



CFCM

CANADIAN FINISHING & COATINGS MANUFACTURING MAGAZINE

Powder Coating **SPECIAL ISSUE**

Inside This Issue:

- Wood Finishing Kitchen Cabinets
- Powder Coating Spray Equipment
- Mixing and Dispersion Equipment
- Why Sustainability?
- Thickness Testing

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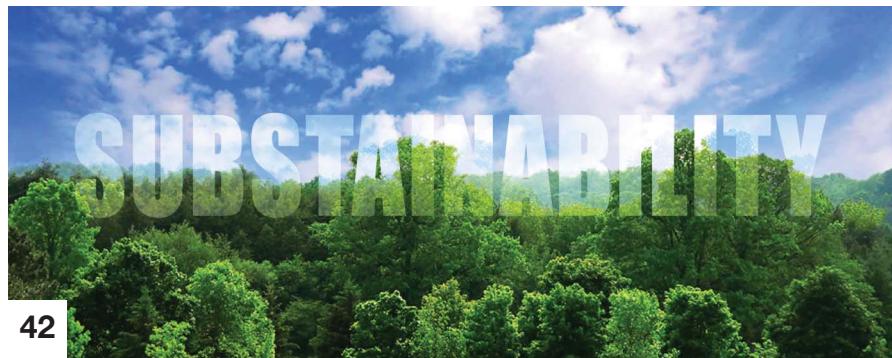
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Smart Surfaces Market to Grow to 13.5 Billion in Five Years

I find the idea of Smart Surfaces very intriguing. Surfaces that change their function in response to outside stimuli. They have attracted attention when it comes to research and development over the past 10 years and are now being commercialized. Smart walls, floors, car bodies, cell phone cases and other smart surfaces are popular business opportunities. NanoMarkets of Glen Allen, VA, has released a new report, Smart Surfaces Markets 2015-2022, that says the smart surfaces market will grow to \$13.5 billion by 2020 and scale to almost \$30 billion in 2022. The report shows where they will generate new business revenues in the construction, energy, transportation, medical, electronics and military/domestic security sectors.

The biggest market for smart surfaces will come in transportation, reaching \$4.1 billion in revenues from smart surfaces in 2020 for products sold for cars, trucks, aircraft and marine vessels. Even major firms such as General Motors, Johnson Controls, Toyota and Bayer are getting involved. Although there is much talk about smart windows in automotive, NanoMarkets sees the major opportunities emerging in

smart self-repairing car bodies and smart surfaces on vehicles that provide protection from corrosion and ice.

According to the report, the construction industry will spend \$3.6 billion on smart surface products in 2020. About one-third of these revenues, NanoMarkets believes, will come from smart solar surfaces. These surfaces include both photovoltaic panels that are monolithically integrated into roofs and windows and self-cleaning solar panels that can rid themselves of dust and dirt and thereby increase their energy conversion efficiency. Self-cleaning walls, windows and other surfaces are also expected to be money generators.

Since smart surfaces often require fine patterning to create their required functionality, the smart surfaces revolution may breath new life into nano-manufacturing technologies such as dip-pen nanolithography (DPN) and nanoimprint lithography, which have been confined to application markets for at least a decade. DPN especially has characteristics that will make it of growing importance for creating smart surfaces. One is DPN's relatively low cost. Another is that



DPN applications already include some that seem highly relevant to smart surfaces, including biosensors, nanosensors, rapid prototyping and metamaterials.

The report includes eight-year forecasts in both volume and value terms for each end-user sector, with breakouts for major types of smart surfaces such as self-cleaning surfaces, energy-generating surfaces, self-repairing surfaces, etc. In addition, it also assesses the R&D and marketing strategies of the leading firms that are active in the commercialization of smart coatings.

sandra.anderson@cfcm.ca

in the NEWS

Association News

CASF Events for 2015

The Canadian Association of Surface Finishing hope to hold its first Lunch and Learn event in Western Canada towards late summer 2015 with the date and exact location still to be determined.

The Second Lunch and Learn event in Quebec towards is also being planned for late summer with the date and exact location to be determined.

CASF will be holding its Environmental and Technical Forum at the Hilton Garden Inn, Toronto, on November 18, 2015.
www.casf.ca

Radiation Curing Program: RadTech International North America/SUNY College of Environmental Science & Forestry

With the evolution of energy curing technologies,

entire industries are changing. An increasing emphasis on UV (ultraviolet) and EB (electron beam) curing creates new opportunities for sustainable materials manufacturing. With this in mind, RadTech International, North America (RadTech) and the State University of New York College of Environmental Science and Forestry (SUNY-ESF) have partnered to create a program that bridges academic and professional development.

The Radiation Curing Program (RCP) helps both students and industry professionals capitalize on these emerging opportunities. Whether you are starting a new career, advancing in your current role, or simply want to better understand these technologies, RCP will help position you and your organization to lead the movement.

RCP incorporates online professional development short-courses that can be completed in 4-6 hours including:

Principles of Energy Curing Technologies

Basics of UV Curable 3D Printing

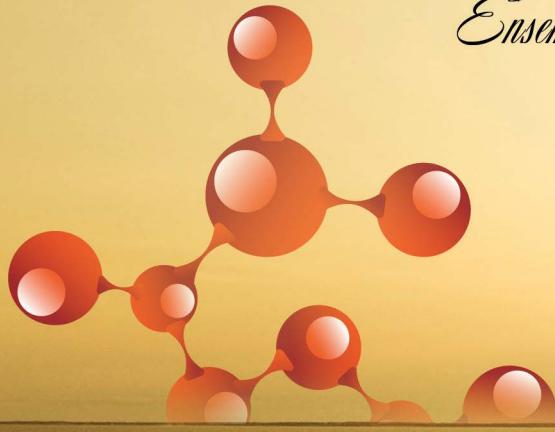
For those wanting more in-depth knowledge, RCP offers three advanced online courses that provide foundational and advanced treatment of current and emerging UV/EB curing principles and applications.

- Introduction to Polymer Coatings
- Radiation Curing of Polymer Technologies
- Radiation Curing Equipment, Instrumentation and Safety

These advanced courses may be taken as non-credit or for three 500-level credits each. Participants taking all three core courses for credit can apply for an Advanced Certificate in Radiation Curing from the State University of New York.

The Radiation Curing Program's online format is flexible and accommodates work, travel, and other commitments. This allows you and your organization to advance in this innovative

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and rapidly growing field in a convenient and cost-effective way. It is the perfect educational solution to compliment in-house training for new and existing employees and for those wanting to learn more about the radiation curing field.

No matter how you decide to be a part of the Radiation Curing Program, this is an incredible opportunity to position yourself and your organization to meet current and future energy curing challenges and opportunities.

www.radcuring.com

Western Manufacturing Technology Show in Edmonton

Despite a decline in oil prices, growth is forecasted for the Canadian manufacturing industry thanks to a lower dollar. From June 15-17, 2015, thousands of manufacturers are expected to attend Western Canada's largest manufacturing event, the Western Manufacturing Technology Show (WMTS) in Edmonton, as rising export profits enable local businesses to invest in new production technologies that are necessary to improve their competitive edge. Through state-of-the-art manufacturing equipment, educational

sessions and networking opportunities, WMTS provides an unprecedented venue to help ensure the continued long-term success of Western manufacturers.

The event will be held at the Edmonton EXPO Centre, Northlands, Halls F, G & H, 7515-118 Avenue, Edmonton.

WMTS is Western Canada's largest manufacturing technology show, bringing the latest technologies, products and processes, the most relevant industry information, and prime networking opportunities, to Western manufacturers.

A one-stop, all-encompassing venue for the latest technologies and trends in machine tools, tooling and accessories, metal fabrication, design, automation and assembly, advanced manufacturing, plant maintenance and process control. More than a tradeshow, WMTS features educational sessions, an industry keynote, an interactive town hall panel and key networking opportunities.

Geared towards the needs of manufacturers in Alberta and throughout Western Canada in industries ranging from oil and gas, industrial and commercial machinery, construction, mining, agriculture, wind energy and aerospace.

It is presented by SME, a nonprofit organization that has served practitioners, companies, educators, government and communities across the manufacturing spectrum for more than 80 years. Through its strategic areas of events, media, membership, training and development, and the SME Education Foundation, SME is dedicated to advancing manufacturing by addressing both knowledge and skill needs for the industry. www.wmts.ca

Company News

Univar Canada to Distribute Thiele Kaolin Clays.

Univar Canada and Thiele Kaolin Company have entered into a distribution agreement where Univar Specialties will be Thiele's exclusive distributor for their complete line of Kaolin Clays to the Industrial Markets in Canada.

Thiele is privately held company founded in 1946, and is one of the world's leading sources for processed kaolin clay.

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pigments, each tailored to meet your needs from processing facilities in Sandersville, Ga., and Wrens, Ga., and slurry facilities in Wisconsin Rapids, Wis., and Gayle, Sweden.

Thiele activities are ISO-9001 certified, and an emphasis on quality has been a company tradition since its establishment more than 60 years ago.

www.univarcana.com

Andicor and Orion Partnership

Andicor Specialty Chemicals is pleased to announce a new partnership with

Orion Engineered Carbons. Effective April 16, 2015, Andicor will be the exclusive distribution partner in Canada for Orion's specialty carbon blacks, focusing on advanced and premium products for coatings and polymer systems.

Orion Engineered Carbons is an innovative, global producer of high quality carbon blacks focusing on collaborative partnerships with customers in rubber and specialty applications.

www.andicor.com
www.orioncarbons.com



Retailer Paints a Colourful Future in Canada With Grand Opening of 250th Store and Plant Tour

Amidst a volatile retail climate, the road ahead for one of the country's popular paint brands is bright. In just four years since announcing a major rebranding initiative, DULUX Paints has gone from having no name recognition to being a household name across the country, says Vince Rea, director of Dulux Paints stores, Canada.

"Every year, we're gaining ground in the industry," Rea says, pointing to a recent national paint brand awareness survey that places Dulux Paints in a solid third position, up one spot from last year for an overall gain of five spots since 2013. "We were almost non-existent in 2011, and now our goal is to be No. 1."

Dulux Paints held a grand opening ceremony for its 250th store on April 1, 2015 followed by a tour of the paint manufacturing plant.

Dulux's 250th Canadian store opened April 1, 2015, at the new Major Mackenzie Rd. West in Vaughan, ON. Officiating at the ribbon cutting are Narttman SanTan and Glenn Stuebing, Dulux; Michael DiBiase, Regional Councillor, Vaughan; Steph Dejong, Dulux; Maurizio Bevilacqua, Mayor Vaughan and Rossana DeFrancisco, Councillor Vaughan; Vince Rea and Graziano DeBerardis, Dulux.

With the opening of the 250th Dulux Paints store in Vaughan, ON, in April and seven more new stores to follow in different provinces before the end of the year, Rea says the target is definitely within reach. "Our stores are thriving – we're the fastest-growing paint store brand in Canada, averaging 12 new stores per year since 2010," he says.

The Dulux Paints chain employs more than 1,000 Canadians in stores located from coast to coast. Its state-of-the-art, 8,450-square-metre manufacturing and distribution facility in Vaughan is the largest architectural coatings and



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paint manufacturing plant in the country, having opened in 1971 and expanded several times since then.

The rebranding took place in 2011 when the former ICI Paints, GLIDDEN, COLOR YOUR WORLD and BÉTONEL (in Quebec) stores were combined under the Dulux Paints banner. With the former stores having taken on the Dulux Paints name and product line, the Dulux brand rapidly achieved broad market reach and recognition is growing, Rea says.

"We've only been around as a paint store brand for four years," Rea said, adding that market share for Dulux Paints is growing in both the trade and do-it-yourself (DIY) segments. Rea attributes that growth to the company's customer service, high-calibre product and commitment to innovation. "Dulux Paints was first to market with a product that has no-VOCs (volatile organic compounds) before adding colourant. Today, it also provides several unique, specially-formulated paints, including an early shower-resistant product that allows for exterior painting in spite of a rainy forecast, and another product that withstands extremely low temperatures. At the top of the line is Dulux Dia-

mond paint, a product some customers describe as "smooth as butter," Rea explains.

Core to the brand's business philosophy is giving back. Since announcing its community campaign – now called COLOURFUL COMMUNITIES – in 2011, Dulux paint has donated hundreds of thousands of dollars' worth of paint and resources across the country to beautify public places, including buildings of community, charity and non-profit organizations. Most recently it provided more than 65 gallons of paint and 30 volunteers to repaint 8,000 square feet of wall space at Toronto-based The Safehaven Project for Community Living, a charitable organization that provides residential and respite care for families whose children have complex physical and developmental disabilities. Dulux Paints also donates paint and time for all Canadian projects of Habitat for Humanity, an international non-profit organization that provides affordable housing.

"Our roots are all about colour," Rea says. "We aim to bring the world to life through the magic of colour, and giving back is one way we succeed in doing that."

The Dulux Paints brand is operated in Cana-

da by PPG Architectural Coatings Canada Inc., a business of PPG Industries.

www.ppg.com

Clariant Celebrates 10th Anniversary of ColorForward

Clariant, a world leader in specialty chemicals, recently celebrated the 10th anniversary of its ColorForward color forecasting guide with a day-long customer event at the Clariant Innovation Center in Frankfurt, Germany. More than 50 key customers from around the world attended.

