacturers," says Annis. "Our customers are demanding eco-conscious biocide solutions that will provide robust preservation of their low/no VOC products, and differentiate them in the market place by meeting new aggressive standards of quality, such as prolonged dry film protection." The customers value Dow Microbial Control for the technical partnership we provide to understand and comply with global regulatory and eco-requirements, while meeting stringent performance and value targets. Dow Microbial Control's solution based approach, which includes a rigorous focus on Industrial Hygiene, the broadest globally registered product portfolio, unique testing capabilities, featuring high-throughput testing TAUNOVATE, and in-depth application expertise, positions us as a valued partner for solving challenging microbial problems."

NEW TECHNOLOGIES

Morden says companies, including Troy are offering lower VOC versions of their current products.

Meanwhile, UNIPLEX Solutions Canada will introduce Smart Silver manufactured in the US by Nano Horizons. "We are waiting clearance from the PMRA," says Saucier.

Dow Microbial Control has recently introduced a new line of proprietary, low/no VOC products, under the broad platform of LE (Low Emissions) Technology. BIOBAN LE products based on 1,2-benzisothiazolin-3-one (BIT), Bronopol, 3-iodopropargyl-N-butyl-carbamate (IPBC), and soon to come 2-n-octyl-4-isothiazolin-3-one (OIT) are available in US, and are undergoing evaluation for approval in Canada.

"These products are based on a proprietary, eco-conscious carrier system, with outstanding solvency power that allows for formulating biocide solutions with low VOC contributions (0 per cent under the EU Paints Directive and less than 3 per cent under EPA method 24 test conditions), low viscosity (under 150 cps), a low freezing point (under -15 °C) and great freeze-thaw stability," says Annis. She says this technology also reduces the need for a solubility enhancing agent, such as alkaline solutions in

the case of 1,2-benzisothiazolin-3-one (BIT). "In fact, the pH of BIOBAN™ BIT 20 LE Preservative is between 7 and 9."

Dow Microbial Control is also working on fundamental innovation through the development of new active ingredients. "While these developments are naturally longer term in nature," says Annis, "it is important to recognize because industry will need an expanded toolbox of antimicrobials in the future."

WHAT TO USE

When it comes to the types of biocides, algaecides and preservatives every paint manufacturer should be using and why, Saucier says they are needed to "prevent growth of microbes which spoil the color and paint system, as well as the coated substrate." He adds, "There are many types available and every 5 years the PMRA review efficacy and continue or revoke permits."

When it comes to biocides, algaecides and preservatives, Morden says each Paint Manufacturer needs to preserve their water based paints with an in-can preservative to stop the growth of bacteria in the package.

"A dry film preservative will prevent the growth of mold, mildew and fungus on the exterior of the coating," says Morden. "The main application here is kitchen and bath products as well as Exterior Coatings," he adds.

Annis says, "The trend towards low VOC and naturally-derived raw materials is putting unparalleled strain on the already limited long-term preservative tool kit." She adds, "A judicious Industrial Hygiene program that combines good housekeeping practices with the use of fast acting sanitizing biocide, such as DOWICIL™ QK-20 Antimicrobial, offers added insurance against product spoilage, along with significantly decreased manufacturing down time and better asset utilization to result in overall reduced cost."

"Another powerful approach is optimization of the antimicrobial solution by using synergistic combinations of biocides," Annis explains. Dow Microbial Control's proprietary high throughput technology allows for the screening of a large number of products, product combinations, and active ingredient ratios to provide antimicrobial solutions that are both performance and value optimized. "This tool is especially valuable when seeking compliance with eco-standards," says Annis. "Several such standards, including Green Seal, Blue Angel, and DfE allow for use of small amounts of formaldehyde releasers to boost the preservative power.

High throughput technology has been successfully employed globally to optimize preservative combinations based on BIOBAN™ BIT 20 or KATHON™ LX1.5 per cent (CMIT/MIT) chemistries with addition of small amounts of DOWICIL 75 to provide robust long-term preservation and compliance with global eco-labels."

A LOOK TO THE FUTURE

Michael Morden feels the trend toward lower VOC products will continue. He adds, "Along with having a proper biocide package in your paint, a good program of plant hygiene is also important."

Dave Saucier says, "Nano technologies may gain some ground here. Understanding the environment and specifically what mother nature provides in terms of pest and anti-microbial controls is an emerging field where some of the bio-available products may be able to be used in paint systems. Time will tell."

Dr. Ioana Annis says, "The increased stringency of the global regulatory and eco-label requirements will further limit the antimicrobial choices, while drastically increasing the cost for the introduction of new-to-market antimicrobials." She adds, "In this challenging environment, a culture of innovation becomes critical."

Dow Microbial Control's approach to innovation, includes delivery systems, a broad portfolio of globally registered actives, antimicrobial and analytical testing capability, strong formulation science, and comprehensive global regulatory support.

Annis sums it up, "Long-term preservatives and dry-film fungicides/algaecides are widely acknowledged as essential components of paints, finishing, and coating formulations, respectively protecting the product from wet-state (in-can) microorganism spoilage and mold/algae defacement of the applied material." She adds, "To address the antimicrobial challenges associated with the new trends towards low/no VOC eco-conscious products, any effective antimicrobial preservation strategy must begin with a robust industrial hygiene program, that includes the use of a fast acting sanitizer, and use an Innovation-based approach to optimize antimicrobial performance, and maximize value."

Biocides, algaecides and preservatives play a necessary part in paint manufacturing and as environmental concerns became increasingly important manufacturers are following suit with products and innovations that meet the market's needs. ■

A Taste of the CPCA Conference in Niagara

Story and photos by Pete Wilkinson



Jean-Marc Pigeon, Inortech Chimie is pilloried by Major Sloan at the 1812 Garrison Dinner for intoxication and rowdy behavior.

A scaled down Canadian Paint and Coatings Association (CPCA) Conference "Navigating in Difficult Waters" was held over two days September 20-21 at Niagara Falls, Ontario.

The Sunday morning Board of Directors meeting was followed by an afternoon winery tour of three local wineries Jackson-Triggs Niagara Estate Winery, Hillebrand Winery and Château des Charmes.

The evening Chairs' event featured a humorous 1812 Garrison Dinner that involved the participation and temporary incarceration of members of the audience.

Bruce Henderson, formerly of DuPont Performance Coatings was presented the Industry Statesman award for outstanding sustained contributions to the CPCA during a career and Brian Edwards of DuPont Performance Coatings was presented 2009 Roy Kennedy Outstanding Achievement Award for the critical role he played as CPCA Chair in the transformation of the CPCA to a successful, modern association.

New Board of Directors

Pierre Dufresne, CPCA Chairman and President and General Manager, AkzoNobel Decorative Paints Canada introduced the new Board of Directors, which include:

- Pierre Dufresne, AkzoNobel Decorative Paints Canada (Chair)
- André Buisson, Societé Laurentide Inc.
- Rick J. Duha, The Duha Group
- Brian Edwards, DuPont Performance Coatings
- Sharon M. Kelly, Kelcoatings Ltd.
- Mike Klein, Dominion Color Corporation
- Darrin Noble, Home Hardware Stores Ltd.
- Brian Roberson, PPG Canada Inc.
- Ed Thompson, L.V. Lomas Ltd.
- Richard Tremblay, Benjamin Moore & Co. Ltd.
- Fred Veghelyi, SI Group-Canada Ltd.
- Tim Vogel, Cloverdale Paint Inc.

Presentations

Monday's full day of presentations focused on the changes and challenges brought on by the current economic downturn.

Bob Willard is an expert on the business value of corporate environmental sustainability. He stat-

ed that as corporations move from non-compliance though compliance and reach a state where sustainability becomes an "Integrated Strategy: and finally a "Purpose and Passion" the business value enhances. He gave three examples of "Green Painting Processes". The Ford 3-Wet Painting Process, in Ohio applies primer, base and enamel paints without waiting for each coat to dry, saves time (20-25 per cent), cuts CO2 emissions, and reduces VOCs by 5 per cent.

Ford's Fumes-to-Fuel System, Oakville (see CFCM June 2009) captures VOCs for use in 300 KW fuel cell, reduces CO2 emissions by 80 per cent and eliminates nitrogen oxide. Mazda's Aqua-tech Paint System Three Layer Wet Paint System in Japan reduced CO2 emissions by 15 per cent and VOCs by 50 per cent and using water-based paints reduces VOCs a further 57 per cent.

Willard summarized, "Sustainability is smart business. Important stakeholders' expectations are rising and new market forces and risks are in play relevant to existing business priorities and can protect and enhance company value."

Diane Brisebois, President and CEO of the Retail Council of Canada, spoke about The Canadian Consumer and Consumer Trends. She stated that Canadian consumers are "Astute bargain shoppers" relative to their U.S. counterpart due to a smaller disposable income. The 2008 Canadian retail figures were \$425 billion in sales from 215,000 outlets serviced by 2.1 million employees. The Home Improvement market had \$40.29 billion in sales. The top 4 retailers Rona 15.6 per cent, Home Depot 14.2 per cent, Home Hardware 12 per cent and Canadian Tire 12 per cent (home improvement only) represented almost 54 per cent of the market. The Canadian consumer's changing expectations are: "I only buy when it's on sale, I can always get a better deal, make it easy for me and give me what I want 'now,'" explains Brisebois. She says the retail environment is seeing a decline in the Mall and an increase in Power Centres as the consumer shifts from a Browsing Shopper to a Laser Shopper, "Women start shopping like Men."

Brisebois predicts a flat or small increase in 2010 housing starts. There is a trend to the "Proximity Store" such as Rona's new mini big boxes,

while Canadian Tire is testing convenience food sections with bread and milk. She adds, expect constant change, fierce competition, and more pressure on pricing. The new consumer is here to stay. They have no time, no money, no patience, and they expect sustainability. They demand but just aren't willing to pay extra for green products.

Bob Armstrong, President SCL Canada said that SCM (Supply Chain Management) in Canada is generally tactical but has key business process gaps with underinvestment in technology and a need for coordinated cross response and engagement. Compared to U.S., total Canadian SCM and logistics costs are 12 per cent higher for manufacturers, 18 per cent for wholesalers and 30 per cent for retail.

Some causes could be inventory management practices (+20 per cent ICC), service outsourcing, the size of firms, highly qualified personnel and regulations (cabotage). The U.S. outsources 50 per cent more of its logistics activities. Canada has made a 60 per cent increase in investment in new distribution innovation and facilities 2001-2007. There has been a 47 per cent GDP growth for the Canadian logistics industry since 1998. Growth

Bob Armstrong offers two strategies. Strategy One: Ensure you have truly leveraged the marketplace for logistics savings to meet service requirements. Research indicates that many companies (in good times and bad) have not gone through the process of collecting the required data, understanding their business requirements and innovatively streamlining their logistics and transportation processes.

Strategy Two: Evaluating your distribution competency: Difficult times have many C-level executives seeking ways to offset infrastructure and fixed commitments. The "O" word (Outsourcing) question invariably comes up at these times. Each business needs to be very clear where its core competencies lie and where it can leverage those capabilities through a partnership with the right Third Party provider. This process, by the way, may not lead to a "lower cost line" per se, but can offset assets and risk, which is very desirable during a downturn.

