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Volume 13 Number 4

EDITOR

Theresa Rogers
416-201-1975
theresa.rogers@cfcfm.ca

SENIOR EDITOR

Edward Mason
edward.mason@cfcfm.ca

CONTRIBUTORS

Donovan Dixon and Gary LeRoux

PUBLISHER, ACCOUNTING, CIRCULATION AND SALES

Pete Wilkinson
705-296-3030
Cell: 416-428-7838
Fax: 705-296-3031
pete.wilkinson@cfcfm.ca

ASSOCIATE PUBLISHER & SALES

Gillian Thomas
416-277-1269
gillian.thomas@cfcfm.ca

GRAPHIC DESIGN

Allan S. Bates
Green Apple Prepress
allan.s.bates@sympatico.ca

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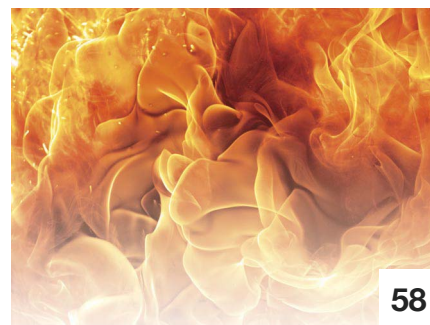
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2186 Mountain Grove Ave.
Burlington, ON Canada
L7P 4X4



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Growth

WHILE PUTTING together this issue, I spent some time hunting for some research that would provide insight into where various aspects of the industry were headed. I was curious about whether government regulation and other factors might be having any negative effect on the markets. Everything I found was a positive indicator for the future of finishing and coatings.

One study showed the powder coatings market is expected to reach approximately USD \$16.5 billion by 2024. Asia Pacific currently accounts for more than 40 percent of that share.

Similarly, the wood coating resins market is a rapidly growing products segment. Insights into the global wood coating resins market suggest a compound annual growth rate of 5.39 percent until 2021.

That report predicts the global wood coating resins market will reach a value of USD \$4.24 billion by 2021.

An increase in the availability of green, environment-friendly, healthier coating systems, more durable coating resins providing better performance and better aesthetics, growing demand for waterborne and solvent-free coating resins, VOC regulations further driving the demand for waterborne coating resins, and growing end-use industries, are all drivers.

Another new study shows the automotive and electronics industry is expected to bolster growth in the optical coating equipment market. This market is estimated to expand at a compound annual growth rate of around four percent.

Different industry verticals such as automotive, electronics, medical, and telecommunications, and also demand for solar energy applications, are anticipated to surge the demand for optical coating equipment. It's no surprise Asia Pacific should exhibit



prominent growth. In developed regions such as North America, growing eyewear and R&D industries play a significant role.

Governments can always do more to loosen the stranglehold on businesses. (See Gary LeRoux's take on Ontario's recycling red tape fiasco on page 58.) But clearly, the consumer is king and where there is growing demand, the will to fill it will be satisfied by those companies who can balance – new trends, technologies and competing demands – best.

Theresa Rogers
theresa.rogers@cfcm.ca

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FABTECH 2019 Announces Keynote Speakers

FABTECH 2019, North America's largest metal forming, fabricating, welding and finishing event, is set to engage the industry with forward-thinking, solution-driven, inspirational keynote sessions on November 11–14 at Chicago's McCormick Place. The informative and captivating keynotes will be led by one of three dynamic featured speakers, including three-time Super Bowl Champion Chad Hennings, Author Frank Abagnale Jr., and Mythbusters' Grant Imahara.

"FABTECH is distinctively positioned to provide industry professionals with access to the information, technology and equipment they need to transform their businesses—exposure to these speakers will impart insights and enthusiasm through shared passions and experiences," says John Catalano, SME senior director, FABTECH. "This year, FABTECH is particularly honored to celebrate veterans who have served to protect our country and are now lending their leadership and talents to our industry. They are part of the blended, diverse fabric of professionals across the world that make up this amazing industry."