The ColorForward trend analysis and color design tool has been released annually since 2006 to help plastic product designers and marketing professionals make more informed color choices. A highlight of the anniversary event was a presentation on trend watching and innovation by Dr. Carl C. Rohde, a Dutch sociologist and head of Science of the Time, one of the first and most respected trend research and innovation agencies in the world. Dr. Rohde was followed by Dr. Angelica Marson, Head of Global Innovation for the Masterbatches business unit and Maurizio Torchio, Global Head of Color-

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Works, Clariant's network of design and technology centers, where the annual ColorForward guides have been created for the last 10 years. They spoke about "The New Language in Innovation." The afternoon sessions featured Judith van Vliet, Designer, ColorWorks Europe/IMEA, who reviewed the 10-year ColorForward odyssey in a presentation called "Where Inspiration and Reliability Meet: An Exciting Visual Path of 10 Years of ColorForward."

www.clariant.com

Gema Industry Partner Symposium a Success

Gema USA Inc. hosted an Industry Partner Symposium on Thursday, March 12, 2015 at their Indianapolis, IN facility. The educational event outlined the many aspects of how Gema products precisely and efficiently "Control the Cloud."

Jeff Hale, Gema's Director of Marketing says, "This event was a great opportunity for our industry partners to learn about our products and see firsthand how we control the cloud."

Throughout the day attendees were able to participate in demonstrations and presentations introducing them to the latest in application and color change technology available for powder coating. Gema highlighted the new OptiFlex automatic spray gun and controls; the latest in pumping technology - the OptiSpray AP01; and the advanced color change technology - MagicCylinder and MagicCompact Quick Color Change Booths. Other products highlighted at the one day event included the OptiCenter Powder Management System, and the OptiColor quick color selector.

Attending the event were over 100 members from leading companies in the powder coating industry. The event provided companies, specializing in powder materials, system design and integration, pretreatment chemicals, and masking, the opportunity to learn about the newest products and leading trends for application and recovery equipment.

In addition to the industry partners, members from Gema's distribution network were also in attendance. "By bringing our distributor network into this event, our industry partners can better understand the strength of the Gema team and the added value that we can collectively bring to our customers", says Hale.

At the conclusion of the event attendees enjoyed a networking reception



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and banquet. During the banquet, Gema announced their top distributor salesmen awards for the previous year. Awards announced were, Powder System Partner Award winner Dan Nosek, Dietz Supply Company, Huntley, Illinois; and dual award winner Scott Stalzer, American Industrial Corporation, Greenwood, Indiana, as the Manual Gun Champion and High Flier Gun Champion.

Gema continues to be a pioneer in the powder coating industry and a global manufacturer of superior quality powder coating equipment. As a business unit of the Graco Corporation, Gema operates its North American Headquarters from Indianapolis, Indiana. www.gemapowdercoating.com

Sherwin-Williams Announces 2014 ProVisions Vendor Award Winners

Sherwin-Williams, through its Product Finishes Division, announced the winners of its sixth annual ProVisions Vendor Awards during an appreciation program at the Cleveland Convention Center in Cleveland, Ohio, on March 17, 2015.

Through the ProVisions program, OEMs and job shops have access to more than 10,000 of the supplies and equipment they use most, including test and safety equipment, abrasives and spray equipment. This complete product finishing solu-



The Product Finishes Division of Sherwin-Williams ProVisions 2014 Co-Vendor of the Year Award presenters and winners, left to right: Jack Vold, Vice President, Parts & Filters Sales, Global Finishing Solutions; Joe Radle, Industrial Sales Estimator, Global Finishing Solutions; Lisa Mayer, Account Manager, Global Finishing Solutions; Scott Failing, Vice President Industrial Sales, Global Finishing Solutions; Bob McElroy, Marketing Manager – Sales Program Support, Product Finishes Division of Sherwin-Williams; Bruce Irussi, Senior Vice President, Sales – North America, Product Finishes Division of Sherwin-Williams; Laura Kelleher, Vice President – Marketing, Product Finishes Division of Sherwin-Williams; Randal Cain, Technical Sales Representative, Touch-Up Solutions and Troy Pait, President, Touch-Up Solutions.

tion saves customers time and transaction costs by offering all of their coatings and finishing supplies on a single invoice.

Sherwin-Williams 2014 ProVisions Vendor Awards include:

- Vendor of the Year Award: Global Finishing Solutions and Touch-Up Solutions
- Field Sales Support Award: Hi-Lite Solutions and Mirka Abrasives
- Facility Support Award: Fawcett Company
- Marketing Excellence Award: Chemco

Manufacturing

"Our award-winning vendors offer expertise and innovations that help our customers succeed," says Bruce Irussi, Sherwin-Williams Product Finishes Division, Senior Vice President of Sales, North America. "They grew sales substantially within the ProVisions program in 2014 and provided the support needed to continue to expand our capabilities."

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Enthonne Commitment to Hard Chrome Technology

Based on a comprehensive evaluation and research of technologies, Enthonne has concluded that a Cr(VI) free replacement for hard chrome will not be available for the majority of industry applications for the foreseeable future. Due to this conclusion and to ensure an uninterrupted supply of high performance hard chrome processes, Enthonne is committed to keeping today's technologies available, barring any unanticipated circumstances.

Enthonne will continue to actively participate in the authorization process under REACH. This is evidenced by the company's continuing leadership role in the Chromium Trioxide REACH Authorization Consortium (CTAC); providing analysis of alternatives (AOA) and socio economic analysis (SEA) data; and offering advanced process technology with substantially reduced Cr(VI) exposure scenarios. On March 6th, Enthonne joined the newly formed CTAC sub consortium for joint application authorization.

Enthonne's ANKOR hard chrome processes will remain available as ready and easy- to-use formulated products beyond the 2017 sunset date for all authorized uses.

Enthonne is and remains committed to working with its customers as a trusted supplier.

www.enthone.com

Clariant's Licocene waxes reach final of German 2015 innovation prize

Clariant, a world leader in specialty chemicals, is a finalist in the prestigious German business innovation award, "Innovationspreis der Deutschen Wirtschaft 2015", category Large Company. The achievement relates to Clariant's Licocene polyolefin-based waxes, recognized for advancing sustainability in textiles, plastics and coatings manufacturing and improving the environmental profile of a wide range of applications.

Licocene waxes give manufacturers the possibility to use fewer ingredients, reduce manufacturing steps, and use less resource-intensive production processes.

The award jury of leading science and business representatives also acknowledged Licocene for promoting home-grown R&D and technical processing within Germany.

Clariant joined fellow finalists for the 2015 award ceremony and gala dinner on March 21, 2015 in Frankfurt am Main. This is the second occasion a Clariant development has been

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acclaimed by the organizers. The company's Exolit halogen-free flame retardants were in the final of the "Innovationspreis der Deutschen Wirtschaft 2012/2013".

www.clariant.com

PPG earns recognition as John Deere 'Partner-level Supplier'

PPG Industries' industrial coatings business has earned recognition as a Partner-level supplier for 2014 in the John Deere Achieving Excellence Program.

The Partner-level status is Deere & Company's highest supplier rating. PPG was selected for the honor in recognition of its dedication to providing products and service of outstanding quality as well as its commitment to continuous improvement. Andy Hammond and Courtney Jungjohann Deemer accepted the recognition on behalf of PPG during formal ceremonies March 3 in Moline, Illinois.

PPG supplies electrocoat, liquid and powder coatings, and pretreatment chemicals to John Deere's global operations.

www.ppgindustrialcoatings.com

Walter Surface Technologies Voted Canada's Top Small & Medium Employer for 2015

Mediacorp Canada Inc.'s Canada's Top 100 Employers has selected Walter Surface Technologies as one of the top Canada's Top Small & Medium Employers for 2015.

The official award presentation was held at the Toronto Region Board of Trade, where Claude Vandemeulebroecke, General Manager for Walter Canada accepted the award on the company's behalf.

Employers are evaluated by the editors of Canada's Top 100 Employers using eight criteria including physical workplace, work atmosphere & social, health, financial & family benefits, vacation and time off, employee communications, performance management, training & skills development and community involvement.

Canada's Top Small & Medium Employers is a new competition that recognizes small and medium enterprises that lead the nation in creating exceptional workplaces with forward-thinking human resources policies. Canada's SME sector is tremendously important to the nation and is responsible for over half of the nation's gross domestic product, nearly 90 per cent of the private-sector labour force; and over three-quarters of the new jobs created in the past decade.

To view the full editorial for the "Reasons for Selection" explaining why Walter Surface Technologies was chosen, please visit eluta.ca.

Arkema Researchers Earn Roon Award for Study of Alkali-Soluble Resin Distribution in Latex Films

A team of researchers, led by Dr. Wenjun Wu, Principle Scientist for Arkema Coating Resins, a business unit of Arkema, was recently awarded the prestigious Roon Award by the American Coatings Association (ACA) at the 2015 Coatings Tech Conference in Louisville, Kentucky. The Roon Award is among the coating industry's highest technical achievements and is used to recognize the best technical paper at the conference.

The research paper, entitled "Alkali-Soluble Resins (ASR) and Acrylic Blends: Influence of ASR Distribution on Latex Film and Paint Properties" was co-authored by a team of researchers, including Dr. Wu, Dr. Christopher Miller, Professor Steven Severtson, Dr. Jihui Guo, Dr. Gang Pu and Dr. Jilin Zhang.



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in the NEWS

The research employed a variety of analytical techniques to characterize the film formation behavior of a soft acrylic latex in the absence and presence of a high glass transition temperature (Tg) ASR. The paper provides new insights into the component distribution in the latex and paint films containing ASR as well as their impact on the end-use paint properties. The methods utilized in this paper can be applied to characterize component interactions and distributions in different polymer blends as well as other additives in paint formulations.

www.arkemacoatingresins.com.

Chemetall receives prestigious Frost & Sullivan 2014 North American Metalworking Fluids New Product Innovation Award



Julia Murray, VP of Global Marketing and Communications at Chemetall receives award from Frost & Sullivan chairman David Frigstad.

Chemetall, a business unit of Albemarle Corporation and an innovator in metalworking fluids, has been awarded the 2014 North American Metalworking Fluids New Product Innovation Award.

Metalworking fluids provide extensive long sump life along with enhanced tool life, reduced "downtime" and consumption savings. These innovative technologies are manufactured at Chemetall's new, state-of-the-art plant in Blackman Township, Michigan.

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

Albemarle Corporation, headquartered in Baton Rouge, Louisiana, is a premier specialty

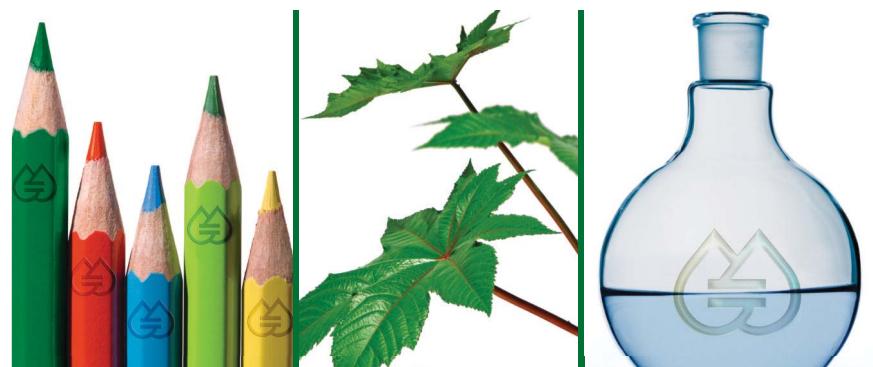
chemicals company with leading positions in attractive end markets around the world. With a broad customer reach and diverse end markets, Albemarle develops, manufactures and markets technologically advanced and high value added products, including lithium and lithium compounds, bromine and bromine derivatives, catalysts and surface treatment chemistries used in a wide range of applications including consumer electronics, flame retardants, metal processing, plastics, contemporary and alternative transportation vehicles, refining, pharmaceuticals, agricul-

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www.albemarle.com
www.chemetall.com.

People

Roberto Bolognini Brings Additional Expertise to Cefla

Cefla North America, a leading provider of finishing, decoration and digital printing solutions for wood, metal, glass and other applications, is pleased to announce the promotion of Roberto



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Roberto Bolognini, Cefla

Bolognini to Finishing Group Sales Manager.

Roberto has over 14 years of experience in the woodworking industry, including work at a lead-

ing Italian machinery manufacturer.

Bolognini's international sales and multi-cultural experience, including helping to establish manufacturing operations in India and China, make him a valuable addition to Cefla management team. He has helped direct sales teams and distributors achieve exceptional growth at all levels.

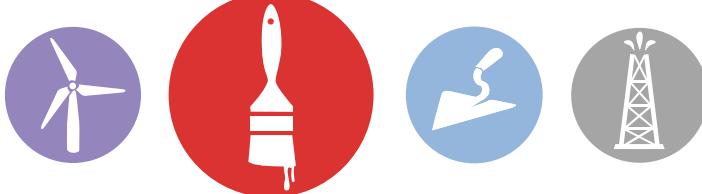
Roberto joined Cefla in early 2014 as Regional Sales Manager for North America, the United Kingdom and Eastern Europe. He was appointed worldwide Sales Manager on January 1, 2015.

Brookfield Names Nilay Shah as International Sales and Marketing Manager

Brookfield Engineering Laboratories is pleased to announce the appointment of Nilay Shah to the new position of International Sales and Marketing Manager for laboratory products and services.



Nilay Shah, Brookfield



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Henneke earned his Bachelor of Science degree in paper and printing engineering from

Shah's expanded responsibilities include sales for all territories outside of the Americas, the UK, and China. For the last 10 years, Shah has served as Brookfield's regional sales manager for India and the southern Asian market.

Shah holds a Bachelors degree in Engineering and Masters degree in Management Studies from the University of Mumbai in India.

Orion Engineered Carbons Appoints Kane Henneke As Marketing Manager, Polymers & Inks

Kane Henneke has been appointed Marketing Manager, Polymers & Inks, Americas Region at Orion Engineered Carbons. He is responsible for developing and implementing business and marketing strategies, identifying business opportunities, and ensuring a substantial, sustainable and profitable growth strategy.