After lunch Mykita Vesselovsky, Office of the Chief Economist, Foreign Affairs and International Trade Canada forecast the Worldwide Economic Trends and Outlook. In the second quarter of 2009



Wine Tasting at Jackson-Triggs Winery.



Hillebrand Winery Tour.

was particularly marked in truck transportation, through an increased use of JIT by Canadian firms and the increase in value added 4-5PL services (4th and 5th Party Logistics). The GDP for logistics service providers is expected to increase by an additional 40 per cent between 2007 and 2015. 3PL and couriers are expected to integrate 4-5PL value added activities and increased demand for supply chain agility will maintain the leading position of trucking.

The 2009 reality is fluctuating fuel and commodity pricing, carrier over capacity, reduced consumer demand, currency, supplier stability and offshoring are the short and long term challenges.

the world economy Real GDP growth was 1.1 per cent boosted by the massive economic stimulus package in China (12 per cent). Canada (-3.4 per cent), USA (-1 per cent) and U.K. (-2.6 per cent) were still in negative growth, but with positive growth in the third quarter for Canada and the US with 2-3 per cent growth in the fourth quarter and through 2010. The world forecast is for a 3-4 per cent increasing annual growth 2010-2012.

Canada's export trade surplus has drastically contracted and a 2009 deficit is expected.

World exports are expected to grow much more quickly than GDP. Canadian exports of goods and services are growing at a far greater rate with



Bruce Henderson formerly DuPont receives the Industry Statesman Award.



Brian Edwards DuPont receives The Roy Kennedy Outstanding Achievement Award.



Bob Willard outlines the "Case for Sustainability".



Bob Armstrong highlights the future challenges for Supply Chain Logistics.



Dianne Brisebois explains the rapidly changing Canadian Retail Market.



Pierre DuFresne CPCA Chair welcomes the attendees.



Jim Quick CPCA President explains the CPCA initiatives for 2010.



Mykta Vesselovsky, Foreign Affairs and International Trade Canada forecasts Canada's recovery from the recession.



Rick Duha, CPCA Conference Chair invites everyone to 2010 Montreal conference.

the fast growing "Emerging Economies" than with the USA.

Vesselovsky forecasts a "solid but weak recovery in 2010. Unemployment, consumer credit, household finances and the stability of the banking sector will determine the recovery strength and length. Canadian trade has been severely impacted as part of a global contraction in world trade and this has accelerated the process of diversification towards emerging and developing markets".

Jim Quick, CPCA President outlined the paint and coating regulations and legislation, for 2010. Quick pointed out the Canadian Air Regulations were introduced September 28, 2009 and Ontario launched the new MHSW regulations September 23, 2009. The paint industry will be under pressure from health, environmental agencies, governments and non-governmental agencies to reduce solvent use, increase stewardship and improve chemical management. Quick highlighted over 30 initiatives that the CPCA will be monitoring and reacting to on behalf of the environment, Canadians health and the paint and coating industry.

Rick Duha 2009 Conference Chairman thanks the committee:

- Rick Duha, Committee Chair, The Duha Group
- Roula Hanna, Kronos Worldwide, Inc.
- Robert Jacksteit, Bayer Inc.
- Steve Nuyten, L.V. Lomas Limited
- Doug Parsons, Home Hardware Stores Ltd.
- Geneviève Savary, Bayer Inc.
- Jim Quick, CPCA

and invited everyone to the 2010 Conference in Montreal October 2-3, 2010.

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Leo Procopio, Dow Advanced Materials.

The next speaker, **Dr. Leo J. Procopio**, DOW Advanced Materials, presented, "Interplay Among Hard Polymers, Soft Polymers and Coalescent—A new concept to advance the balance of VOC, MFFT and hardness related properties". Procopio began by saying that the work done in the presentation was done by Zhenwen Fu, Andy Hejl and Andy Swartz. He says when you start lowering volatile organic compounds (VOC) in a coating there is the tendency to lose film formation and hardness properties and sacrifice performance, so Dow dealt with these challenges and put a latex system together.

After lunch **Wayne Franzen** of Dianal America Inc. spoke about "Acrylic Plastisols—Why into the Lion's Cage?" PVC resins are extremely versatile. However,



Wayne Franzen, Dianal.

recent health concerns of vinyl chloride and phthalates, the two key components of traditional plastisols have sparked interest in developing PVC and phthalate-free plastisol formulations. Franzen talked about how acrylics compare with PVC technology and how the acrylics can be formulated using non-phthalate plasticizers to produce plastisols that can be used for screen inks, dip coatings, and rotocast applications.

The next speaker, **Stuart Lipskin**, BYK, dealt with the topic of



Stuart Lipskin, BYK Chemie.

"Use of additives for environmentally friendly coatings". Lipskin presented an overview of additive technologies and said special emphasis is placed upon three areas: pigment wetting and dispersing, defoaming, and surface flow control. The chemical determinants of additive performance were outlined. Lipskin discussed structure performance correlations and showed practical examples. He outlined the 12 principles of green chemistry.

Salvatore J Monte, Kenrich Petrochemicals, Inc. gave a presentation titled "Titanates and Zirconates—Innovation in Coatings, from Nanotechnology to Biodegradability."

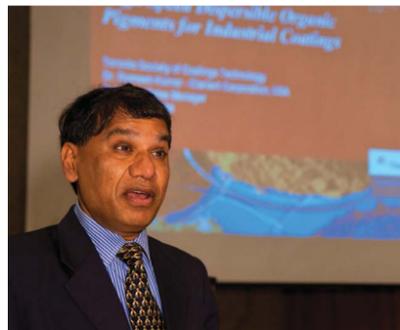
Titanates and zirconates are



Sal Monte, Kenrich.

shown to reduce the viscosity of inorganic/organic materials; increase flow and strength of polymers; functionalize the pigment/filler/fiber interface; prevent corrosion and aging; promote adhesion; increase thermal and electrical conductivity; deagglomerate and disperse nanoparticulates of all types in the organic or water phase; and with BIOchem types, make polymers such as PVC plastisol signage biodegrade in a landfill. Monte reviewed some of the more interesting recent and historical developments in coatings, inks, adhesives and sealants, thermoplastics and advanced composites.

Day 2 of the Symposium began bright and early with a talk by **Dr. Romesh Kumar**, a technical manager for Clariant Corp. about "Easy Dis-



Romesh Kumar, Clariant.

persing Pigments for Industrial Coatings." Kumar explained that over 90 per cent of paint is solvent based and the pigments organic and inorganic are co-milled; batches are shaded with dispersions to arrive at the final colour. Easy dispersing pigments (ED types) make it easy for a paint chemist to develop optimum mill bases to be used in durable paints. These pigments can be dispersed on a high speed mixer with minimum shear, and paint colour and performance are not affected by otherwise aggressive milling process with regular media mills. There is significant decrease in haze, and improvement in gloss and some of the very desirable features of high performance coatings. Also, the paint manufacturing output is highly increased.

The next presenter, **Dr. Mouchine Kanouni**, Cytec Industries Inc., talked about "Expanding the Use of Waterborne UV Curable Coating." Kanouni exposed the benefits of



Mouchine Kanouni, Cytec.

WB-UV such as ease of spray, good mechanical and matting properties, improved adhesion and less polymer shrinkage. Kanouni showed some comparative results of conventional waterborne systems and 2K system versus the latest WB-UV products: a novel aliphatic UV curable aliphatic polyurethane acrylate dispersion for high gloss sprayable coatings for furniture and plastics applications.

Dr. Nenad Vidovic, Sansin Corp., Strathroy, ON, then took the floor with an informative talk titled, "Technical Overview of Wood as a Substrate for Decorative Coatings."

He began with a little experiment with a beaker and water and wood to show how much untreated wood will swell. Vidovic talked about different types of wood and explained how wood is constructed. He gave examples from his experiences as to how certain wood and certain environmental factors can effect the coatings.

He talked about study performed by scientists at The Sansin Corporation concerning carpenter bees and how the company has responded to customer needs. Agents affecting wood also include termites, fungi and much more. He gave a demonstration with pieces of wood showing how they will warp when water is sprayed on it if untreated.



Navin Patel, World Minerals and Scott Harvey, Chemroy.

After lunch, **Navin Patel**, Imerys-World Minerals talked about "Flat-tening and Multi Functionality - the Green Product Portfolio: Helping you reduce your footprint."

He talked about fillers and pigments, particle shapes and Diatomaceous (D) Earth in different regions. He also talked about its different forms and how it is processed and the physical properties of certain

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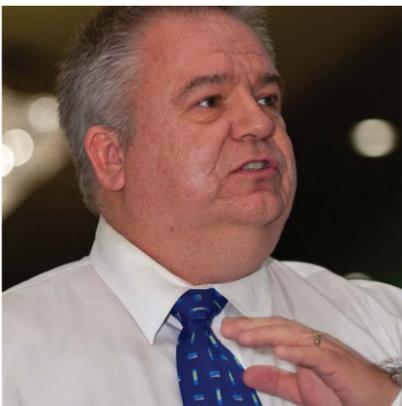
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Maggie Lu, John, E. Goudey Ltd, Jean Meng DuPont, Denis Florea.



Ray Lahti, Becker Industrial and Noel Shahnazarian, Northspec Chemicals.



Gord Howes, Folio Instruments.



Jake Jevric, Conference Chairman.

rocks, diamond being the hardest and talc being the softest. Using charts and diagrams he discussed a new low VOC product that has lower oil absorption, mud cracking, scrub resistance, film formation, good matting and better film performance. It is a natural raw material from a new deposit in South Africa.

Jean Meng of DuPont Co. then dealt with the topic of "Olephobic, Hydrophilic Coatings: The Optimum System for Exterior Dirt Pick-up Resistance" in waterbase systems. Fluorosurfactants enable the development of coatings, which offer repellency to oils while allowing uniform rinsing of the surface, a combination which gives paints excellent dirt pickup resistance. The additives currently used in water-based coating systems have significant implications and can contribute to dirt pickup. Meng explored the use of Fluorosurfactants and the implications on the overall formulation, leading to paints that have greater hydrophilicity and improved olephobicity.

The final presenter was Gord Howes of Folio Instruments titled,

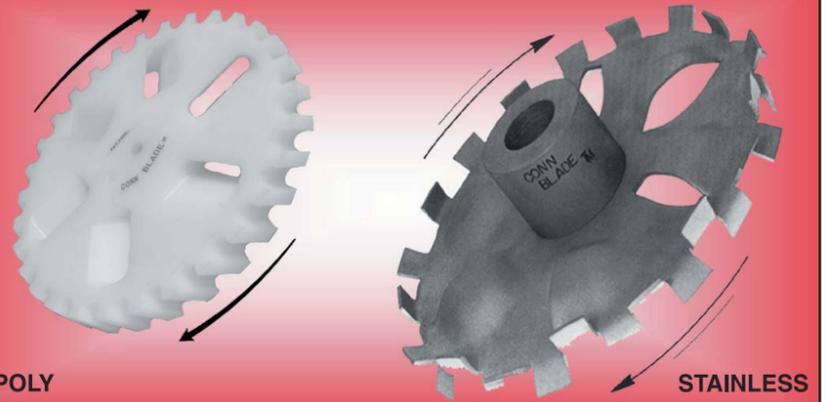
gauges a science and not a guess. Howes reviewed the changes in technology that are currently available to the formulator and chemist. All of the major testing lab tools were examined and features discussed. He focused on key advance-

ments that have increased accuracy and lowered costs. He also covered gauge R&R studies, which are often neglected in real world applications.