On Monday, November 11 from 8:30 a.m. to 9:45 a.m., FABTECH opens with a unique celebration of veterans. FABx Tech Talks, designed to emulate the popular TED-style concept, will feature a powerful lineup of visionary veterans. These heroes will draw on their unique experiences to inspire attendees with their frontline stories focused on motivation, team building and innovation. Kicking off the celebration is nine-year NFL veteran and three-time Super Bowl Champion, Chad Hennings, who served in 45 successful combat missions with the Air Force. As a FABx featured speaker, Hennings will share how integrity, identity and commitment lead to a lifestyle of excellence. FABx will also welcome

honored veterans: Hernán Luis y Prado, founder and CEO, Workshops for Warriors; Jason T. Ray, co-founder & CEO, Paperless Parts, Inc.;

Shelly C. Rood, educational consultant, Mission Ambition, LLC; and Michael Walton, manufacturing industry solution executive, Microsoft. Each speaker brings their life experiences and expertise to inspire forward-thinking and organizational leadership.

Known as one of the world's most famous comedians, Frank Abagnale Jr. will welcome the industry on the morning of Tuesday, November 12 from 8:30 a.m. to 10:00 a.m. This intriguing keynote session from the cybersecurity expert, bestselling author and subject of "Catch Me If You Can" will provide entertaining insights into his life as the notorious imposter of the 1960s as he instructs attendees on how to protect themselves and their businesses from fraud. Attendees will experience an emotional roller coaster ride as Abagnale takes them on a hilarious and poignant journey of his time as a wanted criminal and speaks of his personal transformation.

Former host on Discovery's Mythbusters and animatronics engineering expert, Grant Imahara, will provide a glimpse at his work on various sets and productions while touching on the importance of advancing the engineering/manufacturing industry during his keynote session on Wednesday, November 13 from 8:30 a.m. to 9:30 a.m. Imahara will bring attendees inside the world of science and entertainment through stories of his experiences consulting for Walt Disney Imagineering, where he works on next-generation robots for Disney's theme parks. Having experience with electronics, designing, fabricating, machining, CAD layout, laser cutting, mold making, and machining, Imahara has a full understanding of the industry and will make parallels to help guide attendees to growth and success.

www.fabtechexpo.com

Bombardier Concludes Sale of the Q Series Aircraft Program and Mitsubishi Acquires Canadair Program

In June, Bombardier confirmed the closing of the previously announced sale of the Q Series aircraft program assets to De Havilland Aircraft of Canada Limited (formerly Longview Aircraft Company of Canada Ltd.), an affiliate of Longview Aviation Capital Corp., for gross proceeds of approximately \$300 million. Net proceeds are expected to be approximately \$250 million after the assumption of certain liabilities, fees, and closing adjustments.

Longview will carry on the production of Q400 aircraft at the Downsview Facility in Toronto, and will continue performing aftermarket services for Q Series aircraft. Bombardier will provide transitional services and will license certain intellectual property to Longview to facilitate a seamless transition of the Q Series aircraft program.

Also announced, Mitsubishi Heavy Industries and Bombardier entered into a definitive agreement, whereby MHI will acquire Bombardier's regional jet program for a cash consideration of US\$550 million.

MHI will acquire the maintenance, support, refurbishment, marketing, and sales activities for the CRJ Series aircraft, including the related services and support network located in Montreal and Toronto, and its service centers located in Bridgeport, West Virginia, and Tucson, AZ, as well as the type certificates.

This acquisition is complementary to MHI's existing commercial aircraft business, in particular the development, production, sales and support of the Mitsubishi SpaceJet commercial aircraft family. The maintenance and engineering capabilities of the CRJ program will further enhance critical customer support functions, a strategic business area for MHI in the pursuit of future growth.

"We are very pleased to announce this agreement, which represents the completion of Bombardier's aerospace transformation," says Alain Bellemare, President and Chief Executive Officer, Bombardier Inc. "We are confident that MHI's acquisition of the program is the best solution for airline customers, employees and shareholders. We are committed to ensuring a smooth and orderly transition."

Bellemare continued: "With our aerospace transformation now behind us, we have a clear path forward and a powerful vision for the future. Our focus is on two strong growth pillars: Bom-

bardier Transportation, our global rail business, and Bombardier Aviation, a world-class business jet franchise with market-defining products and an unmatched customer experience.”