Henneke brings 20 years of experience to his new position. He has held sales and marketing positions in the ink, paint, coatings and plastics industries and has a technical chemical background in resins, pigments and colorants. Prior to joining Orion Engineered Carbons, Henneke served as Director of Americas – Architectural and Industrial Colorants Division of Chromaflo Technologies and Global Business Manager, Inks and Coatings Division of Keystone Aniline Dyes.



Kane Henneke, Orion

Western Michigan University and his Associate of Science degree in printing sciences from Triton College. He is president of the Chicago Printing Ink & Production Club (CPIPC) and a member of NPE and the Chicago Paint & Coatings Society.

Stephen Edwards Named Business Manager for Sartomer Americas

Sartomer, a business unit of Arkema Inc. and a global leader in specialty acrylate and methacrylate

monomers and oligomers, announces that Stephen Edwards has been named business manager with responsibility for the adhesives & sealants, electronics, personal care, and advanced materials markets. In his new role, Edwards will lead the company's efforts to provide customers with the personalized support and high-performance chemistries they need to develop innovative, market-leading applications. Edwards will report directly to Timothy Cauffman, business director.

Edwards started his career in the chemical industry with Cray Valley in 1990, where he held roles in technical service, quality control and production. He then spent seven years with Sartomer Europe providing technical support to product development teams before advancing to a sales management position. Since 2003, Edwards has held several managerial roles with Sartomer Asia, including business manager, sales director, business director and strategy and development manager. Since January 2014, he has also spent significant time supporting several business units for Arkema China.

Edwards earned a degree in chemistry from the University of Nottingham (UK) and an MBA in senior management from Open University (UK).

New at Esteron Chemical

Esteron Chemical Inc. is pleased to announce that Anna Chizhikova has joined Esteron as Applications Manager – Powder Coating Raw Materials.

Anna has more than 20 years experience in powder coatings. She began her career in this industry in 1994 as a technician at the Ferro Corporation and advanced to R&D Technical Manager at Akzo Nobel Powder Coatings, a position that she held for a decade. Working in the Architectural, Automotive, General Industrial, IT, Furniture and Functional Coating markets, Anna has managed multiple R&D projects that resulted in the commercialization of cost effective new products, technology and processes.

She is an experienced professional with a unique combination of technical expertise, managerial ability, business leadership as well as product support.

Pricing Updates

Vencorex Increases Prices for TDI

Effective April 1, 2015, or as existing contracts permit, Vencorex will increase prices on its TDI range of products (ScuranateTM) in Europe, Middle-East and Africa.

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calendar of INDUSTRY EVENTS

Prices will be increased by 100 € per metric ton.

The move is needed to recover margin after recent price declines and the increasing cost for toluene.

Industry News

Canada—GHS has Arrived

At last, Canada has finally implemented the Globally Harmonized System of Classification and Labelling Chemicals (GHS). On February 11, 2015, the Government of Canada officially announced that the current WHMIS regulations have been updated to incorporate GHS. The new and improved regulation has been named WHMIS 2015.

The WHMIS 2015 regulations are in force as of February 11, 2015 and will be introduced using a three-phase transition period with completion set for December 1, 2018. During this transition period, both old and new WHMIS will be present in the work place. However, the phases dictate when Manufacturers and Importers must comply with WHMIS 2015 compared to Distributors and Employers.

May 5-7, 2015: Powder Coating Show, Louisville, KY,
www.powdercoatingshow.com

May 18-21 2015: Eastern Coatings Show, Taj Mahal Hotel and Resort, Atlantic City, NJ, www.easterncoatingsshow.com

May 27-29, 2015: CPCA Annual Conference, Niagara on the Lake, ON, www.cdhpaint.org

June 8-11, 2015: SUR/FIN 2015, Stephens Convention Center, Rosemont, IL, www.NASFsurfin.com

June 15-17, 2015: Western Manufacturing Technology Show, Edmonton EXPO Centre, Northlands, Edmonton, AB, www.wmts.ca

October 5-7, 2015: 2015 Polyurethanes Technical Conference, Orlando, FL, www.americanchemistry.com

October 7-8, 2015: Canada Woodworking West, Abbotsford BC, www.masterpromotions.ca

November 5-7, 2015: WMS Woodworking Machinery & Supply Expo, International Centre Toronto ON, www.WoodworkingExpo.ca

November 9-12, 2015: FABTECH 2015 McCormick Place, Chicago, IL, www.fabtechexpo.com

November 18, 2015: CASF Environmental and Technical Forum at the Hilton Garden Inn, Toronto, ON. www.cASF.ca

Phases	Timing	Manufacturers and Importers	Distributors	Employers
Phase 1	February 11, 2015 – May 31, 2017	Both (one or the other)	Both (one or the other)	Comply with both old and new regulations
Phase 2	June 1, 2017 – May 31, 2018	Must comply with WHMIS 2015	Both (one or the other)	Comply with both old and new regulations
Phase 3	June 1, 2018 – November 30, 2018	Must comply with WHMIS 2015	Must comply with WHMIS 2015	Comply with both old and new regulations
Completion	December 1, 2018	Must comply with WHMIS 2015	Must comply with WHMIS 2015	Must comply with WHMIS 2015

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Taking Care of Business

Register Now: CPCA's Annual Conference Taking Place at the End of May

CPCA has moved the date of its Annual Conference and AGM to the spring. The annual event will take place on May 27-29, 2015 at the Pillar and Post Inn & Spa in Niagara-on-the-Lake. It will include the Chair's Annual Gala Dinner, prestigious industry recognition awards and speakers from the Richard Ivey School of Business, the Network for Business Sustainability, Waste Diversion Ontario, Health Canada, the Ontario Department of Labour and more during its business sessions. They will all update attendees on the latest trends, opportunities and challenges facing the Canadian paint and coatings industry. Register by the Early Bird deadline on April 27, 2015 and you will be entered to win a free conference registration. For details, please see www.canpaint.com/c pca-conference.

CPCA/ACA Joint Management Information Committee to Meet on May 11-12, 2015

The next meeting of CPCA's Management Information Committee (MIC) will take place on May 11-12, 2015. Held jointly with the American Coatings Association (ACA), the meeting will be held at the Aexcel Corporation Headquarters in Mentor, Ohio. CPCA's MIC Committee works to compile relevant statistics and data critical to all aspects of business operations for our member companies. Attendees will get an update on the coatings industry's performance and projections for the architectural, industrial

and automotive sectors, while reviewing and managing both associations' statistical programs. A visit to the Arcelor Mittal facility in Cleveland is also planned. If you would like to attend the meeting, join this committee and/or receive the meeting agenda, please contact CPCA at c pca@canpaint.com.

CPCA Applauds the Federal Government on Passing HPR Regulations

CPCA commended Health Canada on finalizing new regulations related to the implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) for workplace hazardous chemicals. The Hazardous Products Regulations (HPR) are now in force after being published in Canada Gazette, Part II on February 11, 2015. Suppliers may now begin to plan for the new requirements for labels and safety data sheets (SDSs) for hazardous products sold, distributed or imported into Canada. Following this early HPR publication, provincial and territorial jurisdictions will continue to aim for June 1, 2015 (or before) for their own regulations and training efforts to implement GHS. Full GHS conversion and implementation in Canada for all manufacturers, importers, distributors and employers is expected to be completed in approximately three-and-a-half years. December 1, 2018 is the last deadline for compliance in workplaces.

The new federal HPR replace the Controlled Products Regulations. This GHS alignment will bring major changes to the existing Workplace Hazardous Materials Information System (WHMIS). A key objective of GHS is to create a system that will allow Canadian and U.S. requirements to be met through the use of a single label and safety data sheet (SDS) for each hazardous product. However, there are some slight variances remain between the U.S. and Canada, which CPCA has documented on the Members Only section of its website and communicated to members over the past several months.

It is important to note that even though Health Canada has finalized the HPR, the provinces and territories are responsible for adopting and implementing GHS in the workplace in Canada. Therefore, industry must ensure that the individual provinces and territories are ready to implement GHS before shipping products with GHS-compliant labels into each jurisdiction. Some provinces have initiated their implementation process of GHS (e.g. Ontario and Alberta, and soon Quebec), while others have indicated that they will not be ready to implement the GHS prior to June 1, 2015 (e.g. B.C. and Manitoba). CPCA has sent letters to all Ministers of Labour of the provinces urging them to adopt and implement the regulations as soon as possible. In the meantime, some provincial and territorial authorities may exercise discretion if products are shipped with GHS labels as they begin to adopt and implement the updated GHS regulations, but please make sure your labels and hazard communication information are in agreement with all provincial and territory current policies.

CPCA asked the WHMIS Current Issues Committee (CIC) to keep the industry informed of any GHS-implementation progress made within each provincial and territorial jurisdiction and if any interim measures would

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be put in place for early acceptance of HPR-compliant GHS labels. CPCA also asked Health Canada's CIC to provide a comprehensive comparative analysis of all variances between the final HPR and HCS 2012. More information is available on the Members Only section of CPCA's website.

CPCA Responds to Consultations on Recent B.C. Amendments to the OH&S Legislation Regarding WHMIS

Upon reviewing the B.C. government's proposal on the occupational, health and safety (OH&S) legislation regarding the Workplace Hazardous Materials Information System (WHMIS), CPCA submitted an important comment to WorkSafeBC regarding Section 5.14 (2), which plans to retain the three-year cycle for safety data sheet (SDS) updates. This requirement in subsection 5.14 (2) deviates from the federal government's approach, which indicates that a SDS will have to be updated when the supplier becomes aware of any "significant new data." It specifically refers to changes in how the hazardous product is classified or to the way companies will handle, store or protect workers from the hazards of the product. SDSs are required to be updated within 90 days of the supplier being aware of the new information. The new Hazardous Products Regulations (HPR) requirement repeals the three-year mandatory update in the former Controlled Products Regulations (CPR).

There seems to be a major issue developing among other provincial jurisdictions (e.g. Ontario and Yukon) with respect to the three-year review of SDSs. It needs to be sorted out quickly as it has the potential to cause serious problems to employers and suppliers.

CPCA Informs Its Members of the Federal Government's Release of a Consultation Document to Evaluate Nano Substances on the Domestic Substances List

The federal government intends to process and evaluate nano substances on the Domestic Substance List (DSL) and its proposed approach is now the subject of a formal consultation, which ends on May 1, 2015. Environment Canada and Health Canada are proposing a stepwise approach to address nanoscale forms of substances on the DSL. In June 2015, they will con-

duct an information-gathering survey and hold a stakeholder workshop to discuss the proposed approach and survey. CPCA continues to be very active on this issue as it will impact industry substantially in the coming years.

CPCA Obtains Clarification on the TDG Consignor Certification Requirements

CPCA recently learned that Transport Canada officials have confirmed that the certification text for the Transportation of Dangerous Goods (TDG) Consignor Certification Requirements

should be in English only. It is also acceptable to put the certification text on the back of the shipping document.

CPCA Submits Comments on the Draft Screening Assessment and Proposed Risk Management for the Cobalt and Cobalt-related Substance Grouping

On February 4, 2015, CPCA sent a submission to Environment Canada regarding its December 6, 2014 recommendation to add a long list of cobalt and cobalt-related substances to Schedule I of

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CEPA (1999). The substances meet the toxicity criteria for environmental concerns and biological diversity. Several of these cobalt and cobalt-related substances are used for the import, manufacture and use of architectural and industrial paint and coatings in relatively low amounts. However, their manufacture and use in paint and coatings is not specifically targeted in the Draft Screening Level Assessment Report (DSAR) and proposed Risk Management Approach. The paint and coatings sector is not expected to directly discharge these substances in effluents and soils to contribute to chronic toxicity. However, CPCAs members recently voiced their concerns that the current CEPA-toxic declaration for all cobalt-related substances might be detrimental to the sector. Paint companies may feel obligated to remove these substances from their formulations, due to the possibility of growing concerns being raised by clients in the supply chain or by consumers who would question the presence of these "toxics" in paint and coatings products.

CPCA Asks WHO Not to Recommend the Placement of BDO and GBL in Schedule I of the 1971 Convention on Psychotropic Substances

The placement of 1,4-butanediol (BDO) and Gamma-butyrolactone (GBL) in Schedule I of the 1971 Convention on Psychotropic Substances has been recommended by the World Health Organization's (WHO) Expert Committee. A final decision on this recommendation is expected to be on the agenda for during the 58th session of the Commission on Narcotic Drugs on March 9-17, 2015 in Vienna. Both substances (CAS RN 110-63-4 and 96-48-0) and their derivatives (NMP, THP, PolyTHF

(Spandex), Polybutylene terephthalate (PBT plastics), BDO-based urethanes for coatings, etc.) are widely used chemicals in the industry. Controlling them as psychotropic substances would not likely result in benefits that justify the burdens such controls would impose. The European Chemical Council (CEFIC) recently called for the recommendation to be rejected. Placing BDO and GBL alternatively in either one of the other Schedules of the Convention would jeopardize the legitimate use as industrial chemicals.

Through CEFIC, current members of the BDO and Derivatives Sector Group (Ashland, BASF, LyondellBasell and Taminco) have all introduced a common set of voluntary measures to closely control the supply chain of BDO and GBL and only supply these products to reliable customers with known and understood end-uses. CPCa and other associations, such as the Chemical Industry Association of Canada (CIAC) and the American Chemistry Council (ACC), support the rejection of this decision.

CPCA Shares Product Stewardship Update for Nova Scotia and Alberta

CPCA anticipates that Nova Scotia, which is looking at new regulations for municipal household and special wastes, will implement them in 2015. The province of Alberta is also hoping to introduce new product stewardship regulations with the intent of amending and fully implementing the regulations this year. ■

Full details on these and other issues are contained on CPCAs website at www.canpaint.com for members only.