Jake Jevric thanked everyone and closing remarks were given by Dave Saucier. ■

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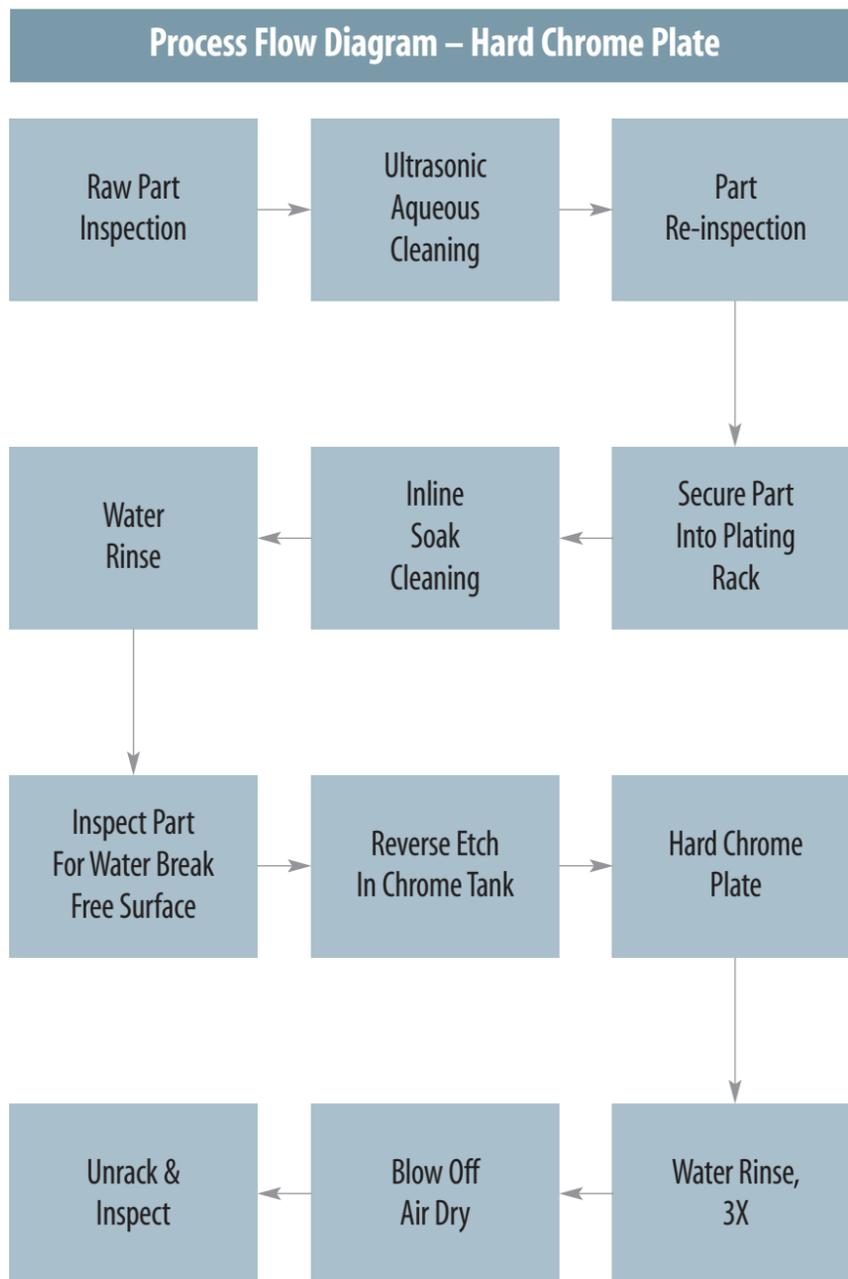
Popularity Continues for Manual Plating Lines

BY PETER FORTH

The move in recent years by automotive companies to reduce their costs of goods purchased, has emphasized the term 'The Lean Production Environment'. In conventional decorative electroplating operations, the highest cost drives tend to be materials and labour. This has pushed many metal finishers to look into automating their electroplating operations. Granted, this allows for improved process stability. And with the application of other lean practice techniques, will 'lean-out' an electroplating operation to provide owners with an improved measure of costs and delivery to their customers. Unfortunately, most automated operations do not provide process flexibility in situations where process volumes are low and where multiple finishes or finish combinations are requested by the customer.

This is where a properly designed manual electroplating line can outperform. In a manual electroplating line capable of producing a number of different finishes, it is possible to produce several different parts at the same time with marginal increase in labour costs. These types of lines still make for an excellent opportunity to implement lean practices to improve process stabil-

ity and first time yields, and increase throughput and manage costs.



MAPPING THE FLOW

When considering installing a new manual electroplating line or undertaking a line upgrade, it is important to fully understand the processing requirements or cycle required for the customer work and then map the flow and movement of the work as it begins and finishes the process cycle. The degree of operator motion on the electroplating line needs to be managed so that workflow is logical and thereby reduces physical effort. Also to be considered is the reducing of opportunities for cross contamination of solutions and maximizing the use of the higher cost and longer duration processes. This can be illustrated using either a process flow chart or a spaghetti diagram. These tools will show the degree of motion and the timing of critical process steps, which will determine the total cycle time required to complete the process cycle.

SPECIAL HANDLING

Depending on the size and complexity of the part to be electroplated, specialized fixturing and handling techniques are required in order to totally electroplate a part or electroplate it only in selected locations. This could require the application and removal of masking type materials during certain steps of the process cycle. Where site specific electroplating is required the use of auxiliary electroplating techniques would be necessary. In these situations, it may be necessary to allow the plating operator to have full access to all sides of the electroplating process tank to ensure fixturing and connections are correct. These situations lend themselves ideally to a manual electroplating line environment.

Where electroplating processes require long electroplating times, hours rather than minutes, as seen in processes such as hard chrome, electrolysis nickel and electroforming, it is more practical to utilize a manual electroplating line. These types of processes usually require the use of specialized fixturing and handling. Utilizing individual process tanks allows for greater

Continued on page 16



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Environmental Regulation: Use It or Lose It

WATER FACT:

“More than half of the supply of water from surface runoff is already in use for irrigation and human consumption. ... The water stored in the deep aquifers of the western United States ... was put there tens to hundreds of thousands of years ago by meltwater ... (the level) ... has been falling as we extract water from the depths where it cannot be quickly replenished by nature”¹

INTRODUCTION

Regulation is often separated into two forms - self-regulation and statute regulation. Self regulation, it seems to this writer, precedes formal governmental regulation in the hopes the former will eliminate the need for the latter. For the most part the former simply forestalls the latter. As an independent contractor working in the environmental field, my work base flows directly or indirectly from formal regulatory requirements at the municipal, regional, provincial or federal level. I am a creature of regulation. Some may say, the “Creature from the Black Lagoon”². A cost of doing business. But who among us would opt for a world of self-regulation in water or wastewater treatment, let alone any other field of human intrusion? Are we so naïve that we feel all practitioners will do what is right when there are no legal consequences for behaving inappropriately? Let’s look at some new regulations, concerning (hexavalent) chrome air emissions from surface finishers, that came into effect in July 2009.

CHROMIUM ELECTROPLATING, CHROMIUM ANODIZING AND REVERSE ETCHING REGULATION³

The “Canada Gazette” publishes “...all ‘regulations’ as defined in the Statutory Instruments Act”. These are Canadian federal regulations. On June 4th, 2009 the Chromium Electroplating, Chromium Anodizing and Reverse Etching Regulations were published by the Minister of the Environment under the Canadian Environmental Protection Act, 1999, Section 332(1).

Why? For many of us working in the environmental field, chrome emissions have long been regulat-

ed. We especially concentrate on preventing chrome discharging from wastewater treatment systems through its precipitation as an hydroxide, followed by sludge collection/treatment and finally appropriate disposal. Indeed, this new regulation is not to “... regulate an aspect of a substance that is regulated by or under any other Act of Parliament in a manner that provides, in the opinion of the Governor in Council, sufficient protection to the environment and human health”⁴ ...”

And yet the new regulations “... apply to any person that uses a solution containing a hexavalent chromium compound for chromium electroplating, chromium anodizing or reverse etching in a tank located at a facility where 50 kg or more of chromium trioxide (CrO₃) is used per calendar year⁵.”

The key here is there may be many aspects of a particular substance and that this regulation addresses an aspect not uniformly covered by regulation, nationally. To be more specific, electroplating, anodizing and reverse etching processes (EARP) using chromium trioxide (CrO₃) can generate air emissions containing hexavalent chromium (Cr⁶⁺, HVC). So, instead of the HVC escaping via the plating manufacturer’s wastewater treatment system, it is leav-

ing as chromic acid via an aqueous air emissions stack. Neither is acceptable.

Why the worry? There is a long standing consensus in the environmental-regulatory world that HVC “...is known to cause cancer in humans and has considerable negative impacts on certain sensitive ecosystem receptors (such as aquatic organisms)⁶.”

Remember that we indicated above that the regulatory agency sought to regulate “aspects” not currently covered? In this case this regulation reflects a variation on that theme. The level playing field theme. In fact some Canadian-wide provincial and municipal jurisdictions already regulated (air) emission limits for HVC. By introducing this regulation, Environment Canada is arguing for a consistent “protection against exposure from HVC emissions across Canada⁷”. A standardized exposure, a level playing field. Not only is exposure standardized but by requiring all facilities emitting HVC to address air emissions, this also, theoretically, levels one cost of production as well.

The regulations also identify three acceptable means of controlling emissions from any one of the three processes addressed - electroplating, anodizing and reverse etching. Air evacuated from above acid solutions is passed through a “High-

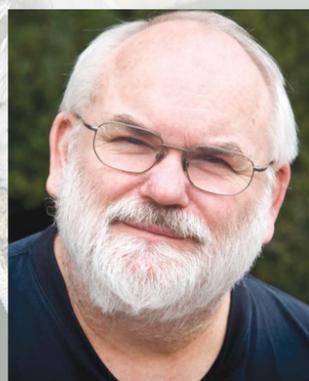
Efficiency Air Filter” (HEPA filter) prior to point source (stack) discharge, controlling surface tension and completely enclosing a tank with a cover are the three mandated techniques.

The effectiveness of each technique is measured differently from the other and all techniques are addressed in detail in the regulations. Consider a few of the requirements included in completing testing of a point source approach (a release test) to determine if a facility is meeting the emission-mandated level of less than or equal to 0.03 mg Cr⁶⁺ per dry standard cubic metre of air discharged (DSCM), referenced to 25 degrees centigrade and 101.325 kPa.⁸air pressure. (One mandated emission level.). Testing requires three samples of a minimal size providing an average result that does not exceed the 0.03 upper limit. The sample needs to be taken by a trained person and be analysed by a laboratory accredited by a Canadian accrediting body under the International Organization for Standardization (IOS/IEC 17025:2005)⁹ that has specifically been certified for performing the appropriate analytical technique.