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CPCA Announces 2015 Program for Its Annual Conference and AGM

The Canadian Paint and Coatings Association (CPCA) is pleased to announce a robust program for its Annual Conference and AGM. This year's event will take place on May 27-29, 2015 in Niagara-on-the-Lake at the Pillar and Post Inn & Spa.

"The 2015 conference will feature the theme, "Survival of the Fittest," and we have an exciting line-up of speakers scheduled for our Business Sessions," says Gary LeRoux, CPCA's President. "They will update attendees on all of the latest trends, opportunities and challenges facing the Canadian paint and coatings industry."

The sessions will begin with Professor Mark Moffat with the Richard Ivey School of Business, who will discuss the current state of the Canadian and global economies and identify prospects for future growth. Sustainability will also be a main focus during this year's sessions with Jane Sadler Richards, the new Managing Director of the Network for Business Sustainability, on hand

to share seven sustainability opportunities for Canadian businesses in 2015.

Stewardship will be an important topic with a session planned to address the new era for post-consumer paint in Ontario. Mark Kurschner, President of Product Care, and Mary Cummins, Waste Diversion Ontario's Oversight Analyst, will discuss the transition of Product Care as the new program operator in Ontario.

The Globally Harmonized System of Classification and Labelling of Chemicals (GHS) will also be addressed with government officials offering important insight on the GHS implementation from both the federal and provincial standpoints on the eve of the June 1 implementation date.

A panel exploring the various aspects of the coatings industry in Canada from the perspective of the manufacturer, supplier/distributor and user is also scheduled, along with a discussion on building resilience in the workplace.

CPCA's Annual Conference will also include the Chair's Annual Gala Dinner, its prestigious industry recognition awards and a social program. For more information, please go to www.canpaint.com or click here to view the conference program.

About CPCA

Since 1913, the Canadian Paint and Coatings Association (CPCA) has represented Canada's major paint and coatings manufacturers, and their industry suppliers and distributors in three primary product categories: architectural paints, industrial products and automotive coatings. In Canada, CPCA members have more than 261 paint manufacturing establishments, own more than 3,000 retail outlets, supply products to another 3,000 retail stores and more than 5,500 auto body shops. This represents annual retail sales of more than \$10 billion, employing directly and indirectly 31,800 employees. ■

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(May 5-7 only at KICC.)

2015 Powder Coating Show

Brought to you by The Powder Coating Institute, the 2015 POWDER COATING show, scheduled for May 6-7 in Louisville, Kentucky, is the only tradeshow solely dedicated to the Powder Coating Industry in North America. This niche market conference and trade-show is proudly recognized as the premiere event for technical and applied technology forums as well as new product innovations and developments in the powder coating industry.

Exhibitor List

(Complete as of March 27, 2015)

There are 99 exhibitors booked for Powder Coating 2015. They are listed here by name and booth number.

Aal Chem	330
ACT Test Panels LLC	102
Aesthetic Finishers Inc.	537
Air Power Inc.	426
AkzoNobel	532
Alpha Coating Technologies	242
Alpine Chemical Inc.	327
Amariko Inc.	342
American Finishing Resources	127
Anhui Shenjian New Materials Co., Ltd.	225

APEL International Inc.	530	Finishing Solutions	509
Argon Masking	112	Concrete Polishing Inc.	130
Assured Testing Services	110	Custom Fabricating & Supplies	121
Axalta Coating Systems	101	Datapaq, Inc.	322
AZO, Inc.	135	Decoral System USA Corp.	215
B.L. Downey	433	DeFelsko Corporation	314
BCI Surface Technologies (Bulk Chemicals)	513	DuBois Chemical	107
BEX Spray Nozzles	232	DuPont Teflon Industrial Coatings	226
Bullard	224	Echo Engineering	321
Calvary Industries, Inc.	508	Eckart America/BYK Additives and Instruments	241
Canadian Finishing & Coatings Manufacturing (CFCM)	134	Elcometer	208
Caplugs	334	Enhancement Technologies Inc. / Miroglolio	425
Castrol Industrial North America	120	EPSI (Engineered Products & Services Inc.)	104
Chemetall US, Inc.	239	Express Chem., LLC.	143
Col-Met Engineered		Finishing Brands	437
		Fischer Technology Inc.	507
		Fostoria Process Equipment Div. of TPI	336
		Gema USA, Inc.	207
		General Fabrication Corporation	525
		George Koch Sons	109
		Global Finishing Solutions	329



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Calgary, AB
Phone: 403-259-2201

BRITISH COLUMBIA
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Hefei Ketai Powder Material Co., Ltd	223	Powder-X Coating Systems	529	Troy Chemical Industries, Inc.	435
Henkel Corporation	221	PPG Industries	324	TVS Cartridge Air Filters	126
Hentzen Coatings, Inc.	422	Pretreatment Equipment		Uni-Spray Systems, Inc.	328
Heraeus Vulcan	522	Manufacturers	100	VitaFlex LLC	539
Hubbard-Hall Inc.	536	Products Finishing	541	Vitracoat	315
IGP North America LLC	137	Rapid Engineering LLC	231	Vogel Industrial Coatings	
INOPOL Co., Ltd.	108	Rapid Industries	421	/Peridium Powder	116
Intek Corporation	128	Rhodes Systems International, Inc.	141	Wagner Systems	415
IntelliFinishing	201	Rohner	133	Webb-Stiles Company	124
Keyland Polymer	505	RollSeal	533	Wego Chemical/ Huangshan Huahui Technology Co., Ltd.	129
KMI Systems, Inc.	501	SAMES – EXEL North America, Inc.	227	Yantai Electrostatic Powder Equipment Co., LTD.	234
Koch Filter Corporation	114	Shenghua Group Deqing			
Kolene Corporation	431	Huayuan Pigment Co., LTD.	323		
Magic Rack/Production Plus Corp	233	Sherwin-Williams	515		
Matrix Powder Coatings	542	Special Masking		Exhibits are open 9 am to 5 pm on Wednesday and 9 am to 1:30 on Thursday. Networking events include a Derby Museum Dinner & Churchill Downs Tour and a WireCrafters—Liquid to Powder Facility Tour. Educational sessions include everything from Fast Colour change to innovation in pre-treatments to powder coating inspection techniques to understanding cure and much more.	
Midwest Finishing Systems, Inc.	409	- A Division of Focused Solutions	528		
Mighty Hook	429	SteerAmerica	427		
Nordson Corporation	401	Tape Industrial Sales	524		
Parker Ionics	115	TCI Powder Coatings	228		
Patriot Powder Coating/Patriot Metal Finishing Systems	136	The Powder Coating Institute /Powder Coated Tough	339		
Pneu-Mech Systems Mfg. Inc.	441	The Powder Coating Research Group	443		
Polymer Molding Inc.	235	Therma-Tron-X, Inc.	123		
PowderDepot.com (A Famis Company)	325	Throughput/Bluestreak	423		
		TQC-USA, Inc.	222	Visit www.powdercoatingshow.com for more information.	

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Gema USA Inc. offers the OptiSpray AP01 Powder Pump – what they are billing as “The REVOLUTION in Powder Application”. Gema brings the powder coating industry a completely different approach to dense phase pump technology by using a single-channel, inline concept. OptiSpray AP01 is like no other pump on the market...revolutionary new levels of consistent, repeatable, high-quality coating results can be achieved. Gema also offers the OptiCenter Line.

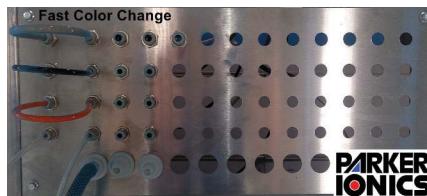
KCI America Co., Ltd., introduces the next level of convenience with KCI's EASY booth automatic powder coating system. A truly efficient system designed to provide maximum productivity with minimal interference. KCI EASY system conveniently memorizes a diverse range of objects, capable of reducing powder consumption. Use of a high strength, double antistatic plastic booth allows rapid color change and highly efficient powder recovery. X and Y axis automation of reciprocators automatically adjusts guns horizontal and vertical position according to the object. Ideal in modern automatic systems, minimizing powder waste from unnecessary gun to part distance.

Features include:

- Highly durable, double walled antistatic plastic booth
- Special coating within the cyclone which supports rapid color change and powder sieving
- All integrated systems are controlled by a centralized touch screen

- Designed to minimize powder waste, promoting a clean working environment
- Optimized powder coating environment for high quality coatings
- Highly efficient dust collector with high speed air collector

Nordson offers The Encore HD Powder Spray Gun, the next generation in HDLV (High Density Low Velocity) powder coating technology.



Parker Ionics has its GX8500 powder coating system, which features Pulse Power II technology designed to improve and simplify coating of challenging part configurations, including Faraday cage regions, wire products, and coating over previously painted substrates such as e-coated and a-coated parts.

Wagner Industrial Solutions offers the ColorSelectX designed for the quickest powder color change while providing the least potential for cross contamination and powder loss. Wagner ColorSelect X incorporates a simple, robust pneumatic control system of up to 10 powder feed systems including hopper fluidizing air, powder injector feed air, and dosage air. The operator control panel includes an intuitive selection dial and quick connect ports for up to 10 colors.

The PEM-X1 Manual Powder Gun from Wagner Industrial Solutions combines the latest in



WAGNER ColorSelectX powder color change system.



WAGNER PEM-X1 and Manual Unit.

advanced ergonomics with superior powder spray technology for improved operator comfort and efficiency. PEM-X1 CG powder cup laboratory set available for small quantity production use.

Manufacturers of powder coating spray equipment offer a variety of products to suit every application from automatic powder guns, gun reciprocators and manual powder guns.

Editor's Note: Manufacturers mentioned in this article can be reached at:

www.exel-na.com

www.kcispray.com

www.gema.us.com

www.nordson.com

www.parkerionics.com

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Specialty Powder Coating can incorporate a host of special effects in the finish from Leatherette to metallics to textures to wrinkles and veins.

Powder coatings with special textures are becoming increasingly popular, according to manufacturers, especially in the consumer electronics market. Soft scratch resistant coatings offered in stain resistant light colours are an example of this.

Metallic

Metal effects coatings are virtually indistinguishable from real metal, and can be used in several applications. They adhere to plastic substrates, and have the durability to stand up to the wear and tear.

Metallic effect powder coatings include mica and aluminum metallics, and unique special effect powder coatings. Customers are demanding Metallic powder coatings that exceed demanding specifications, and provide consistency.



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Visual effects can include the illusion of looking into a hologram. There the powder coating technology manipulates particles in the paint to achieve the effects. There are also laser etch coatings, where intricate designs can be etched into coatings applied to plastic substrates, so light can pass through them. Most often, they are used by the automotive industry on backlit dashboards, but they can also be used in consumer electronics and lifestyle applications. By varying the depth of the etching process, it is even possible to create a range of colors.

Epoxy powder coatings are an ideal choice for applications requiring corrosion resistance, excellent chemical and mechanical properties, exceptional adhesion and the ability to meet demanding specifications.

Polyurethane powder coatings combine outstanding thin-film appearance and toughness with excellent weather resistance. They demonstrate superior chip, mar and scuff resistance and they are highly resistant to humidity and salt spray.

Acrylic powder coatings provide high performance finishes with outstanding weather resistance, ranging from thin film clear coats to very smooth, high gloss colours, making them ideal for outdoor applications.

Hammer

Hammer Finishes are effectively metallic leatherette, so that similar principles for Formulation apply.

Antique

Antique Finishes are usually based upon black leatherette, although other base colors are occasionally employed. This leatherette base is then simply blended, or if reclamation is required encapsulated, with the metallic pigment of the required color, e.g., aluminum, so that in this case a black antique with a silver vein effect is obtained.

Clear

Clear Lacquer Finishes are, as the name implies, CLEAR finishes. No pacifying pigment or filler should be employed. Although this may at first sight appear straight forward, major problems can occur as a result of slight incompatibility between the flow agent and the resin base. Unfortunately, there are no simple methods for correcting this effect, (which invariably leads to a milky looking finish), and as a result the development chemist usually has to carry out exhaustive compatibility trials prior to any full scale manufacture. Occasionally very low levels of blue or violet pigment are incorporated to mask the slight yellowness of the resin or curing agent being used.

Tinted

Tinted Lacquer Finishes are a variant of the clear lacquer finish, and are produced by incorporating a small proportion of a solvent soluble dyestuff (usually at a 1 – 5% pigment level). Tinted Lacquers yield a good, hard, resilient coating if applied correctly. Two major factors must be observed for their correct utilization. Firstly they must be applied over a high lusture, blemish-free substrate, e.g. polished nickel or chrome. Secondly, being transparent their resultant colours are film thickness dependant. In an attempt to overcome this loss of luster; many powder manufacturers use a post blending process. Again, extreme care must be employed with this technique. By far the most common approach applied today is slow speed tumble – mixing. This method and powder is quite satisfactory for those customers who apply the powder via a spray –to – waste technique. However, as the popularity of the finish grew, many coaters attempted to recycle the overspray, and thereupon immediately found the problem of this type of powder – the separation of the metallic pigment from the powder base such that when one attempted to re spray the material, zoning occurred. As a result of this the encapsulation process was developed. In the encapsulation process, the powder base and metallic pigment are mixed together so that the particles of powder become covered or encapsulated in a thin layer of metallic pigment. Finally, it should be mentioned that while the post additive and encapsulation approach produces a powder system which yields a high lustre finish, in both cases, the pigment is not bound in the resin layer, and therefore attains no protection from the binder. As a result the coating will easily mark, and the environment importantly, will attack more. To overcome and/or avoid these deficiencies it is necessary to

apply a second coat of clear lacquer.

Texture

Texture finishes are produced via the incorporation of texturing agents such as polypropylene or by using high filler contents. The more distinct texture effects being obtained via the agent approach.

Stipple finishes look somewhat like a cross between leatherette and a texture finish. They are produced by either of the techniques used

for creating texture finishes. The degree of stipple finish being controlled by adjustment of the classifier speed and the mesh size when the powder is milled

Customers have very specific requirements that cannot be satisfied with off-the-shelf solutions and are looking for special colors, special effects, and textures that will differentiate their products from the competition. Manufacturers are following suit with product solutions for every need. ■

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CABINETRY FINISHING TRENDS:

Partnerships that Deliver Success

BY JOHN MILLER

As the market continues to heat up for kitchen cabinets, cabinet manufacturers are looking for more than just finishes from their finishing suppliers. Manufacturers are relying on their coatings suppliers to be true partners in order to achieve true finishing success.

Bottom Line, A Partnership Matters

More manufacturers today are looking at the total cost of finishing rather than just the cost of finishes alone. It just makes business sense to ensure that the finishing operation be looked at as a cost center; while finishing quality is necessary, so, too, is reducing expenses. For many manufacturers, the real measurement of success of a coatings partnership is measured in



Photo Courtesy of Sherwin Williams

An example of MDF.

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Kitchen Cabinets using a Waterborne Finish.

overall cost savings.

That's not always an easy thing to define, but it starts by understanding that the cost of finishing goes well beyond the price per gallon. Coatings partners should be able to provide cost-savings recommendations and overall expertise in a wide variety of areas such as application techniques, proper painter/operator training, finishing line equipment upgrades, reduced waste and sustainability.

Establishing a cost savings program starts by sitting down with your coatings partner and establishing goals. Identifying the various areas

of concern is a good start; a walk-through with your technical representative can establish some baseline needs and may reveal areas of opportunity not originally considered. From there, a complete line audit may be in order, with the partner's engineering and technical team providing a deeper dive to determine potential process improvements, environmental audits and equipment recommendations. The finishing partners should also have relationships with equipment suppliers that become part of the overall finishing solution and remain part of the finishing partnership beyond installation

and start-up.

This may take some time at the outset, but the goals established through a complete line audit also define the recommendations. And that's not to say that everything that's recommended needs to take place immediately. Initially addressing the areas that provide the fastest payback with the least amount of effort and expense makes sense. After that, adjustments can be made in phases.

The key is to ensure that any changes in the finishing operations take place with no negative effect on production. Streamlining operations to reduce costs mean little if production suffers.

It's also important to have regular follow-up meetings between the manufacturer and coatings partner to confirm finishing initiatives and cost-reduction goals are met.

It Starts With The Finish

Coatings partners should be on the leading edge of finishing trends. The current trend for new finishes in the marketplace is toward products that enhance a manufacturer's sustainability programs, such as lowering VOCs or improving air quality while maintaining or enhancing throughput.

Formaldehyde-free products – lacquers, conversion varnishes, primers and surfacers – and waterborne finishes have been on the market for several years. They're still a small part of the overall cabinetry finishing mix, but several factors are in play that should increase demand for these products.

As Millennials enter the housing market, this generation will be attracted to homes that offer sustainable products and address environmental concerns.

Regulations are constantly changing, and companies must address VOC concerns as these tighten over time.

Some manufacturers voluntarily choose to utilize formaldehyde-free and waterborne finishes as a statement to their customers about their commitment to the environment.

A major benefit of formaldehyde-free finishes is the elimination of the strong odour of formaldehyde during both the finishing process as well as the strong residual odour that may cause complaints during installation and unpacking of cabinetry. And while the finishes may carry a premium price over traditional finishes, manufacturers should understand that most formaldehyde-free finishes are a drop-in on existing finishing lines; there typically is no added expense in terms of purchasing and installing new finishing equipment.

Waterborne coatings not only help manufac-

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turers meet environmental emissions considerations, but also offer quick curing to enhance throughput. They are available in clear coats, various shades of white and custom pigmented colours in a variety of gloss levels. Waterborne coatings that offer UV finishing capabilities may carry an additional cost through the need for more capital equipment, but with regard to overall cost savings, those costs may be negated through increased throughput, finishing efficiency and the ability to meet regulatory requirements.

New product introductions for spray and wiping stains offer fast, repeatable colour matching with tight tolerances to ensure batch-to-batch consistency. Anti-settling features may boost the stain's stability, colour dispersion and increase overall workability.

Custom accent finishes have become popular with manufacturers who wish to create high-end, one-of-a-kind looks. Textured emulsion, crackle, veiling, dry brush, powder glaze and chip finishes can be used independently or combined to add depth and texture. The only real limit is the imagination, and finishes such as this truly offer the manufacturer a way to differentiate itself from the competition.

Powder Coatings... The Newest Opportunity

As painted cabinets have increased in popularity, so too has the use of medium-density fibreboard (MDF). High-performance, low-cure powder coatings for MDF that offer a durable finish in a wide array of colours, plus a variety of textures are now available.

Low-temperature cure systems may reduce a manufacturer's energy consumption while offering fast cures to increase overall line speed as compared to conventional powder coatings. Low-cure powders may also provide stain and moisture resistance.

Colour My World

It's not just a world of stains anymore. A true coatings partner should be able to help customers understand upcoming trends and tastes through colour forecasts, and then help them plan accordingly.

Colours in cabinets remain popular among consumers. Greys remain popular for both cabinets and accent pieces; these shades are versatile, and can be mixed with either cool or hot colour combinations. Blues and natural wood tones are also popular, and so are jewel tones on accent pieces.

Our research indicates that homeowners seek practicality and simplicity in their kitchens and baths, and they show an interest in lasting value and better aesthetics. To achieve this, they will combine elegant and rich colours with simple, less ornate materials that are easy to maintain.

There's No Place Like Home

Finally, it's important to be able to work with a coatings partner that offers local support and speaks the language of the province in which you're located. When there's a question, or when it's just making sure that everything is operating smoothly on the finishing line, there's a real degree of comfort knowing that a finishing partner isn't far away and can be at your facility with relative ease.

That's just one more way establishing a partnership pays off for all concerned. ■



John Miller is
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Hope Pro Finishing Launches New Custom Coating Operation

Launching a new Custom Wood Coating operation is a tough choice between a basic manual and a high-end automatic operation.

When he began operation on Progress Ave. in Eastern Toronto in 2014, Christy Alexander of Hope Pro Finishing, chose to go high-end with a Roba-Tech rotational brush belt sanding system followed by a Venjakob Ven Spray flatline finishing system and Fugi Dry tunnel. The operation began with one major customer who made cabinets, but has grown to encompass several large customers plus numerous smaller customers that keep the seven employees busy. Besides cabinetmakers, Hope Pro works with a door manufacturer and mill work company. Alexander hopes to work with commercial store fixtures contractors.

The Hope Pro team has several years of experience working with Custom Builders,



Ariyam Jimron and Roba-Tech rotational brush belt sanding system.



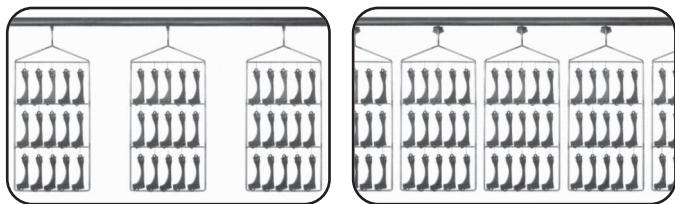
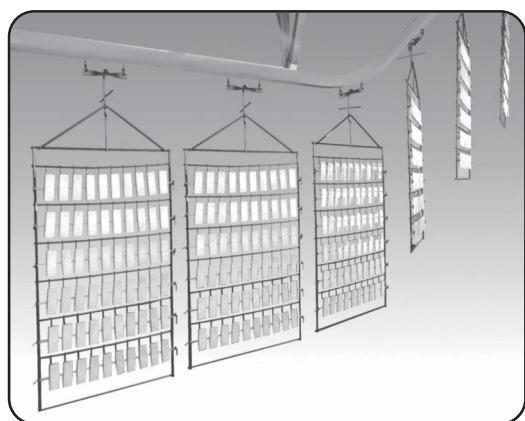
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Michael Harrison, President
Yorke Towne Supplies Limited

Louie Forestieri
Multiflex Custom Cabinet & Millwork Solutions

Sam Cesario, Sales Representative
Yorke Towne Supplies Limited

“With the current trend having moved from laminate to paint, accurate and consistent colour matching is more important than ever. Usually, our jobs begin by meeting with interior designers and reviewing the colour palette they've selected for a project. From there, we begin collaborating with our Chemcraft Distributor.

Their colour team works alongside myself and my colour finisher to recommend the substrates, products and finishing techniques that will bring the designer's colour vision to life. Our reputation depends on accurate colour matching, and our Chemcraft Distributor provides the products and support that helps us deliver the results our customers expect. It's a great partnership.”

Louie Forestieri
Multiflex Custom Cabinet & Millwork Solutions
Toronto, ON

Founded in 1977, Multiflex Custom Cabinet & Millwork Solutions provides high-quality custom crafted cabinetry and millwork to the corporate, hospitality, retail and high-end custom home markets. Their Chemcraft distributor is Yorke Towne Supplies Limited in Richmond Hill, Ontario.



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Designers and Homeowners and over two decades experience in finishing. Alexander says the company's master sprayers specialize in high gloss and glaze jobs. They keep their prices competitive.

"We understand that quality craftsmanship, premium finishes, and detailed installations are essential to a successful project," says Hope Pro's Christy Alexander.

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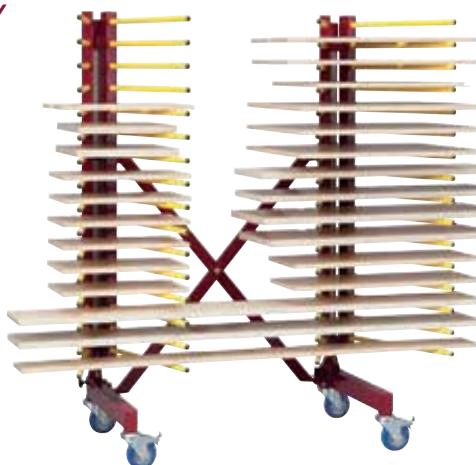
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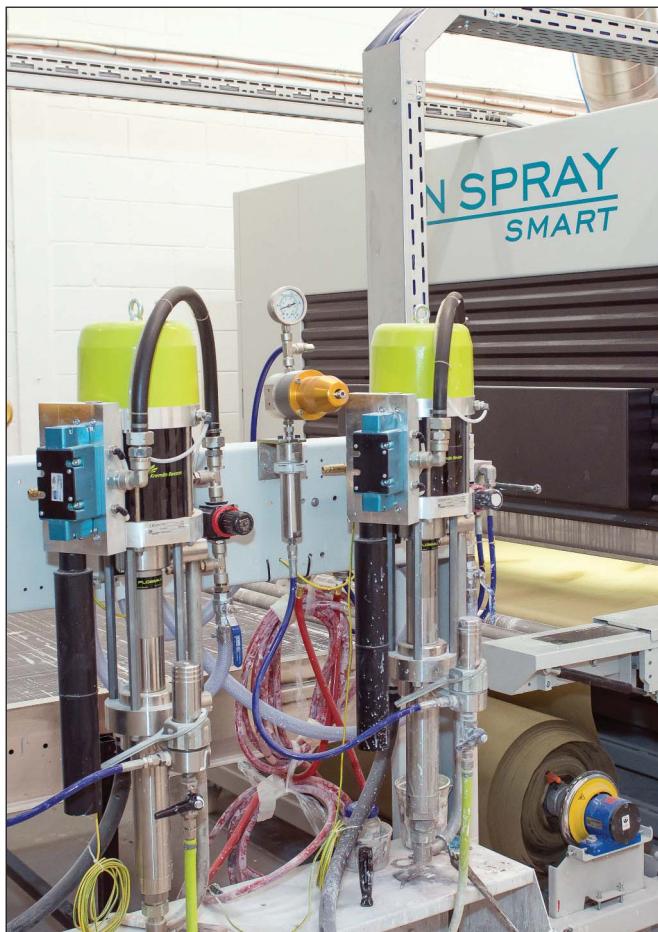


Jesuthasan Jugin.

ishing company specializing in natural finish, stains, solid colours, glazes, and luxury finishes. They work with the customer, the cabinetmaker, contractor, decorator and architect to help in the decision making process of selecting the best finish for the design. Hope Pro provides a variety of pre-made samples, as well as custom colour matches in a wide variety of stains, paints, and specialty finishes. They offer commercial finishing services for MDF and wood surfaces and can create custom colours or stains that will compliment any decor, colour matching most existing colours. The high-end wood finishes come in many styles and combinations.

The automated systems ensure quality control and repeatability in paint, stain and high gloss finishes.

Hope Pro works with Chemcraft solvents, and waterborne stains and coatings from Yorke Towne Supply and Sherwin-Williams.



Kremlin Pump system.



Jesuthasan Jugin and Venjakob Ven Spray Smart.

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Finding the Cure with the **RIGHT OVEN**

Choosing the right oven in the curing process is critical. Curing is an important, but also costly, part of the finishing operation. Using the right equipment and using it properly is essential to achieving optimal results.

The size and shape of the parts on the finishing line, the type of coating to be cured, and even the amount of floor space available on the shop floor are all considerations before making the capital investment in an oven.

Some product configurations trap liquids and may require zoned ovens. The oven exhaust, if insufficient to handle volatile materials released during curing, can negatively impact the cure and final part appearance. The amount of volatile material also depends on the product being used.