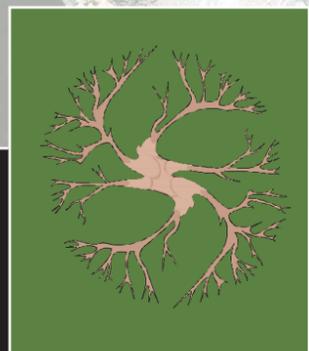
The surface tension testing involves actually measuring the surface tension of the chrome bath and the tank cover approach of controlling emissions requires a “smoke test”. I leave the details for you to review in the statute.

Regardless of the control approach taken, “Environment Canada estimates that the overall efficiency of 98 per cent from these three control options is economically and technically feasible on an individual facility basis¹⁰. When the

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John Seldon, RPP, C.E.T., CCEP
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regulations come into effect, facilities will have from 3 to 30 months to comply with emission requirements.

Also addressed in the statute is the timing for beginning the testing of these devices and the frequency for their performance thereafter, as well as the information to be summarized in report form and submitted to the appropriate authorities. Little is left to the imagination.

This writer has in the past frequently emphasized the need for capable, professionally trained personnel in wastewater treatment. A regulation like this for Chrome (air) emissions brings this need for professionalism again to the fore. Indeed, in the regulation it states in part "... the sampling must be performed ... by a sampler trained to perform release sampling for chromium using a documented and validated method¹¹..." Do you have a person trained in the release method on your staff so that the sampling is undertaken correctly or do you have access to a firm that will provide this service? Are you satisfied that the laboratory that you take your samples to provides the high quality of service expected to ensure accurate results? If the sampling is poor, the laboratory results

are meaningless. If the laboratory's analytical techniques are haphazard, good quality sampling is compromised and questionable results from poor sampling are compounded. You will get the invoice regardless. The regulations even have an estimate for this, estimating the costs for testing over 25 years at "... \$2.4 million¹² ..." with the costs of reporting to be "negligible" (it is implied this is a national estimate for cost). Can you satisfy yourself that everything was done professionally for your site's costs??

Oh, and by the way, where were you when the regulations were being drafted? And did you have the expertise to contribute to the regulation development to effectively criticize or support any one aspect of the regulation. In short, you need this expertise before the regulation even comes into place in order to contribute in any meaningful way to its development. Indeed, according to the Regulations (in the Regulatory Impact Analysis Statement, beginning on page 939 of the Regulations), a wide variety of groups contributed, including the (then) "... Canadian Association of Metal Finishers (CAME, now the Canadian Association of Surface Finishers, CASF), the American Electroplaters

and Surface Finishers (AESF), and the Metal Finishing Suppliers Association (MFSA); and by federal, provincial and municipal government representatives. ... Speakers with expertise in the areas of control technologies, emission testing, the chemistry and use of fume suppressants and measurement of surface tension¹³." Your writer made a modest contribution to this whole process when asked by a metal finishing association to review its proposed summary on the topic of these emissions some years ago. Do you feel you had time to comment? No time to contribute to the whole process? Chrome was identified in the Environmental Protection Act's Priority Substance List as early as 1994 - fifteen years ago. If you didn't know this was coming, you were not paying attention.

SUMMARY

Read this regulation if it applies to you. This column was started with a statement about using up precious water resources stored below ground for thousands of years being used up with little likelihood of them being replaced. In contrast, the body of the column addressed a new regulation regarding the unwanted aqueous air emissions of hexavalent chromium to the environment where it may stay for thousands of years, harming water ecosystems in ways we may or may not be able to quantify. Clean water used up on the one hand, clean water made dangerous - and just as lost to consumers - on the other. Let's let the regulation have the last say:

"The Regulations will reduce HVC releases into the environment by an estimated 31 tonnes over 25 years or by an average of 1.24

tonnes per year¹⁴."

You can also find other useful information, such as the Compliance Guide, Frequently Asked Questions, etc. via the following web site: www.ec.gc.ca. Information on the Government of Canada's management of toxic substances is available at the chemical substances portal: www.chemicalsubstances.chimiques.gc.ca

John Seldon, is a Wastewater Contractor, Public Speaker and president of Temporary Operations & Maintenance Inc., Port Burwell, Ontario.

References:

1. Excerpted from "The Environment" Adbusters: The Big Ideas of 2006, (section) adapted from *Plows, Plagues & Petroleum* by William Ruddiman: Adbusters Editor-in Chief, Kalle Lasn.
2. "Creature From the Black Lagoon" 1954 film directed by James C. Havens.
3. *Canada Gazette Part 2, Vol. 143, No. 13. Ottawa, Wednesday June 24, 2009 Statutory Instruments 2009. SOR/2009 - 160-185 and SI 2009 - 43 - 55, pages 922-1148*
4. *Ibid page 929*
5. *Ibid page 930*
6. *Ibid page 939 (Regulatory Impact Analysis Statement - Executive Summary - not part of the actual regulation.)*
7. *Ibid page 239*
8. *Ibid page 931*
9. *Ibid page 932*
10. *Ibid page 939*
11. *Ibid page 932*
12. *Ibid page 940*
13. *Ibid page 957,958*
14. *Ibid page 939*



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

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What is Dip-Spin Coating?

BY BRIAN GLOWACKI

Your favorite jewelry, the cars you own, the bridge you drive over and even your cell phone, contain parts that are made from metal. Almost every metal you come into contact with on a daily basis is treated or finished in some way to make it stronger, look nicer or last longer.

Every metal oxidizes or rusts in some way. Some are very slow and not very visible like aluminum and some are very fast and easy to recognize, like iron. As you know, steel or iron when left to the elements reacts or oxidizes producing that ugly reddish brown flakey rust that you see all around you.

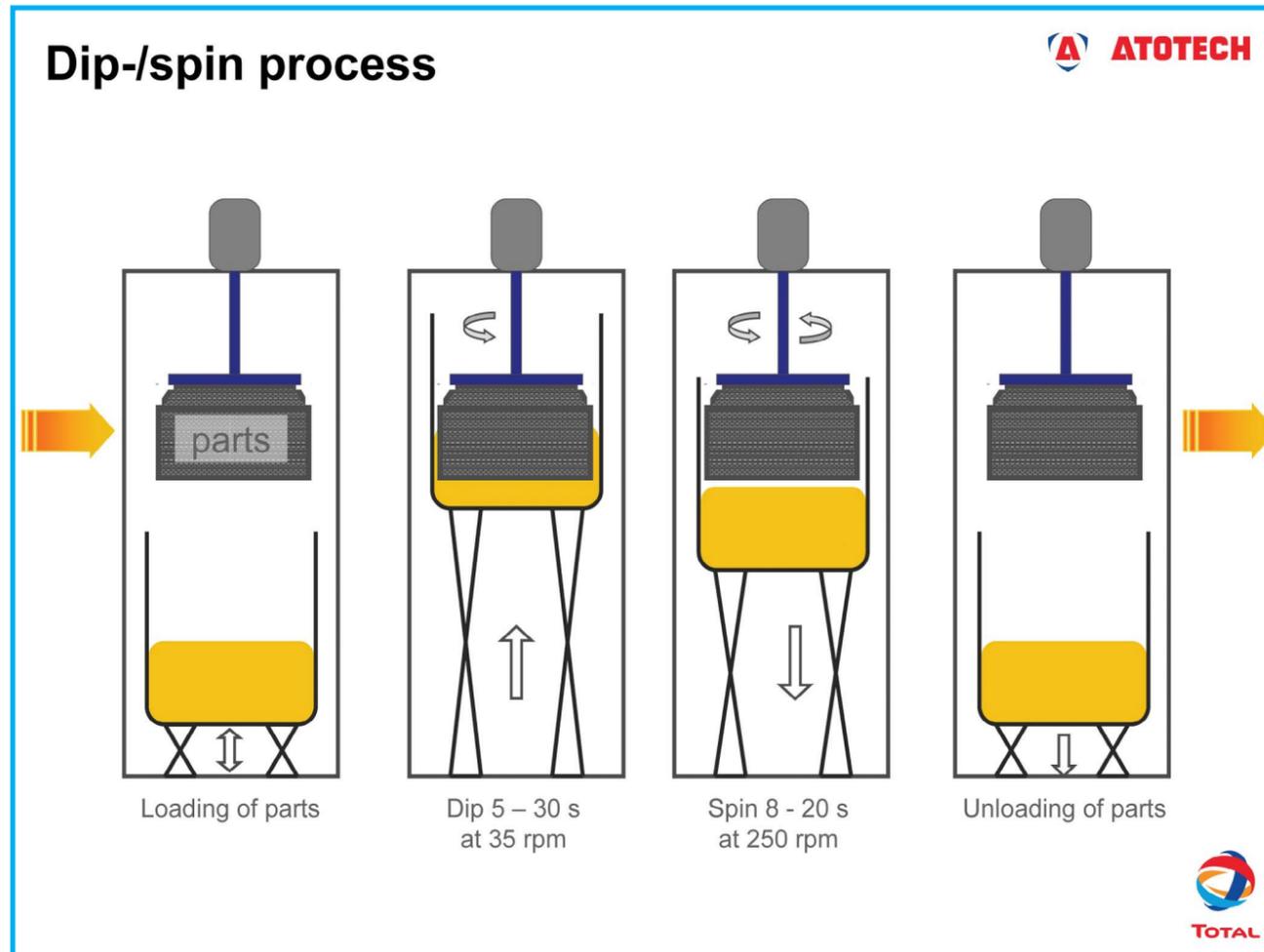
THE CHEMISTRY

Knowing that, chemistry allows us to do some very interesting things. We are able to select and use one element or metal to protect another. This protection can be accomplished by using a simple barrier coating, such as paint, plastic or wax to prevent oxygen from reaching the surface of the metal we want to protect. We can deposit gold, silver and zinc on the surface of another metal like iron to prevent this oxidation from occurring, thus making it visually appealing. However, if we deposited a layer of gold on every nut and bolt in a car, think of how that would increase the purchase price, not to mention your insurance rates.

MOST ECONOMICAL

The most economical metal used to prevent corrosion is zinc. Zinc can be melted and applied in a very heavy layer to prevent corrosion. This is great for really big things like guard rails and electrical towers. Zinc can also be dissolved in acids and bases and then deposited using electricity, this is known as electroplating.

Electroplating is used to deposit a very thin layer of one metal on the surface another. It is used on screws, brackets, hinges even your kitchen faucet. This produces a very good protective layer of zinc, however, using electricity can also cause some problems to the metal that you are trying to protect. These problems are known as hydrogen embrittlement and stress corrosion cracking. This is especially important for things like the bolts that keep the wheels on your car and



the screws that hold an airplane together.

WHAT IS IT?

So this brings us back to the very first question: What is Dip-Spin Coating?

Dip-Spin Coating is an application method used to deposit a corrosion-preventing layer of zinc and aluminum onto the surface of metal parts. This protective layer consists of a mixture of metal flakes, corrosion inhibitors and a binder system

to hold it all together.

It is designed to keep nuts and bolts together and free of rust for a very long time.

Screws, nuts, bolts, rivets and many other small steel parts are placed into a basket. This basket is then submerged in a tank of the zinc-aluminum coating mixture for a few seconds to make sure that all air bubbles are removed. Then the basket is removed and spun at high speeds to remove the excess coating, leaving behind a coated part

with a predictable amount of liquid on the surface. This part is then placed into a conveyor oven and the coating is cured in place creating a hard protective layer that will prevent corrosion.

So now I will paint you a very simplistic, but easier to understand picture of the process. Think about the Dip-Spin coater as your clothes washing machine and the conveyor as one of those 10 minute pizza ovens at the local pizza place.