The amount of exhaust and the type of heat source can affect product colour. Poor exhaust and gas-fired ovens typically cause coating colour to darken and/or yellow. The amount of colour drift varies with product type.

Prior to entering the cure oven, the product is cleaned, rinsed, dried, and coated.

Time spent in the oven is determined by the coating specifications. The coating suppliers specify the required time at a given temperature needed to thoroughly cure the coated product. However, line speed, product window size, hanging spacing and product weight/conveyor weight must be defined prior to designing a cure oven.

Enclosure openings where products enter and exit are designed using minimal clearance for the product and can cause concern. Bottom entry/exit designs make use of the natural sealing features of hot air and present no real problems. Openings in the sides of ovens require mechanical air seals to contain the environment.

To seal an opening, it is best to draw hot air from the oven and force it back into the opening. For this to work, a significant velocity must be developed at the center of the opening. Additionally, the oven must run negative relative to the production environment. These two

requirements draw factory air into the oven. This pressurization is relieved by exhausting the enclosure, resulting in a considerable source of heat loss.

An alternative to traditional construction methods is an oven module. When the design allows for shipping, 20-ft-long completely assembled sections of the oven can be fabricated. This construction includes all-welded interiors that eliminate areas for dirt to collect; steel buried in the panels to reduce interior surface area; fewer joints with through metal for less heat loss; and speed and ease of assembly at the customer's factory. Despite the many positive features, these ovens are rarely practical because of their configuration.

Heater units. The heater generates the energy for curing and begins the distribution of energy. The most significant components of the heater are the burner, supply fan and filters.

Many heater units have filtration systems to continuously clean the oven environment. Filter efficiency varies with the application, but the types modified for the elevated temperatures used to filter final makeup are most effective. Filters require much lower velocities than in normal heater units. When filters are used, heater unit size must be increased. Oven filters continuously clean the air and, as a result, load very slowly. It is not necessary to pre-filter high efficiency filters.

Supply Air System. Another problem occurring when the products of the cure and combustion combine and come in contact with a direct flame is the production of NOx. When this becomes a problem, it is overcome by introducing large amounts of fresh air into the heater. This lowers the temperature of the flame-heated air to a point where NOx is not produced. This, like the indirect oven, is applied at a significant cost of energy.

Recirculated Air Systems. The recirculating system returns oven air to the heater unit so that energy is continually added to the oven. This is accomplished using the duct with the supply fan to create a negative pressure condition within the enclosure. The oven air naturally migrates to the areas of low pressure, where it is captured in the duct system and returned to the heater.

Recirculating duct is fabricated in much the same manner as the supply duct. The duct is designed for slightly lower velocities. The velocity in the duct is held at 2,000 fpm and openings are 20-25 per cent greater than the supply.

Exhaust Air System. Every oven must be exhausted. Exhausts create a negative environment so that air seals operate properly and remove VOCs and other cure products from the oven. Additionally, the exhaust purges the oven prior to start-up. The requirement for purge is to change the enclosure atmosphere four times in approximately 20 minutes prior to ignition.

The flexibility of convection curing keeps it popular with today's finishers, despite pressures to increase quality and reduce the space required for paint shops. A properly designed and installed convection oven requires little attention relative to pretreatment and application processes. It runs effectively with simple controls. It can be combined with other curing methods. Filtration or indirect firing can be added to improve quality. Because the exhaust can be controlled so well, abating oven gases is reasonably achieved. To conserve on factory space, ovens can be elevated, located outside or on building roofs.

The understanding of oven system requirements will lead to a successful implementation when the end user, coating and equipment suppliers work as partners in developing the oven curing system right for you. ■

RadTech's UV.EB West – A Success



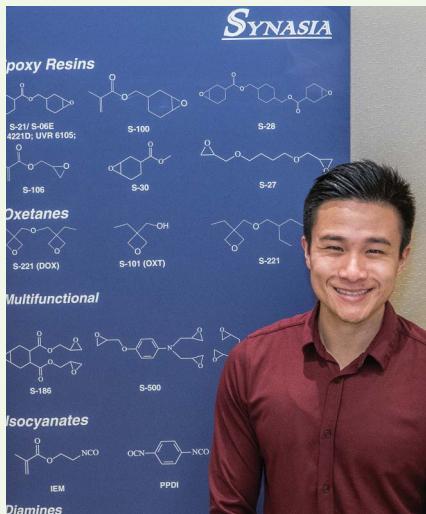
Carlos Alvarez and Mike Kay, Excelitas, Mississauga, ON.



Michael Knoblauch, Keyland Polymer.

With a record number of exhibitors and attendees, RadTech thanks members and friends for helping make uv.eb WEST 2015 a success. The event showcased the use of UV and EB in applications such as 3D Printing, inkjet, industrial and printing and packaging. A large percentage of our attendees were end users and/or first time RadTech participants. Mark your calendars for RadTech 2016, May 16-18 in Chicago. The exhibit floor is already 40 per cent sold and the call for papers will be out shortly.

Photos by Pete Wilkinson



Kevin Qiu, Synasia Inc.



Tom LeBiedz and Ron Starkey, CB Mills.



Michael Dvorchak, Allnex Inc.



Bob Ruckle, Adam Horne and Eugene Ward, Siltech Corporation, Toronto.



Marc Jackson and Mark Smith, Melrob.



Mixing and Dispersion Consistency

Manufacturers of mixing and dispersion equipment in paint and coatings manufacturing, say formulators are looking for equipment that offers consistency and ease of operation. Energy efficiency is also a demand...any equipment that provides a boost in versatility and efficiency, and enables development engineers to be more productive. New designs in mixing/dispersion equipment are making this possible.

Mixing equipment features available include air drive, electric drive, AC or DC with electrical specifications to suit operating conditions, single or variable speeds with horsepower to suit service conditions and dimensional design to suit batch size or the existing tank. Power lift is also available providing means for quickly removing stirrer shaft assembly. Products avail-

able in the marketplace include machinery for grinding and dispersion, lab size to complete custom engineered systems, with capacities up to 65 tons per hour. High-speed dispersers, inline mixing, horizontal and vertical media mills, multi-shaft mixers, powder size reduction equipment (jet mills, classifier mills and universal mills), skid-mounted, turn-key processes and custom equipment and systems.

In several sectors of the industry, successful dispersing, (the targeted separation of agglomerated particles) is still presenting a challenge. Manufacturers of dispersion equipment are meeting this challenge with energy efficient units through utilization of turbulence, cavitation and shear forces, thus providing real energy and time saving potential. Technical benefits can

include efficient dispersion, small particle sizes, significantly reduced heat, reproducibility and easy cleaning/product changing.

Machines should accomplish effective dispersing of particle and pigment agglomerates as well as emulsions. In addition to being energy efficient, difficult dispersions should take fewer passes, which helps keep wear and tear at a minimum. A low pressure, low maintenance machine can offer viscosity up to 150,000 mPas and provide gentle thermal process conditions for delicate active ingredients, with no moving parts.

Manufacturers say customers seem to be interested in mixing more challenging materials, such as viscous or highly filled materials that make the mixing part of the process more important. There are applications where the mixing process has to be done in just a few seconds. With advances in development and availability of nano tubes, carbon and glass fibers and trying to mix these new materials more efficiently in various liquids, mixing has become a more important factor.

Waterborne systems require the higher

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The advertisement features a collage of NETZSCH equipment against a background of colorful paint cans and abstract paint splatters. The equipment includes:

- Submersible Basket Mill** **MASTERMILL**: A large green and silver vertical mill.
- Grinding Media** **NETZSCH ZETABEADS®**: An inset image showing dark spherical grinding media.
- Economic Dispersionizer** **OMEGA**: A smaller horizontal mill unit.
- New!** A teal arrow points to the Omega dispersionizer.
- Horizontal Disk Mill** **LME**: A large green and silver horizontal mill.

A callout box in the upper right corner reads: "Test your product or application in one of our state-of-the-art technical centers! Call today to learn more!"

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shear of a rotor/stator mixer to achieve a product with the desired droplet size, stability, agglomerate size and colour development.

Waterborne products are extremely vulnerable to air and the vortex created by the HSD can cause foaming problems. Although a defoaming agent can be added, the problem can be averted by switching to a bottom-vortexing rotor/stator mixer. Compared to the HSD, the rotor/stator mixer generates an inverted vortex and much less surface violence, sharply reducing the air entrained in the batch. The high shear rotor/stator mixer can produce a better pre-mix in both solvent- and waterborne applications.

The reality in many coatings labs today is that engineers must consider both high-speed dispersers and rotor/stator mixers in development to ensure that they identify the optimal process for their new product.

Any agitator change that requires more than five minutes is too slow. If it requires specialized tools, it is too complicated. If it causes a mess with exposed bearings, seals and shaft replacements, it has no place in the lab. The answer is to design the agitators specifically for fast interchange with no need to touch the bearing assembly or the shaft.

A mixer that accepts a variety of agitators saves space in the lab. Coatings development labs require the ability to compare test results using a rotor/stator mixer and a traditional high-speed disperser.

There is a difference between a mixer that enables the changing of agitators and one that is engineered to allow the change and preserve process comparisons with properly balanced shaft speeds and agitator tip speeds. The agitators must be sized correctly to allow for the best lab results. The operator must be able to adjust the shaft speed easily, quickly and precisely over a speed range of at least 690 to 6,900 rpm.

The blades in the high-speed dispersion equipment need to be properly maintained and changed and updated regularly for consistent results. When installing a new impeller, run a standard batch of material and record the amps required to run the impeller in the said batch. Check the amp draw of the machine in the same type of batch, maybe once a week or month depending on the abrasiveness of your products. When there is a noticeable decrease in the amp draw for the same batch, the impeller is losing its effectiveness and should be replaced.

There are coatings available on the market to make blades last longer, such as tungsten carbide spray welded to the tips of the impeller to give them abrasion resistance. A typical tungsten carbide coated blade will last up to

four times longer than a non-coated blade. Dispersing highly abrasive materials will need a coated blade.

Blades available on the market include Intensive Type for agitation, positive but gentle material flow, low shear smooth fast mixing without air inclusion. Intensive Type Cutter for shear and agitation, positive material movement, good blending and shear for the more fibrous additives and fillers. Intensive Type with Teeth for high shear and agitation, most positive material movement, best combination where

high shear is required for a rapid and smooth blend or when high shear is not required but is not detrimental.

A formulator needs to select a mixer/disperser product line that is intelligently designed to facilitate scale-up with operating parameters that logically relate each product model to the others in the line. This will reduce problems when it is time to increase production.

Test a variety of equipment. Select an equipment manufacturer with a well-equipped laboratory for testing prior to purchase. ■

The Paint and Coatings Industry: On Point with Sustainability

GARY LEROUX

Sustainability is the buzzword for the 21st century since it first came into the vernacular in 1987 at the United Nations with the Brundtland Environment Commission Report. It defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." It is indeed a worthwhile goal and since then it has been embraced by the corporate world including the paint and coatings industry.

The International Paint and Printing Ink Council (IPPIC), of which CPCA is a founding member, interprets the broad definition specifically for the global paint and printing ink indus-

many years by virtue of the excellent performance and multiple uses of its products.

In addition to these obvious value-added characteristics of coatings, in 1996 IPPIC developed the Coatings Care program and its best management practices for environmental management, process safety, occupational health and safety, product stewardship, transportation and distribution, and community responsibilities. The program was and is used by companies around the globe to ensure sustainable business practices remains a key business focus. In addition to these best practices, more recently in Canada we have seen a proliferation of regulations and standards by governments at every

grams. That is approximately 35 million kilograms per year!

In addition to best practices and regulatory compliance, paint and coatings companies have gone one step further. They have fully embraced the concept of sustainable development, and the larger publicly traded companies report on sustainability each year as part of their overall annual reporting to shareholders. For example, one of the largest coatings companies in the world, PPG, delivered the following in their recent report: 21 per cent of sales from sustainable products on worldwide sales of more than \$15 billion, ten percent reduction in GHG emissions from 2012 to 2013 and plans for 1.5 percent per year to 2020, the lowest injury and illness rate in history and continually encourages and supports community service among its employees. Axalta Coating Systems' "Sustainability Report" revealed that 2013 emissions from operations of VOCs and hazardous air pollutants decreased by 15 percent, recycled or reclaimed approximately 27,000 metric tons of waste, and reduced manufacturing process times thereby reducing cycle time per batch of paint produced by approximately 30 per cent. Benjamin Moore has created a line of high quality, low or zero-VOC paint, committed to measuring and reducing their carbon footprint company-wide, and supports historic preservation including housing initiatives, environmental programs and pediatric care. Benjamin Moore obtained certification at the Silver level from the "Cradle-to-Cradle Products Innovation Institute" for its 'greenest' paint Natura and zero-VOC waterborne colorants. For ten years, the company has established the "Benjamin Moore Community Restoration Program", a granting program in support of heritage restoration and community projects in Canada.

Another CPCA member among the top ten coatings companies in the world, Sherwin-Williams, has gone so far as to have an annual sustainability disclosure database, which tracks sustainability across its global supply chain in 120 countries. It includes things like non-haz-

"In addition to these obvious value-added characteristics of coatings, in 1996 IPPIC developed the Coatings Care program and its best management practices for environmental management."

tries in terms of their impact on Planet, Prosperity and People. IPPIC's sustainability policy notes that the coatings industry has a long history of sustainable practices. It points out that these include: "Protecting and decorating the surfaces of buildings and structures, ships, planes and automobiles, as well as paints and coatings that provide energy efficiency, disease prevention, and 'self-repairing' surface treatments. Other examples include resource recovery, eliminating hazardous emissions, offering products formulated to meet specific requirements, 'life-cycle assessments' to evaluate the relevant environmental impacts that come from preserving and protecting global infrastructure, and worker and community health and safety programs that protect the workforce manufacturing the products and the communities using paints and coatings." The coatings industry has clearly been proactive on many fronts with respect to this definition of sustainability for

level to control the use of chemical inputs in coatings formulations such as the federal government's comprehensive Chemicals Management Plan (CMP) assessing all chemicals in commerce. These regulations are among some of the toughest in the world and much of CPCA's work involves working with governments to insist that regulations be evidenced-based with respect to a reasonable assessment of risk. That being said, the paint and coatings industry has not shirked from its environmental responsibility and works hard to be in full compliance with regulations. All of this effort has led to many positive outcomes such as, substantial VOC reductions with low and no-VOC products on the market, increased use of waterborne paint over solvent-based (with more than 90 per cent of the architectural products in Canada now waterborne) and more than one kilogram of post-consumer waste paint per Canadian recovered annually under product stewardship pro-

SUSTAINABILITY



ardous liquid waste treatment and disposal, non-hazardous liquid material use and recycling, hazardous waste treatment and disposal, and hazardous material reuse and recycling. On the scale of pounds per 100 pounds of production for all these elements it has consistently reduced its environmental footprint annually. Other metrics focus on VOC emissions during manufacturing, total electricity consumption, sites certified in accordance with ISO standard 14001 and more.

Since 2003, BASF's sustainability report applies the "Global Reporting Initiative" G4 'comprehensive' international guidelines in its reporting. The 2014 report showed that the annual number of transportation accidents was reduced from 0.56 per 10,000 to 0.20; its climate protection products sold in 2014 enabled customers to reduce greenhouse gas emissions by 520 million metric tons of CO₂ equivalents; with respect to energy efficiency BASF saved 18 million MWh per year, equal to an annual reduction in CO₂ emissions of 3.6 million metric tons; and they continue to reduce emissions from their own production activities and from their work with partners along the value chain.

Valspar recently issued the "Valspar Sustainability Report" to highlight their long history of integrating their economic success with efforts to safeguard human health and the environment and their active engagement to make the communities stronger. The report covers five important aspects of Valspar's business: employee safety, community engagement, innovation, operational excellence and governance. They evaluate their success against baselines and established benchmarks vis-à-vis their various locations and regions.

Among the top coatings companies in the

world, AkzoNobel, continues with its "Planet Possible" initiative highlighting their commitment to making products and their operations more sustainable and creating value from fewer resources. It has an Executive Committee and Sustainability Council measuring progress against set targets ranging from carbon management and renewable energy to raw material extraction and water use via a very rigorous reporting process. It's little wonder that AkzoNobel has been ranked number 1 on the Dow Jones Sustainability Index for three consecutive years and chosen from among 350 companies in the materials industry group. It had been in the top three for the past nine years. This Sustainability Index is widely regarded as the most respected independent sustainability ranking system in the world as it benchmarks the sustainability performance of leading companies based on environmental, social and economic performance, including forward-looking indicators.

It is clear from the above examples of large publicly traded companies that the coatings industry maintains a steely focus on sustainability. All CPCa member companies pay close attention to sustainability and environmental impacts in some manner. However, it needs to be noted that the achievement of social and environmental objectives can only come if the third pillar of sustainability is sound, economics. On that front the coatings industry is also on top as it has outperformed all other industries in the chemicals sector over the past four years, averaging a 27 percent return compared with the Standard & Poor's 18 percent. The industry provides good shareholder returns with strong cash flows, and consistent earnings that lead to excellent value creation. The global coatings demand and

growth by end use is forecasted at 5.5 percent overall through 2018. The major end users are decorative and wood, automotive OEM and refinish, transportation, general industrial, maintenance and protective, and packaging.

There are other reasons why the coatings industry provides worthy investment opportunities. The sector is viewed as part of a strong value chain with predictable cash flow and ROI, good profitability, low capital intensity with significant barriers to entry such as regulations, technology innovations and strong franchise operations. In fact, over the last four years there has been \$15 billion in activity from mergers and acquisitions, which included manufacturing (48 percent), distribution (19 percent), and raw material supply (33 percent). Furthermore, coatings companies are well respected for capably running their companies with good returns for investors and a deep understanding of their customers.

The paint and coatings industry doing the right thing, in the right way, for the right reason, helps increase productivity, lower costs, and increase worker safety. This is done while helping customers reduce consumption of resources and minimize exposure and impacts on the environment. In the final analysis, sustainability has proven to be good for business and good for the environment when done the right way. It is here to stay as part of our lexicon and as a critical part of the paint and coatings business for years to come. ■

Gary LeRoux is the President of the Canadian Paint and Coatings Association (CPCA) based in Ottawa.

Cost-Effective, Energy-Efficient and Environmentally-Friendly

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

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

Various lines of resins for powder coatings offer a wide range of choices to meet a formulator's needs. Manufacturers focus on delivering performance, value and versatility to the powder coating formulator.

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Characteristics of powder resins are adapted to fit the strict needs of powder coating production.

Combination of innovative technology, global support and broad product lines help to achieve the highest quality paint.

If a manufacturer carries extensive lines of additives, it enables the formulator to add value to powder coating formulations. Choices range from rheology modifiers or specific performance-enhancing additives.

Fine-tuning formulations with specialized additives for powder coatings will achieve:

- Rheology control
- Matting agents
- Slip and mar resistance
- Scratch resistance
- Flow and levelling agents

In the global automotive industry, the key trends are reducing carbon emissions and lowering fuel consumption. This underpins the search for further weight reduction in cars. Sheet molding composite (SMC), essentially a fiber-reinforced plastic with an extremely low weight-to-mass ratio and infinite freedom in design, is therefore a preferred construction material for body car parts. To date, the typical paint process has been a limiting factor: micro-pores in the SMC surface after molding require several layers of sealer, primer and finally topcoat to ensure a high quality finish. Some powder-in-mould coatings solve the problem in a single layer, without additional production steps.

There is currently a limited number of powder coating lines for MDF/wood - probably fewer than 40 worldwide. Yet these pioneer coaters show that there are plenty of promising opportunities for powder-coated MDF/wood, particularly in applications where a desire for durability is matched by the need for design freedom, such as in furniture, kitchen cabinets and architectural solutions.

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

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

Powder coating resin manufacturers are continually coming out with new resins that they feel will boost their market potential. High performance lines of polyester resin products for outstanding aesthetic performance for example. Acrylic Polyester hybrid cured resins are good for building materials, electrical products and metal. Blocked Isocyanate-cured hydroxyl-containing polyester resins and epoxy resin-cured carboxyl-containing polyester resins and hydroxylalkyl amide-cured carboxyl-containing polyester resins are as well. Diacid-cured glycidyl-

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

containing acrylic resins have all those uses plus road vehicles and acryllic resin additives also have multiple uses. With powder coatings intermediates, formulators can achieve the coatings performance that's desired: high- to low-gloss finishes, standard and super-durable applications, good to excellent chemical resistance, and even anti-graffiti applications. Formulators are asking for resins that are versatile and still perform.

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

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

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

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

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

TGIC - Polyester powder coatings are used for architectural purposes, agricultural equipment, and lawn and garden applications.

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

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

Significant advancements are also being made in the weatherability of powders for use in automotive and architectural applications. Polyester TGIC based powders, for example, have been used on outdoor stadium seating and other exterior applications that were previously susceptible to degradation from UV. The use of TGIC, which has been labeled as toxic in certain regions, is now being replaced by other binders. Clear, corrosion resistant, and durable powder coatings are used for a wide range of applications including automotive parts. Auto manufacturers such as BMW and Volvo are using powder clearcoats over automotive exterior basecoats.

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

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May/June 2015 Issue



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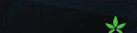
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KEYNOTE BY BILL BARKELEY

Blind-Deaf Adventurer and Disability Advocate

NETWORKING: Chicago Midwest Chapter of NASF Evening Reception

TUESDAY, JUNE 9



SHOW FLOOR OPEN 10:00 AM – 5:00 PM

CONFERENCE SESSIONS:

Advances in Surface Finishing I
Aerospace Forum
Automotive I: Functional
Automotive II: Decorative

Fasteners
Light Materials Finishing
Mechanical Methods for Finishing
Regulatory Issues

◀ KEYNOTE BY AL MCGEE

John Deere Supply Base Manager,
Enterprise Supply Management



JOHN DEERE

NETWORKING: Joint Reception with Fastener Tech

WEDNESDAY, JUNE 10

SHOW FLOOR OPEN 9:00 AM – 3:00 PM

CONFERENCE SESSIONS:

Advances in Surface Finishing II
Automotive III: Plating on Plastics
Best Practices in Treatment and Waste

Electroless Nickel Plating
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The Importance of the Dangler

The right dangler design is critical in barrel plating.

Manufacturers have seen several cases where the design or quality or selection of the barrel dangler significantly influences the success or failure of the electroplating process.

The dangler must not be too heavy or low quality or too small or various plating problems will occur.

There is a large variety of danglers available in the marketplace including plain, PVC sleeve, full length pvc sleeve, baked plastisol coated, vulcanized custom rubber and OEM Danglers. There are custom EPDM jacketed cables with a large (0.78) OD. There are ball, rod and slip on danglers, slotted danglers and disposable heads. There are also stainless steel heads in various sizes. Most dangler manufacturers will offer a free sample for testing and evaluation.

Some danglers have a completely vulcanized sleeve. The rubber sleeve can be molded directly to the cable, reinforcing the cable jacket to resist cuts and bends. No significant loss of flexibility occurs with a molded sleeve, as is commonly seen in time with a plastic sleeve. This superior design substantially extends the life of the dangler, reducing maintenance and downtime, lowering operating costs.

Extended life is one benefit of the sleeve. The quality of the plated parts are important. The sleeve reduces the carry-over of chemicals from tank to tank often found in plastic sleeves.

Dangler manufacturers often custom manufacture to fit a customer's individual barrels. Most cable sizes are available. Special requests for knobs and moldings are often considered. Crimped over knob design gives a positive electrical connection and added strength not found in soldered knobs.

Cathode danglers are manufactured from flexible welding standard cable in diameters from 16mm² to 240mm² with fixed or detach-

able contacts in brass or steel. They are supplied in rubber, polyurethane or PVC for durability and extended life. Dangler contacts can be fixed or detachable. Detachable tips (contact bombs) can be provided and are particularly useful for copper and nickel plating where the tips can become coated, resulting in reduced plating efficiency. The screw-in tips can be replaced without the need for a new dangler. Danglers are durable and flexible to aid the efficiency of the plating process. Safe plating operation is assured through uniform compression fixings.

Danglers are available as 4/0 dangler with steel cathode head, copper mounting terminal, and EPDM jacket. Recommended for small to medium loads and sized parts.

Also available on the market are 4/0 danglers with a PVC protective sleeve for abrasion resistance, steel head, copper mounting terminal and an EPDM jacket. Recommended for all size loads and parts. These have medium durability.

There are also 4/0 danglers with a full length PVC sleeve that passes through the bearing hole to above solution, standard head, terminal, and EPDM jacket. Recommended for all sized parts and loads. These have better durability.

There are 4/0 danglers with a Baked Plastisol coating, thick inside barrel coating, thin taper through bearing, standard head, terminal, and EPDM jacket. Recommended for all sized parts and loads. These have excellent durability.

There are 4/0 danglers with Vulcanized Coating designed for superior durability with 1.25" OD coating, 1" OD cable. Stays flexible for life. Standard head and terminal. Recommended for all sized parts and loads.

There are dangler quick connects available to change danglers in two minutes. Add 10-12 minutes of production per dangler change with no tools. Mounts to existing dangler locations.

Corrosion resistant copper coated and stainless steel construction. Plastisol coated handle. Used with custom TDG terminal.

4ga Mini Danglers have a 24" w/ 3" baked plastisol coating over the head and trimmed back. 3/4" OD and 2" length steel head.

Danglers are an important components of a plating barrel. They exist mainly to carry current from the electrified saddles to the parts inside the cylinder to be plated, although they may provide some parts agitation.

Making a good connection at the horn on the superstructure is important because without a good connection the amperage will be lessened or possibly absent. Broken or frayed danglers need to be replaced. Another consideration is the possible dragout from a vinyl sleeve as opposed to a plastisol dip (preferred dangler). Although there is an initial higher cost per dangler, this needs to be compared with the cost of chemistry carried from one tank to the next and the possibility of chromate leakage into the parts at the unload station. Also typical dangler longevity is better with plastisol dipped compared to a vinyl sleeve. However, the vast majority of customers use a vinyl sleeve in their plating barrels according to manufacturers.

Barrel plating line employees need to visually inspect danglers each time the barrel is unloaded. Sometimes there is sufficient time to replace a dangler without removing the plating barrel from the line. There are quick-change tools that make the process easy and quick. Replacement of barrel danglers, or the contact tips, should be part of any ongoing maintenance program. A damaged or worn dangler can impede the plating process and add to production costs.

Dangler manufacturers highly suggest paying close attention the selection, design and supplier for your barrel danglers. ■

Thickness Measurement



Measuring the thickness of plating on parts determines how long and well they will perform. It is a critical requirement for the production and incoming inspection of finished goods.

Testing Equipment suppliers offer a complete range of handheld coating thickness gauges ideally suited for measurements of plating, anodize, paint and powder coatings...from the small products with an integrated probe to the equipment with a choice of high precision probes to match applications.

Over the years, a variety of equipment has been developed to help monitor and control the thickness of coatings. Most of these tests are nondestructive and cover a wide range of coating thickness and material.