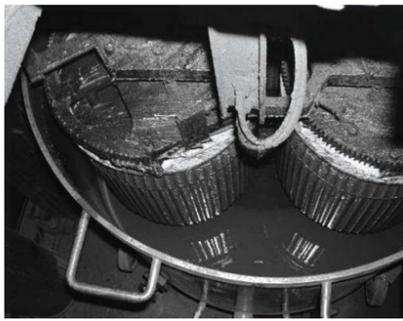
We are going to use the rinse

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PLATING AND ANODIZING: DIP SPIN



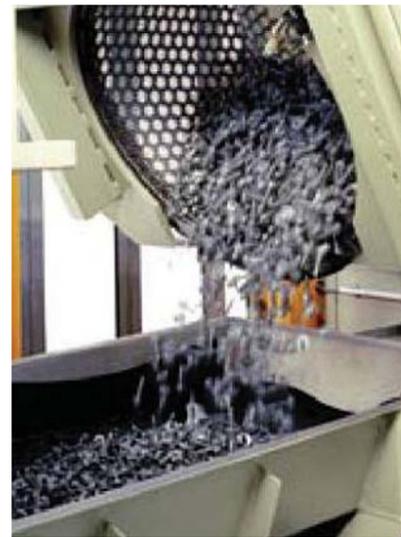
cycle of your washing machine and the parts are the clothes. The parts (clothes) are placed into the basket and the tank (washing machine) is filled with the coating (water). After all the air bubbles are removed and the parts (clothes) are completely soaking wet the tank is drained. Next comes the high speed spin cycle where all the excess coating

is removed leaving behind a coated part (damp clothes). The basket is then removed and emptied onto a conveyor belt. Please do not remove the basket from your washing machine, it may void the warranty. The parts are then conveyed using a set rate and time through a temperature controlled oven cooking the pizza dough - sorry I mean curing the coating. Then at the end of the baking oven the parts are cooled and packaged. In some cases these parts go back through the system a few more times to add additional thickness for increased corrosion protection or lubricants and color coats can be added.

Every day, the metal finishing industry treats or applies chemicals,



paints and custom formulated coatings to every type of metal you can imagine and even some you would never think of. ■



Brian Glowacki is the Product Marketing Manager Flakes & Sealers Group of Atotech Canada Ltd, Burlington, ON.

PLATING AND ANODIZING: MANUAL PLATING LINES

Continued from page 12

control of processing parameters throughout the complete electroplating cycle within the process tank. Small PLC units, geared to each key process tank, can be utilized to control temperatures, solution agitation frequencies, reverse etch currents and overall current efficiencies and duration. Due to the much longer electroplating times required by these processes, it is essential that high process yields be assured.



TANK TOP FURNITURE

In situations, such as hard chrome plating of large parts for salvage and repair, it is normally necessary to transfer a substantial amount of rectifier current evenly to the process tank and ultimately to the part. This is accomplished through the copper buss bar that transfers DC power from the rectifier source to the tank. Copper buss bars can only transfer a prescribed amount of power. Where large amounts of power are required, large amounts of copper buss bar are then required. This copper buss bar needs to be bent and formed to the top of the process tank and is referred to as 'tank top furniture'. In a Manual electroplating line, this tank top furniture can be placed easily as there is normally an opportunity to

provide more comfortable spacing around tanks. This provides for more efficient furniture set up for power distribution and also an improved accessibility for the operator.

SAFETY AND TRAINING

Whenever there is an operator or operators working on an electroplating line, safety from process solutions and part handling systems needs to be taken into account. This becomes more difficult on a manual electroplating line as the part and operator motions and process steps can be less predictable as compared to an automated electroplating line. Critical process tanks continue to utilize up to standard ventilation systems. However, these systems can be an obstacle when parts are to be maneuvered around as they progress from tank to tank. Intensive training is required for operators of manual electroplating lines due to the large degree of variability that they encounter during the processing of parts on a daily basis. Where new people are trained for such an electroplating line, it is essential that training be provided in a formal and hands-on fashion. This training would also need to cover the use of personal protective equipment or PPE. In a manual electroplating line, operators are much more likely to be in contact with the process solutions and the work to be processed compared to an automated processing environment.

lined line environment. This quality is normally based on a good line layout, well-maintained process solutions and a skilled electroplater. While watching skilled electroplaters work on a line you'll notice that they look at the process tank while parts plate and they look at the part as it exits a process tank. These observations allow skilled platers to make minor adjustments to fixturing, part conditions or process conditions, to ensure greater reliability. In many respects, these people are termed 'classic electroplaters'.

MAKING SPACE

A final consideration on a manual electroplating line is space allocation. Generally, the electroplating aspect of a product is just one step of many operations required to produce a finished end-product. All of the individual process steps can be viewed as cost centers. Floor space has a cost. A manual electroplating line, due to its lower volume production capabilities will generally occupy less floor space. In addition, the line will also cost less to construct overall compared to an automated plating line.

Before committing to a manual electroplating line format, it is important for the company to consider all of the variables. The future for this type of electroplating is very inline with North American manufacturing practices requirements and can function as a safe environmentally friendly aspect of any multifaceted business. ■

CLASSIC ELECTROPLATERS

Manual electroplating lines are capable of producing quality electroplated work that can far exceed what can be produced in an auto-

Peter Forth is with JBC Ltd., an electrofinishing engineering design and fabrication company based in Chatham, ON.

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RadTech East in Niagara Falls, NY Exceeds Expectations; Nyserda Announces \$2 Million Funding Opportunity

With attendees representing a broad cross section of manufacturing industries, uv.eb EAST 2009 conference presented the latest on UV (ultraviolet) and EB (electron beam) technologies, October 20-21 at the Niagara Falls, NY, Conference Center. The exhibit and conference covered four major themes: UV curing for Photovoltaics, UV/EB Curing for Printing and Packaging, UV Curing

for Wood Finishing and UV/EB Curing for Industrial Applications.

Co sponsored by the New York State Energy Research and Development Authority (NYSERDA) and RadTech, the event also featured the formal announcement of a \$2 million funding opportunity by NYSERDA. According to the NYSERDA announcement, "the goal of the solicitation is to elicit behavioral changes in the NY state

industrial marketplace leading to the increased adoption of these energy efficient, inherently green technologies in numerous industrial markets."

While designed as a regional event, attendees traveled from 25 states as well as Canada, Brazil and India. Featured application sessions included printing and packaging, wood and building products, industrial applications

and photovoltaics. Proposals for funding under PON 1641 must be received by NYSERDA by March 10, 2010; details are available at www.nyserdera.org/funding/1641pon.asp.

RadTech's next educational event for UV & EB curing technology is RadTech UV/EB Technology Expo & Conference 2010, May 24-26, 2010 at the Baltimore Convention Center in Baltimore, MD. ■



Steve Awadalla and Steve Rosiek Cytec.



Earl Ferguson Sartomer, Ryan Red, Roger Gouveia, and Christina Proess RM Ferguson /ICC Brampton PN, Bill Schaeffer Sartomer, Guy Primeau RM/ICC and James Goodrich, Sartomer.



Bob Bonham, H&S Autoshot, Georgetown, ON.



Eugene Ward and Robert Reichle, Siltech Corporation, Toronto and Brian Chambers, Novagard Solutions.



Jim Tennant and Michael Sartorelli, CAI, Prescott, ON.



Joshua Taylor, United Space Alliance and Kevin Joesl, Fusion UV.



Alec Botrie, Chemque, Toronto, ON.

Coatings East 2009, A Success in Nashville

The Coating East 2009 show went out with a bang in Nashville.

PCI and Nace announced the formation of a new joint venture, The 2010 North American Industrial Coating Show, to be held in Indianapolis October 27-29, 2010.

Meanwhile, the Chemical Coaters Association International announced a new partnership with FABTECH International & AWS Welding Show, including METALFORM tradeshow in Atlanta November 2-4, 2010.

CFCM Magazine will be exhibiting at both shows.

Photos by Pete Wilkinson



Richard Buekert, Line-X, Winnipeg, MB, drops by the CFCM Booth.



Jay Cressman, Unispray Systems, Waterloo ON.



Paul Lomax, Fischer Technology.



Rolly Wolford, Antony Brown and Brian Kittle of Mighty Lube announced the acquisition of OPCO.



John Cole, Parker Ionics, Eric Nyrhilla, Paintronics, Jim Oren and Brian Garvey, Parker.



Dave Rohland and Jeff Kloes, Global Finishing Systems.



Trena Benson and Robert Ablamowicz, DuPont Coating Solutions.



Craig Caldwell, Tommy Hopper, Pat Scalera Henkel chat with Terry Moore and Steven Smith, Clark Pulley.



Richard Northrup and Scott Bate DeFelsko, with Bill Brown, Atotech and Doug Trageser, Southern Chemical.



Myles Compton, Electro Steam Generators cleans up.



Greg Moise, Christian Canzano, and Mike Simmerer, Bex Engineering.



Merlin Halipchuk and Terry Clark, Monarch Industrial Coatings, Steinbach, MB.



Mark Williamson Iowa Waste Reduction Center, demonstrates the spray training simulator to Michael Remington, Owen-Illinois.

Canada's leading woodworking and design shows offered joint registration and conference sessions



Exel Canada's S.T. Rajan, Michel Bresolin, Mike Boers and Sanjay Tangri.



Ronnie Guindon, Global Finishing Solutions.

continued from page 1

four-day educational conference beginning on September 23.

The Woodworking Machinery & Supply Expo is Canada's premier woodworking event for manufacturers of cabinets, furniture, architectural woodwork and other wood products. The biennial expo is owned by Vance Communications Canada LCC and sponsored by the Canadian Woodworking Machinery

Distributors Association.

The woodworking conference included topics such as: Discovering Sales Opportunities in the Closet & Home Organization Market; Leaning & Greening Your Finishing Operations; Selling Wood Products to the Green Building Market; Three Keys to Economy-Proof Your Business and Double, Even Triple Your Sales in Just 10 Months and much more. ■



Lorenzo Pavone, Santana Cimo and Joe Sanders with the new Mito Spray System.



Front row left to right: Gustavo Lorencini-Renner Wood Coatings –Brazil, Jeff Topping-Renner Wood, Coatings –USA, Eric Bertelsen-Clancy's Commercial, Reinaldo Coelho-Renner Wood Coatings– Brazil
Back Row Left to Right: Adriano DaSiva-Renner Wood Coatings –Brazil, Jeremiah Phinnemore-Clancy's Commercial, Ian Moorhouse-Clancy's Commercial



Bob McElroy, Ron Pernal, Lona Ruot, and John Miller, Sherwin Williams.



Brent Fischer and Ken Johnston Becker Acroma chat with Anthony Sheng, Lemmer.



Mark Babin and Jonathan Kaufman discuss the new stain wiping pads.



Valspar Canada Richard Beaudoin, Alain Pomerleau, George Tanev, Mark Carruthers, Burt Spinosa, Jason Hanlon, Ralph Arp, Percy McIntyre



John Glover, AkzoNobel Wood Coatings and Jean-Marclavoie Peinture Can-Lak catch up.



Dino De Lellis Pro Glo Paints Ltd. and Steve Veroba, Lenmar wood finishes.



Paul Martin Homag with the Barberan B8 multi-head spray System.



Mirco Carloncelli, from Makor at the CNC Canada booth.



Jason Berger and Wade Christensen, Superfici.



CanLak Industrial Wood Coatings.



Jesper Hansen, Ceetec and Eric Bos, Santec Equipment demonstrate their shingle coating machine.



Anthony Sheng and Umar Sutar, Lemmer Spray Equipment.

Today's Dollar-Saving Paint Kitchens

BY STEVE ROMER

Today, wood manufacturing plants have many choices when it comes to the handling of their liquid coatings. With staff reductions, it also becomes very important to find ways to reduce manpower requirements in both small and large assembly areas. On top of this, it is much safer to have one controlled location in the plant for the coatings used. Centralized paint storage and pumping systems make sense for many manufacturers. It is much safer to locate all of the coatings in a remote paint storage and pumping area. The many advantages a remote area offers will be discussed in this article.

GOING REMOTE

For years, stains and lacquers have been stored in a remote area allowing people to retrieve five-gallon pails to be used in the finishing area. Often, the problem is the inventory is not properly rotated and some coatings are old before they are used. This can result in coatings being disposed of as old inventory. Many of the coatings are used on a regular basis but are taken back and forth all the time. And, small containers cost more money than larger 55-gallon drums.

The advantages of a remote paint kitchen are many, including:

- Safe storage of hazardous materials
- Larger containers which often reduce the cost of the coating
- Continuous circulation of coatings to the application points for very repeatable results
- Stains and coatings are delivered to their point of usage, with repeatable colors and glosses
- Reduced manpower to bring the coating to the application area
- Improved finish quality, as the coatings are being pumped out of larger containers
- Improved repeatability of colors and glosses
- Safe handling of hazardous materials

These are just a few of the bene-



fits of the modern-day paint kitchen. Each area is important but, when combined with the other advantages, it creates a win/win for all sizes of manufacturers.

AIR FLOW

A paint kitchen should be designed to control the fumes generated by opening the containers. By code, this is really a small constant air flow, which assures a safe environment without the harmful Volatile Organic Compounds (VOC) in the air. The air is taken off the floor at a rate of about one CFM per square foot of storage area. If the kitchen is 10 feet by 10 feet (100 square feet), only 100 CFM is required to assure a safe environment and good working conditions. This takes very little air out of the room, but safely controls the VOC in the air.

BIGGEST ADVANTAGES

I believe one of the biggest advantages of the paint kitchen is constant circulation of toners and stains to the application areas. This allows constant motion of the stains to the application area and assures color repeatability, even if a kitchen is made days apart. Stains can be circulated from their shipping containers (even 5-gallon pails) to the application areas. While tubing must be run from the paint kitchen to the application areas, the volume of coating in the tubing is small. For example, a paint kitchen 30 feet away from the application might require 50 feet of tubing, or a complete circulation loop of about 100 feet. If 1/4" ID tubing were used to circulate the material, this is only about one quart of material. By circulating from the paint to the application area and back into the pail, the stain colors will always be the same from day to day. With a small color changer, an operator can change from one stain color to the next at the application area with very little waste and assurance that

the colors will be on spec. Stain pumping systems should be equipped with a cover with an air-powered agitator to keep the pigments fully dispersed in the pail and circulation lines. Several stain colors can easily be stored in the remote paint kitchen ready for use at the application station. And, to assure quick and safe stain clean up, a small pump can be used to flush stain out of the application system at the end of production.

VOLUME AND COSTS

Clear coats, even two-component coatings, can be easily pumped from 55-gallon drums from the remote paint kitchen. Even a small shop can look at upgrading to the large container size. A shop that uses 5 gallons of a sealer, and/or a top coat, uses 25 gallons of coating per week. This means that they are spending about \$5.00 per day on a 5-gallon pail that is being thrown out when empty. This is \$25.00 per week, or \$1,300 per year, just for the container. Conversely, a 55-gallon drum is normally priced so that



the coating manufacturer will get the drum back when empty. Therefore, drum lots will save about \$1.00 per gallon just for the container and, typically, an additional percentage for the volume in the drum. This means that the cost per gallon can easily be reduced by about \$1.50 to \$2.00 per gallon when using a 55-gallon drum.

The drum can be stored in the remote paint kitchen, safely contained in the ventilated safe area. This assures a safer working environment and allows the painter to continue spraying due to the volume in the drum. This makes the paint kitchen a productivity improver in addition to keeping the environment safer. The productivity

increase alone will help pay for the safety of a remote centralized paint storage kitchen.

GOING GREEN

There are many two-component coatings now in use in the wood industry. Many are completely



GREEN, with no formaldehyde in the coating. With the post-catalyzed polyurethanes, they sand like the old lacquers, with much lower VOCs and a completely GREEN coating. The only problem is that these new coatings are catalyzed with a limited pot life. Here again, we can take advantage of a remote paint kitchen. The resin can be supplied in a 55-gallon drum and circulated to automatic meter mix equipment in the application area. As most resins have a preset gloss level, the resin should be constantly circulated to the meter mix system. This will keep the gloss level within the application range all the time. In addition, the catalyst and flushing materials can be stored in the paint kitchen and pumped to the meter mix system. This allows the coating to be fresh all the time, with only seconds of coating catalyzed at the application area.

The proper design of the paint kitchen is very important. But, even small manufacturers can and should look at remote paint kitchens. They must include correctly sized tubing, circulation rates, and constant agitation. A paint kitchen will help improve plant safety, improve productivity, improve color repeatability while at the same time reduce the cost of finishing. It is a great way to improve the finishing operation in a wood manufacturing plant. ■

Steve Romer is the Market Development Manager for Exel North America, Plymouth, MI.

continued from page 5

deliberations, the board has come to an agreement in principle to merge TOSCOT into the CPCA. The goal would be to complete a merger by the end of 2009.

The result from the vote during the Oct. 19 meeting was that the majority was in favour of becoming the educational committee of the CPCA. At presstime the merger was official.

President of CPCA, Jim Quick, comments, "TOSCOT's dedication to the advancement of the coatings education has been a tremendous service to the paint industry for many years." He adds, "Through this merger we hope to build on that success by continuing to provide formulators with opportunities to learn about the latest technical advances and new product developments."

Sur/Fin 2010 Set For Grand Rapids, Michigan!

Finishing exhibitors are invited to share the stage alongside equipment and chemical manufacturers. DeVos Place in downtown Grand Rapids, Mich., host to a diverse range of industry conferences, meetings, and exhibitions, adds another special occasion to its roster of events scheduled for next year: SUR/FIN 2010! The announcement comes from the National Association for Surface Finishing (NASF), the chief organizer and promoter of SUR/FIN 2010.

The sprawling space features a 162,000-square-foot, column-free exhibit hall, 40,000-square-foot ballroom, and 26 individual meeting rooms encompassing 32,000 square feet.

Management Training Certificate Program to launch in January 2010.

The Centre for Advanced Wood Processing (CAWP) has created a new online management training program for the Wood Manufacturing Council. The program consists of 8 web-based modules on Quality Management & Control, Sales & Marketing, Business Finance & Investment Evaluation, Production Planning; Human Resources & Safety, New Product Development; Factory Layout & Equipment Justification and Supply Chain Management.

Each affordable course module can be taken on a part-time basis over six weeks, and has been designed specifically for the wood products industry. The training courses make extensive use of case studies and industry examples. Participants can take modules one by one at their own pace. For more details view the Management Program web pages, contact cawp@cawp.ubc.ca or download the PDF.

Certificate Program in Industrial Wood Finishing

The UBC Certificate in Industrial Wood Finishing is a part-time industry training program that takes place every year from January to April. The program consists of 100 hours of online learning from January to March followed by a 6-day practical session in Vancouver in late April. It is one of the most comprehensive courses on wood finishing currently available, and covers wood properties, sanding, coating types and application methods, guns and compressor systems, automated finishing, environmental compliance, safety and quality testing.

Previous participants have come from a variety of backgrounds including spray finishers, line supervisors, production managers, owners of small

shops, coatings lab technicians, equipment sales reps, and manufacturing engineers. They have enrolled from across Canada, the United States, and overseas.

Product Development Assistance Services for Manufacturers

CAWP helps wood products manufacturers of all types and sizes to develop new products. There is a large team of technical specialists and an advanced 10,000 square-foot manufacturing lab that features the latest technologies, including three and five-axis CNC routers, a CNC beam processor, and UV-curing flat line finishing equipment. Our team can help manufacturers identify market opportunities, brainstorm and refine design concepts, model new products using advanced computer-aided-design programs, create and test prototypes, track production costs and recommend manufacturing solutions.

Note that funding support for this program is available to BC companies through the Business Innovation Partnership.

cawp@cawp.ubc.ca

Far Coast Blue Pine Furniture Project

This year a unique student project has been underway at CAWP in which students from our B.Sc. Wood Products Processing program and Emily Carr University's Industrial Design program have worked together in teams to design outdoor chairs and tables using wood from BC's Mountain Pine Beetle-ravaged northern forests. The teams were assigned a design brief from Far Coast, the official hot beverage supplier to the 2010 Olympic Winter Games, in January. In May the winning designs were chosen, and students have been working since then to manufacture the furniture, which will be used in a number of Far Coast "warming zones" at the Athlete's Village and various event venues in Vancouver and Whistler.

International Surface Finishing Academy Announces 2010 Introduction to Anodizing Workshop Dates and Locations

The International Surface Finishing Academy (ISFA) recently announced dates and locations for the 2010 North American Tour of the popular "Introduction to Anodizing" workshop series. This workshop is instructed by the internationally respected, Dr. Anne Deacon Juhl and will cover the fundamentals of all types of sulfuric anodizing, from both the commercial, and industrial perspectives.

The two day workshop is designed to increase the knowledge and ability of anyone involved in operating an anodizing line. With an emphasis on quality, the program takes students through the entire process from beginning to end, starting with the metallurgical properties of aluminum alloys commonly anodized, and going right through to the final rinse and sealing processes. Completion of this ISFA Workshop will provide students with a well-rounded understanding of practical anodizing, supported up by an expanded knowledge about the fundamentals of anodizing in sulfuric acid.

Locations and dates for the 2010 workshops are as follows:

- Phoenix, AZ January 25-26
- San Jose, CA February 17-18
- Chicago, IL May 11-12
- San Diego, CA August 17-18
- Mystic, CT September 7-8

Folio celebrates 20 years

It was November, 1989, when Gord Howes, President, and his partner, Rhett Barriere, Vice-President, Sales & Marketing, started Folio Instruments, which has grown to become Canada's leading supplier of scientific instruments.

In honour of the company's 20 years, they are changing their logo to reflect the two decades. They also hope to do something special to thank those manufacturing companies who have been with them since the beginning, of which there are three out of the 14 manufacturers the company represents.

Folio has come a long way since Howes began it in his home basement in Kitchener, ON, and Barriere did the same in Montreal, QC. Offices have moved three times in Kitchener and four times in Montreal, always to larger locations. Folio now employs 13 people out of a total of five offices across Canada, the other offices being Ottawa and Sarnia, ON and Calgary, AB. Barriere and Howes had both worked for Technical Marketing Association as salespeople when the company went under, so they decided to go into business for themselves.