Magnetic induction method: This technology measures nonmagnetic coatings over ferrous substrates and magnetic coatings over nonmagnetic substrates. When the probe is positioned on the sample, the linear distance between the probe tip that contacts the surface and the base substrate is measured. Inside the measurement probe is a coil that generates a changing magnetic field. When the probe is placed on the sample, the magnetic flux density of this field is altered by the thickness of a magnetic coating or the presence of a magnetic substrate. The change in magnetic inductance is measured by a secondary coil on the probe. The output of the secondary coil is transferred to a microprocessor, where it is viewed as a coating thickness measurement on a digital display.

Eddy current method: This method measures nonconductive coatings on nonferrous conductive substrates, nonferrous conductive coatings on nonconductive substrates and some nonferrous metal coatings on nonferrous metals. As with a magnetic induction probe, the

eddy current method also contains a coil. In this case the coil has the dual function of excitation and measurement. This probe coil is driven by a high-frequency oscillator to generate an alternating high-frequency field. When near a metallic conductor, eddy currents are generated

in the conductive material. This causes an impedance change in the probe coil. The distance between the probe coil and the conductive substrate material determines the amount of impedance change, which can be measured, correlated to a coating thickness and displayed

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Dynamix is one of North America's fastest growing manufacturer and supplier of metal finishing chemistry. "The philosophy at Dynamix is simple - enhance our customers' performance and profitability, while dealing with all of our partners in an open and honest forum."

The primary focus of Dynamix is the design and manufacture of specialty chemicals for the metal finishing industry, covering all aspects of metal finishing from anodizing to zinc plating. Toll blending, packaging and distribution of custom formulated products are also available.

We offer a service that encompasses all of our values with a highly skilled and motivated team. The laboratory at Dynamix is well equipped and able to provide analytical solutions specific to a particular sector of industry and/or customer. Products are designed at Dynamix to provide unsurpassed performance and solution economy. Superior chemistry is only the beginning, as the company realizes that technical and application knowledge are just as vital to the metal finishers' success.

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in the form of a digital reading.

Coulometric method: With the coulometric method, the weight of an area of known size on a metallic coating is determined through localized anodic stripping of the coating. The mass-per-unit area of the coating thickness is then calculated. The coating's measurement is made using an electrolysis cell, which is filled with an electrolyte specifically selected to strip the particular coating. A constant current runs through the test cell, and because the coating material serves as the anode, it gets de-plated. The current density and the surface area are constant, and thus the coating thickness is proportional to the time it takes to strip the coating.

Beta backscatter method: Here a beam of beta particles is directed through an aperture onto the coated component, and a proportion of these particles are "backscattered" from the coating through the aperture to penetrate the very thin window of a Geiger Muller (GM) tube. The gas of the GM tube ionizes, causing a momentary discharge across the GM tube electrodes. The discharge—in the form of a pulse—is counted and then translated into coating thickness.



istic X-ray emission is detected with an energy dispersive detector.

Hand-held coating thickness gages: These gages typically operate using the magnetic induction method, the eddy current method or a combination of both. They come with either built-in integrated probes or units with probes on a cable. These units are ideal for one-hand operation and are most often used on a larger measurement surface such as an automobile part or appliance. Units that have detachable probes offer more flexibility, and they also allow users to exchange probes in the future if the application should change.

There are several different types of measurement methods and a wide variety of gages, both hand-held and bench top, from which to choose. Knowing some of the benefits and limitations of each method is important when deciding which unit will be most suitable. ■

X-ray fluorescence method: X-ray fluorescence is a versatile, noncontact method that allows the measurement of very thin multilayer alloy coatings on small parts and complex shapes. Measurement is performed by exposing the part to X-radiation. A collimator focuses the X-rays onto an exactly defined area of the test specimen. This X-radiation causes characteristic X-ray emission (i.e., fluorescence) from both the coating and the substrate materials of the test specimen. This character-

Editor's Note: Much of the information for this article was provided by Fischer Technology, Inc. www.fischer-technology.com

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Dow Corning introduces versatile leveling and slip agent

Dow Corning Corporation has introduced a new leveling and slip agent to meet the need for performance-enhancing products that can be used in a wide range of coating systems.

Dow Corning 8526 Additive is an easy-to-use, high-performance silicone polyether that provides good leveling and slip in waterborne, solventborne and radiation-curable paints and inks. The additive is compatible with a broad range of binder types and with acrylic, epoxy, polyester and urethane formulations. Additionally, it can be diluted in alcohols, glycol ethers, aromatic solvents and water for greater formulation versatility.

The product's effectiveness at low addition levels helps formulators reduce their formulation costs. Effectiveness at low addition levels also reduces unwanted side effects and enables good recoatability, so there are fewer rework concerns.

dowcorning.com/coatings

PPG debuts ENVIROCRON HTE high-transfer-efficiency powder coating

PPG Industries' industrial coatings business has introduced ENVIROCRON HTE (high-transfer-efficiency) powder coating, featuring a proprietary bisphenol A (BPA)-free polyester formulation that has a faster application build rate than traditional polyester coatings while providing more uniform coverage on complex parts and surfaces and reducing material waste.

Engineered for appliance, architectural, wire goods and extrusion applications, Envirocron HTE coating is engineered with an exclusive cross-link polymer that enables it to penetrate and apply evenly to metal parts and product assemblies with recessed cavities; odd shapes; and open, uneven or geometrically-complex surfaces such as refrigerator racks, patio tables, architectural components and other finished goods.

Envirocron HTE coating also can achieve first-pass transfer rates of 85 percent and

better, which makes it ideal for spray-to-waste coatings applicators that want to reduce product loss.

Shelley Verdun, PPG powder product manager, industrial coatings, said Envirocron HTE coating is engineered to help applicators increase throughput, reduce waste and more readily achieve environmental compliance. Envirocron HTE coating cures in 10 minutes at 350 degrees F, and it is available in a standard formulation to meet American Architectural Manufacturers Association (AAMA) 2603 specifications as well as in an ultra-durable version to achieve the AAMA 2604 standard. PPG also manufactures the coating in a wide range of colors and gloss ranges.

www.ppgindustrialcoatings.com

TCI Powder Coatings Launches New TruAnodize Powder Coating, AAMA 2604 Product Line.

TCI Powder Coatings, a powder coating manufacturer and subsidiary of RPM

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International company, launches a newly developed powder coating product offering, the TruAnodize line, meeting AAMA 2604 specifications. As part of the TruDurance architectural coatings product line, these innovative powder coatings are designed specifically for architectural applications where the anodized look is desired. The TruAnodize coatings are a smooth, low gloss powder coating applied in one coat with no clear coat required.

The six anodized appearances developed to match the most popular anodized colors are Light Bronze LR, Dark Bronze LR, Dark Bronze DR, Champagne LR, Black, and Bonded Clear. Ideal applications for these coatings include windows, doorframes, lighting, benches, wall panels, and rails. These coatings will eliminate the variation problems commonly associated with anodized metals while still meeting AAMA 2604 specifications in a one-coat powder coating.

www.tcipowder.com

Introducing the NEW OCMA Series

Horiba's new OCMA-500 & OCMA-550 Series operability is significantly improved while user-friendly features of the conventional products are maintained. This instrument can be utilized across a wide variety of applications such as drain monitoring & quality control of components.



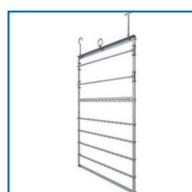
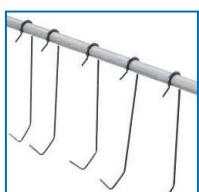
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Enthonc Introduces ENLUBE Plus PTFE PFOS-free Dispersion for Electroless Nickel PTFE Coatings



ENLUBE Plus PTFE advanced, PFOS-free dispersion has been introduced by Enthonc. When used in combination with an Enthonc electroless nickel process, the system delivers a single, integrated solution that produces EN PTFE coatings with superior wear resistance. Engineered to

meet automotive, industrial, defense and electronics application requirements, a 50 per cent increase in deposition rate with a PTFE build-in rate of up to 30 per cent may be achieved, versus conventional EN PTFE systems.

ENLUBE Plus PTFE eliminates the need to inventory multiple dispersions and EN processes while meeting exacting OEM requirements. Unlike competitive systems, ENLUBE Plus PTFE imparts extremely smooth and uniform deposits that are not prone to "orange skin" appearances or edge pull back. Capable of plating high thicknesses, ENLUBE Plus PTFE is both PFOS-free and Cd/Pb-free and maintains a shelf-life of 12 months.

www.enthonc.com

Dual Process Metal Finishing from a Single System

Metal finishers now can achieve both a high quality black oxide finish and a zinc phosphate finish using the same processing system. Safe, simple and inexpensive to operate, this innovative process line from Birchwood Technologies operates with Near-Zero™ water consumption. Capable of two unique finishes, it pro-



duces a high quality black oxide finish using the proven TRU TEMP low temperature process. In addition, it produces a fine-grained zinc phosphate coating using the MICROLOK MZN process. Both finishes meet many industry requirements and finishing specifications.

Consisting of 10 tanks with 100-gallon capacity, the Dual Process line incorporates a Near-Zero water recycler and an Ion Exchange water purifier. Both processes use common tanks and consume minimal rinse water. Both the blackening and the zinc phosphate process can operate singly or can operate simultaneously.

The TRU TEMP process operates at much lower temperatures than conventional processes, providing a high quality finish with long-term corrosion resistance without a dimensional change. It is a direct replacement for hot oxide and complies with Mil Spec MIL-DTL-13924, Class 1 and AMS 2485.

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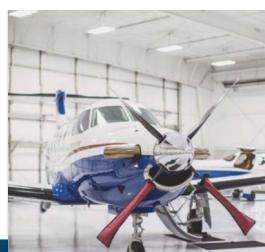
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The MICROLOK MZN process is a zinc phosphate fine-grained gray finish. It provides long-term corrosion resistance along with anti-galling and break-in lubricity qualities. It complies with MIL-DTL-16232, Type Z, Class 1, 2 and 3.

The Dual Process line offers the flexibility to operate either process by itself, or both processes simultaneously, as needed. Just one operator can handle all operations with time to spare. One operator can load and unload the system's racks/baskets, process the loads through the line, perform general daily maintenance on the line and produce about 3-4 loads of finished parts per hour. The line can be operated on a full-time or part-time basis, depending on work-flow patterns and part demand.

www.birchwoodtechnologies.com

CorrShield VpCl-379

CorrShield VpCl-379 is a water-based, economical, safe to apply, corrosion preventive liquid concentrate designed to



meet tough anti-pollution requirements. It is aimed for protection of ferrous and non-ferrous metals in sheltered areas, indoor or in packages not in direct exposure to rain and outdoor elements. Its unique vapor phase action migrates wherever humidity and corrosive agents can penetrate to provide complete protection to uncoated and difficult-to-reach areas.

VpCl-379 is designed as a complete environmentally safe replacement for hazardous oil-based preventives. The wide dilution range (between 5 per cent and 50 per cent) allows flexibility to customize the length of protection required versus applied cost per square foot (or m²).

CorrShield VpCl-379 provides superior protection against humidity and eliminates cleaning and housekeeping problems associated with oils.

This economical product can be diluted up to 1 part VpCl-379 to 20 parts water enabling significant cost savings. It forms clear and dry film, which renders attractive appearance to protected parts. CorrShield VpCl-379 displaces water from metal surfaces and is easy to remove, if necessary, or paintable with common coatings. Metals protected are carbon and stainless steel, aluminum, cast iron and copper.

VpCl-379 is readily soluble and forms a clear solution in water. Its properties and efficient application result in labor savings and improved health, safety and pollution control. The protective coating is clear and will dry at ambient conditions to become dry-to-touch 30 minutes after application. VpCl-379 is easily removed with conventional alkaline cleaners, and can be coated over with paints and primers without removal.

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Pentco Industries Inc. speaks out about great products and great relationships

We traveled to Surrey, just outside of Vancouver, BC, Canada to talk with Pentco about why they like working with Chemcraft products and with their Chemcraft distributor, Omega Coatings.

Pentco Industries Inc. was founded in 1979 and is one of Western Canada's largest manufacturers and distributors of cabinet doors. They produce industry leading products for single/multi residential developments, and commercial and institutional projects.

"We do a lot of multi-family high rises," said John McNulty, one of Pentco's two owners, "You can't have inconsistent colors rolling through hundreds of units. That's when we started using Chemcraft."



"Every company has a good, better, best product. Chemcraft has the greatest - Chemlife 24."

Chemlife® 24 Conversion Varnish

"Chemlife 24 has great fill, you can use it as a self-seal and it has higher solids than most products out there," continued McNulty.

"It's a go-to product. Very user friendly and cost effective. Using this product, you can cut waste by up to 30%. Consistent. Sprays the same every time," said McNulty.

"Pentco is known for quality products. We have to feel confident that every cabinet door lives up to what we say it will. That's why we have to use good coatings - and that's why we have to have good support. We can't wait a 'couple of days' for someone to show up."

"Our Chemcraft distributor representative is in here all the time," McNulty said, "Having



Front, L to R: Dallas McNulty - Manager, Pentco Industries. John McNulty - Owner, Pentco Industries. Sandra Filosof-Schipper - President, Omega Coatings. Back, L to R: Frank Brams - Sales Representative, Omega Coatings. Ian Jackson - Owner, Pentco Industries.

someone like Frank (Brams) to bounce problems off of and bring you solutions is key."

"We have sales reps in here constantly trying to get us to switch," said Dallas McNulty, Pentco's Manager. "So I asked one rep, how many changes of clothes do you have in your car? And he said to me, 'what are you talking about?' I said, 'Exactly!' Frank will stick his head in a machine and get dirty to insure our products are 100%, so he keeps a couple of changes of clothes in his car."

"That's the difference Omega and Chemcraft bring; you're buying insurance when you buy good coatings and work with good people."

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