Beyond selling at Folio, there is a strong overall support program in Canada, helping customers to find the instrument they need to improve their production. Folio constantly informs customers on new products and important information regarding scientific instruments. Howes says the company is all about finding solutions. The professionally trained sales team and service engineers will install, service and give calibration certificates, while also training customers on various instruments.

Howes says he has seen a dramatic decrease in paint manufacturers in the last two decades, which he feels might be due to the state of the auto industry.

Perhaps some of the most exciting news for Folio is that they are the first company in Canada to launch their own line of gauges. There is the Folio palm sized thickness gauge and a couple of glossmeters, which Howes says have been well accepted.

All in all, Folio has had a good 20 years and remains optimistic about the future.



Neil Howard and Gord Howes from Folio Instruments chats with CFCM's Sandy Anderson about their own brand of testing equipment at the recent TOSCOT Symposium in Niagara Falls.

Charleston, SC October 4-5
Jupiter, FL November 16-17
Las Vegas, NV December 7-8

People on the Move

Tony Keane Resigns as Executive Director of NACE International

NACE International, the Corrosion Society, says goodbye to Tony Keane as Executive Director. Under his leadership, NACE membership has grown over 50 per cent, with international membership increasing to over 6,000 members (30 per cent of total membership). Additionally, the annual budget has risen to over \$21 million. Keane will be leaving on Jan. 8, 2010.

Del Doyle, P.E., NACE Senior Director for Strategic Initiatives, will be the Interim Executive Director while the NACE Board of Directors conducts a global search for a permanent replacement.

International Paint Names PC Manager, Canada

International Paint LLC, part of AkzoNobel, has promoted Darrin Andrews to the position of protective coatings manager, Canada.

Andrews will be responsible for leading the protective coatings business throughout Canada, including all business development, sales, engineering sales, and marketing activities specific to Canada.

Previously, Andrews was the Canadian director of industrial coatings sales for Devco High Performance Coatings, also part of AkzoNobel. Devco and International Paint are nearly halfway through a two-year effort to integrate the Devco business with the International Paint protective coatings business.



Darrin-Andrews

Univar Names President and Chief Executive Officer

Univar has announced the appointment of John J. Zillmer as President and Chief Executive Officer.

Gary Pruitt, Non-executive Chairman of the Board, announced his plans to retire as Chief Executive Officer last April.

Zillmer joins Univar after serving as Chairman and Chief Executive Officer of Allied Waste Industries Inc. from 2005 until it merged with Republic Services in December 2008.

Fusion Appoints New Market Support Manager for the Fiber Optics Market

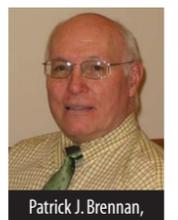
Fusion UV Systems, has appointed John Guarniere to the position of Market Support Manager for the optical fiber curing market. John will be responsible for supporting Fusion's existing customer base and for growing Fusion's worldwide presence in the industry.

Guarniere has been an employee of Fusion UV Systems since 2006.

Industry Professional Obituary

Patrick J. Brennan, 60, Vice President of Q-Lab Corporation, Westlake Ohio, died September 20, 2009. During his 30-year Q-Lab career, he became established as one of the few experts in the field of accelerated weathering and lightfastness. He was an active member of ASTM, ISO, AATCC standards making organizations.

Brennan published numerous technical papers on weathering and lightfastness and taught audiences around the world. His contribution to the science of weathering and light stability have been immeasurable.



Patrick J. Brennan,

Business Profile: A Trend Towards Tiny

BY SANDRA ANDERSON

As more paint and coatings finishers embrace automation, FANUC Robotics Canada Ltd. based in Mississauga, ON, has taken robotic and gun motion to a new level, not bigger, but smaller.

FACTORS TO CONSIDER

The overall factors a finisher should consider for justification are quality, material costs, warranty costs, labour costs/savings and compliance issues according to Barton Faylor, FANUC's Program Manager for Automotive and General Industry Paint Market, Paint Finishing Group.

"One of the things that we have seen is that the traditional painting business is quieted as auto suppliers go through their adjusting, and so we've been increasing our focus on some newer, emerging market segments." Faylor explains that the company is looking at two different markets:

- large product working with wind turbine, boatsetc. along with military camouflage painting on trailers.
- introduction of the new FANUC Robotics Paint Mate 200iA small table top robot, to focus on the small reciprocator paint line finishers market and small parts painting.

For finishers who have been in business many years who need to improve their quality and operation so they can move more product through the line, robots are a way to save set up time.

"So, one factor to consider is targeted spray instead of cloud of spray," says Faylor. "The robot can move one gun more efficiently than a fixed machine where multiple fixed guns are needed. This can significantly reduce overspray and the associated paint waste and environmental impacts."

He describes some case studies using FANUC equipment. "What we are seeing is getting into new markets...spraying a lubricant on a quick disconnect fitting used in airline industry, for example, but they needed quality of spray, increased productions...the robot could spray multiple parts at a time. Now the operator loads two at a time, the robot sprays, then the operator takes them off and puts two more on."



ROI ON EQUIPMENT

Faylor says the typical return on investment for a robot to be used in finishing is between 12 to 18 months. "Typically people have faith in robotic automation and customers request it," says Faylor. However he says if the ROI is more than three years they tend not to look at robots for their lines.

THE NEWEST PRODUCTS

FANUC Robotics Paint Mate 200iA is an example of one of the newest painting robots out on the market today targeted for small and low-end painting. Many other robot manufacturers are also coming out with small robots for the paint and coatings industry. For FANUC this is a new area.

"In the past we have had a wide range of robot model sizes, but nothing this small," says Faylor. "But this is a small robot, with low cost and targeted functionality, so we can go after the smaller system opportunities and be cost competitive." He continues, "It was an answer to the needs for a smaller product at the low end of the market." The company already had the smaller LR Mate 200, which is used in material and food handling. They have taken the same robot and adapted it with minor changes and a hazardous approval rating for a paint line and it has become the Paint Mate. Faylor says this was a natural progression for this robot.

"So this robot can now go into painting operations," says Faylor. "In

addition to liquid spray applications, it also fits very well into the opening of a powder booth and fits well in powder touch up."

FANUC has been in the painting industry for 26 years, and the paint robots have always been big for fast colour change in the automotive and tier suppliers. But requests for something smaller were flooding in.

"It was a combination of local demands for something in the smaller lower cost market and demand from European and Asian counterparts," says Faylor. "I think that demand is there for the targeted spraying they want to make small targeted system, have variability, control and consistency and help eliminate human error."

He adds, "Smaller production operations with chain on edge painting lines are looking at ways to improve production and the new FANUC Robotics Paint Mate is an excellent fit and replacement for fixed guns and reciprocators."

"We are entering new unconventional markets with a small paint robot," says Faylor.

ADVANTAGES?

Implementing robotic automation can improve overall quality, reduce material costs and increase productivity.

"From a quality standpoint, an automated robotic application of material brings consistency to the spray out process," says Faylor. "Repeatable robot paths and gun triggering leads to material savings

during the application process."

Gun triggers are precise. Material is delivered in a consistent motion allowing higher transfer efficiency and reducing material overspray.

"Consistent proper application all but eliminates product defects caused by build variation, therefore reducing part rework and scrap rate," says Faylor. "Additional production increases may be realized due to a larger reach capacity a robot arm affords along with greater painting speed endurance."

DISADVANTAGES?

The initial capital investment may be more than a traditional fixed gun or reciprocator system. The ROI impact versus initial capital outlay is an item that finishers have to weigh carefully. The other disadvantage is that for all the reliability and repeatability, a robot is not ideal for very short "one time" runs.

"If the finisher is a custom job shop, this robot may not be the right piece for him," says Faylor.

IN THE FIELD

Faylor says the company's business is equally distributed, larger robots have fewer models, smaller numbers, and more system engineering.

Fanuc's small paint robots have been out for just under a year and a few have been installed in Canada. However, Faylor admits, "It has been a pretty tight year for automation in general." That being said he adds, "We are pleased with its acceptance." Applications in Canada include top coat on spray truck emblems and top coat spray on voltage transformers. We have an Integrator (engineering and installation service that supplies a complete custom system) in Canada that is buying the robots and supplying that solution to the end customer," says Faylor.

Although business everywhere has slowed, Fanuc is optimistic. They still plan to remain strong in the automotive business as it goes through its economic adjustments. But their smaller robot has opened new doors in the paint finishing market. "Our outlook for this year is optimistic with growth opportunities in general industry applications" says Faylor. "We see things picking up this year, our quote level is high and customer project scope is high. The Paint Mate is a game changer for us." ■

Finishing Training via the Web: The UBC Certificate in Industrial Wood Finishing

Wood finishing typically represents at least 25 per cent of the cost of manufacturing value-added wood products, and the decisions made and actions taken at this stage of production are critical to the quality of furniture,

cabinets, doors, windows, and architectural millwork. Finishing is a complex subject because it involves a knowledge of several branches of science and engineering. Practitioners need to know how to operate finishing equipment, and under-

stand how the quality and properties of the wood and coatings influence the quality of finished products. They also need to be aware of environmental and safety regulations governing the finishing of wood.

With all of these challenges it is surprising that formal training in wood finishing is quite difficult to find. For many manufacturers, the only skills training that is available is provided by vendors of industrial machinery and, even then, this is usually only in major population centres. A study in 2003 by the Wood Manufacturing Council found that finishing technicians were one of the three most difficult occupations to recruit for. In response to this need for accessible, unbiased, training opportunities, the Centre for Advanced Wood Processing (CAWP) in Vancouver began offering a certificate course on industrial wood finishing in 2005. The program consists of 100 hours of online learning (held each year from January to March) followed by a 6-day practical session, typically held in Vancouver in late April. It is taught by Professor Philip Evans and Jason Chiu, and is one of the most comprehensive courses on wood finishing currently available. The course covers wood proper-



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Industry trainees perform hands-on training in CAWP's advanced manufacturing lab, Vancouver, BC.

ties, sanding, coating types and application methods, guns and compressor systems, automated finishing, environmental compliance, safety, and quality testing.

A unique aspect of the course is that it allows industry learners to study the theoretical aspects of finishing in a convenient, web-based format that is flexible to learners' work schedules and other commitments. Learners are advised to set aside around eight hours per week for the web-based portion. During this time they read and review the course material, which includes text, photos, diagrams and videos. Along the way electronic quizzes help learners measure their progress, and participants also exchange experiences and opinions with each other via an online discussion tool. An individual project report is the last task during the online learning portion, and help is always readily available from course instructors via email or telephone. Throughout the course, workplace examples and case studies are referenced as much as possible in order

to provide real-world context.

Once the web-based study period is complete, learners spend one week at the University of British Columbia in intensive practical sessions devoted to a variety of hands-on exercises, as well as demonstrations, factory visits, and guest presentations by specialists from coatings and equipment companies. This is always a popular experience, as it gives participants a chance to put the theoretical knowledge they have gained into practice. Normally each participant shows up for the practical week armed with a list of questions that have come up during their online studies, and there is ample opportunity to have these answered. "We deliberately leave the schedule for the practical week quite flexible" says Jason Chiu, a technical specialist at CAWP who acts as a course tutor and coordinates the online discussions. "By the time we get the participants here we know quite a lot about their goals and interests, and the companies they work for. As a result we're able to tailor the

week to fit their specific needs".

To date participants have come from a variety of backgrounds, including spray finishers, line supervisors, production managers, owners of small manufacturing shops, coatings lab technicians, equipment sales reps, and manufacturing engineers. They have come from around Canada and the United States, as well as from overseas locations such as Indonesia and Vietnam. "One of the things that participants are always surprised about is that they learn almost as much from each other as they do from the course material and instructors," says Iain Macdonald, CAWP's Managing Director. "It really helps that they come from such a diversity of backgrounds, and we try to build in a lot of interaction opportunities to take advantage of this".

The Centre for Advanced Wood Processing (CAWP) is located at the University of British Columbia, and was established in 1996 as Canada's national centre of excellence for the wood products industry. CAWP carries out a wide range of training programs for technical and managerial personnel, and its facilities include a 10,000 square-foot advanced wood processing labora-

tory equipped with state-of-the-art computer-controlled manufacturing equipment and research tools. Beginning in 2000, the Centre for Advanced Wood Processing has organised industry conferences on wood finishing every other year in Toronto and Atlanta, and has conducted numerous practical workshops and in-plant training sessions in various parts of Canada. Dr. Philip Evans, a UBC professor whose research career has focused on enhancing the appearance and protection of wood surfaces, authored the certificate program and teaches wood finishing at UBC, both to undergraduates and industry learners. "Our aim was to blend the teaching of solid scientific principles with a practical solutions-based approach that promotes learning in context," he explains. "Based on what participants are telling us, we think we've been able to strike the right balance between the two". ■

For more information on the Certificate in Industrial Wood Finishing or other CAWP programs readers can visit www.cawp.ubc.ca or call 1-866-822-2297 (toll free).

NEW PRODUCTS AND TECHNOLOGIES

Xcite Airmix Manual Gun

Kremlin by EXEL NA has released the new Xcite Airmix Manual gun.

This gun has improved atomization, lighter weight, less trigger pull, new fluid swivel and better fit, feel and comfort.

It is "green" offering cleaner booth environment resulting in reduced clean-up costs, lower solvent emissions for a cleaner outside environment and low energy consumption.

www.exel-na.com



UVRAY Highest efficiency, lowest consumption

Ceffa Finishing Group introduces the UVRay, which can provide energy-resource savings which can reach up to 30 per cent compared to traditional systems.

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The electronic lamps control optimizes lamps power delivery and consumption according to the manufacturing flow: in case of a production gap – with pieces not running on the line from a minimum

of 2 sec (short stop) up to a maximum of 20 min (long stop) - the lamps in the oven will automatically turn from the standard working power of 80-100 W/cm² down to about 30 W/cm²; for stop times longer than 20min the unit will automatically switch off.

www.ceffafinishinggroup.com

Phoseon Technology introduces the RX FireLine UV LED Curing Systems

Phoseon, Hillsboro, OR, introduces the RX FireLine series, which is the next step in the evolution of their world leading Semiconductor Light Matrix (SLM) based high power UV LED curing systems.

The RX FireLine is a scalable UV LED curing solution with utility in a wide variety of web/conveyor based UV curing applications but with a smaller footprint than the existing RX FireFlex product family.

www.phoseon.com

Sherwin-Williams Introduces Mildew-Resistant Coating

Sherwin-Williams, Cleveland, OH, has introduced Hi-Solids Polyurethane Mildew Resistant, a low-VOC, aliphatic acrylic polyurethane resin coating. It is a two-component gloss and color-retentive, heavy-duty

maintenance coating that the company says is ideal for use on tanks and structures in high-visibility areas.

The coating provides protection against mildew growth in hot, damp, and shady conditions and is effective on interior and exterior prepared substrates in industrial environments and is suitable for use in USDA-inspected facilities and conforms to AWWA (American Water Works Association) D02-03.

www.sherwin-williams.com.

Short-Chain (C6)* VOC-Free Phosphate Ester Surfactant

Chemguard, Mansfield, TX, a leading manufacturer of fluorosurfactant specialty chemicals, has added a short-chain (C6)* phosphate-ester fluorosurfactant free of volatile organic compounds (VOCs) to its product line - Chemguard S-764P.

This new, VOC-free, short-chain (C6), phosphate-ester-based product is ideal for use in VOC-free coatings, floor polishes, and inks. The surface activity of S-764P rivals competitive longer-chain perfluoro products now on the market, with no need to increase concentrations to obtain similar results.

www.chemguard.com

CALENDAR OF INDUSTRY EVENTS 2010

April 12-15, 2010: American Coatings Show and Conference, Charlotte, NC.
www.american-coatings-show.com

April 13-16, 2010: PaintExpo, International Leading Trade Fair for Industrial Coating Technology, Exhibition Center Karlsruhe, Germany, Organizer: FairFair GmbH.
www.paintexpo.de

May 24-26, 2010: RadTech 2010, Baltimore Convention Center in Baltimore, MD.
www.radtech2010.com

June 15-16, 2010: Sur/Fin 2010, annual conference and trade show organized by the National Association for Surface Finishing, Grand Rapids, Michigan. www.nasf.org

October 2-3, 2010: CPCA 2010 Conference in Montreal. www.cdnpaint.org

October 5-7, 2010: Canadian Manufacturing Week: at the Toronto Congress Center.
www.sme.org

October 12-14, 2010: parts2clean, International Leading Trade Fair for Cleaning within the Production and Maintenance Processes, Exhibition Center Stuttgart, Germany, Organizer: fairXperts GmbH. www.parts2clean.com

October 12-14, 2010: COROSAVE, International Trade Fair for Corrosion Protection, Preservation and Packaging, Exhibition Center Stuttgart, Germany, Organizer: fairXperts GmbH. www.corosave.com

October 27-29, 2010: The Powder Coating Institute (PCI) and NACE International, The Corrosion Society (NACE), host The North American Industrial Coating Show at the Indianapolis Convention Center, bringing together CoatingsPro and The Coating Show will provide the industry with a www.nace.org and www.powdercoating.org.

Nov. 2-4, 2010: FABTech/Finishing Expo, Atlanta, GA. www.fmafabtech.com

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AD INDEX

American Coating Show	2
Canadian Finishing Systems Limited	12
Chemcraft AkzoNobel	24
Chemroy Canada Inc.	10
CONN Blades	11
Comet Chemical	11
DeFelsko Corporation	4
Dynamix Inc.	14
Henkel	Outside Back Cover
Inortech Chimie	9
JBC Limited	14
LiquidMix Agitators	16
NAI Coating Show	27
PEC Process Electronics Corporation	15
Temporary Operations & Maintenance Inc.	13

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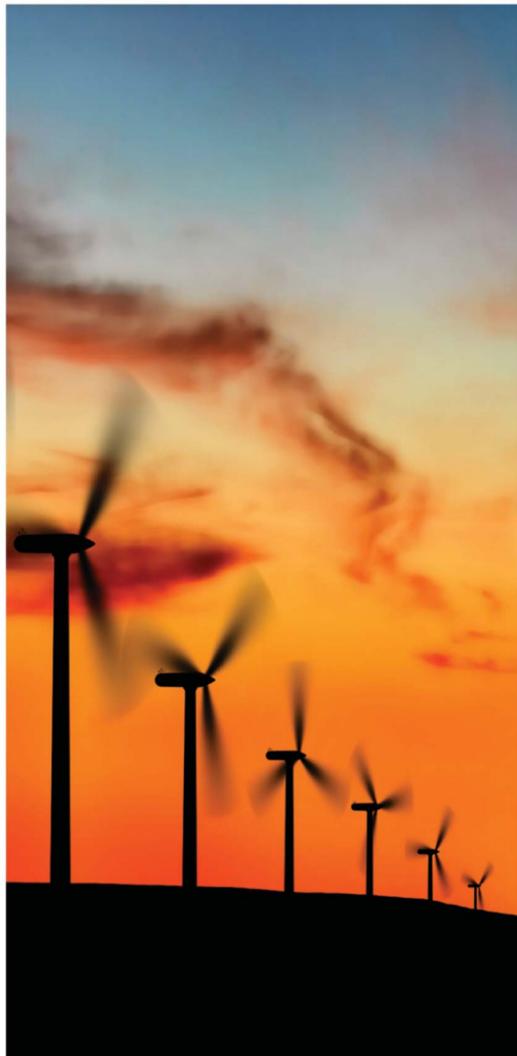
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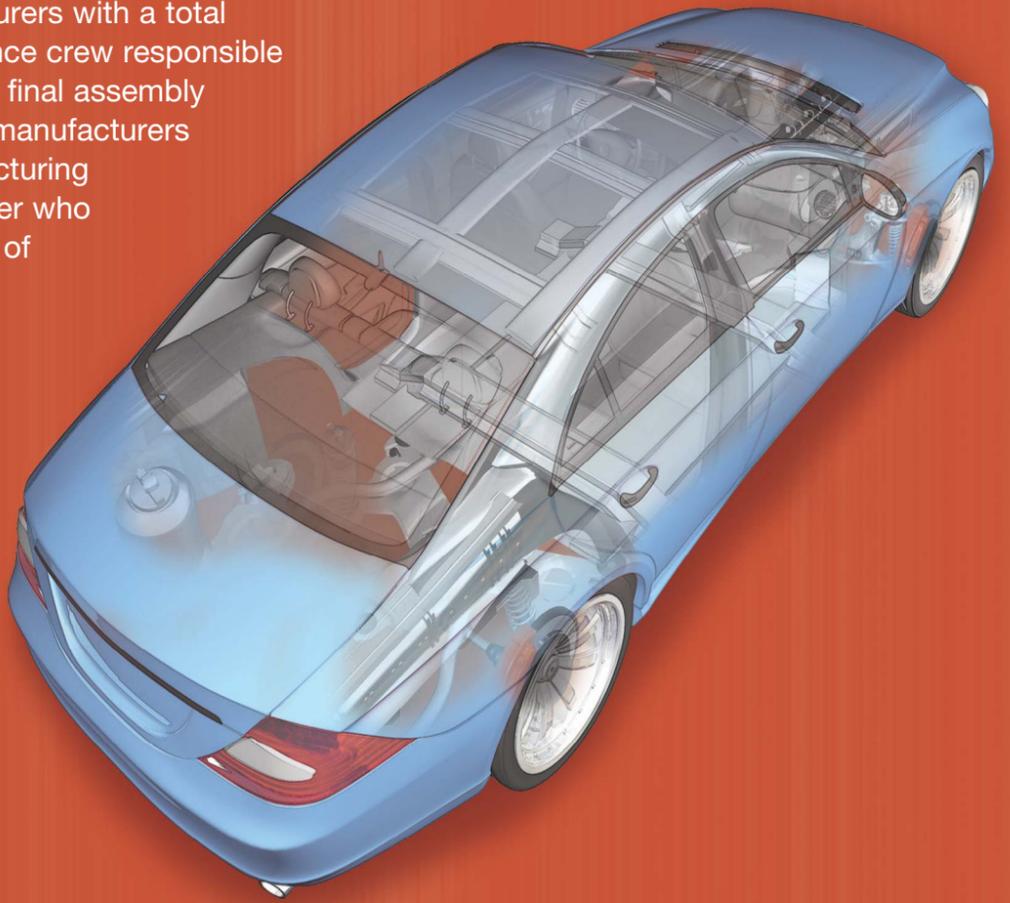
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