The CRJ production facility in Mirabel, QC, will remain with Bombardier. Bombardier will continue to supply components and spare parts and will assemble the current CRJ backlog on behalf of MHI. CRJ production is expected to conclude in the second half of 2020, following the delivery of the current backlog of aircraft.

The transaction is currently expected to close during the first half of 2020.

www.bombardier.com

PCI Awards 2019 Scholarships



Daikon Iverson, University of Wisconsin – Stout, winner of the PCI/Nordson Ken Kreeger Scholarship.

The Powder Coating Institute (PCI) awarded its 2019 scholarships to students who are studying various subjects that can lead to a career in powder coating. “We are very excited that this program continues to grow each year. It is a pleasure to be a part of something that really invests in future talent,” says Trena Benson, PCI executive director.

The criteria for the awards include specific studies and projects relevant to powder coating technology, transcript/GPA, future goals, unique qualifications, and a letter of recommendation from their adviser. Scholarship committee chair Peter Dority received several letters of appreciation, noting, “The scholarship recipients were extremely grateful and stated that receiving the award was an incredible honor and very motivating.”

PCI administers the scholarship program, which promotes and solicits scholarship applica-

tions from students through numerous educational institutions and the industry at large. PCI received many qualified applicants and is excited to watch the development of the projects generated by these exceptional students. The scholarship program continues to grow and attract bright new talent to the powder coating industry, which includes students pursuing degrees in polymer

science, manufacturing, engineering, business management and marketing. The growth of the scholarship program enhances the potential of young scholars in the industry and PCI is proud to be a part of it.

The 2019 PCI Scholarship Program awarded \$25,000 in total, which includes donations of \$5,000 from corporate donors: Axalta Coating

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Systems, Gema USA and Nordson Corporation. The following students were awarded scholarships:

PCI CORPORATE SCHOLARSHIPS

PCI/Axalta Scholarship
Samuel Little, Purdue University

PCI/Gema Scholarship

Genevieve Andreae, University
of Wisconsin – Platteville

PCI/Nordson Ken Kreeger Scholarship

Daikon Iverson, University of Wisconsin – Stout

PCI GENERAL SCHOLARSHIPS

Mark Rupert, University of Cincinnati
Ashley Sullivan, University of Cincinnati

www.powdercoating.org/scholarship

MacDermid Enthone Acquires Chemtech Systems Inc.

In June, MacDermid Enthone announced the acquisition of 100 percent of the assets of Chemtech Systems Inc., a specialist surface finishing equipment design and manufacturing business based in Michigan.

Chemtech was founded in 1991 and has developed a reputation for innovative metals recovery, recycling, waste water treatment and process control ancillary equipment for the surface finishing and electroplating industry. Chemtech and MacDermid Enthone have enjoyed a long-term partnership, successfully installing equipment focused on waste minimization and recycling, at many leading surface finishing applicators.

The acquisition of Chemtech further expands MacDermid Enthone's investments in surface finishing equipment design and supply. Chemtech will further enable MacDermid Enthone to offer a comprehensive package of surface finishing equipment, fully supported by equipment specialist teams in each geographic region and demonstrates its continued focus on providing sustainability enhancing solutions to customers.

As environmental pressures continue to drive change within the surface finishing industry, investments in new techniques, equipment, processes and services that minimize the environmental footprint for our customers, is a vital component of its business, MacDermid Enthone says. The company's "Sustainable Excellence"

program provides customers with the latest information, process innovations and equipment for environmentally advanced surface finishing. www.macdermidenthone.com

Carbon and Arkema Partner to Advance Digital Manufacturing

Rapid advances in additive manufacturing are changing the way products are designed and manufactured in many industries. Carbon and Arkema, through its Sartomer business line, the companies say, are bringing materials at the leading edge of innovation, disrupting the supply chain model, and delivering new technologies to take digital manufacturing to the mainstream.

Since 2013, Carbon and Sartomer have been driving innovation to scale process technology and resin manufacturing. This approach enables parts made by Digital Light Synthesis technology to be increasingly reliable and cost-competitive.

Arkema has taken part, with an investment of US\$ 20 million, to support the next generation of fully integrated digital manufacturing platforms with a deeper collaboration, cutting-edge materials and innovative solutions. Carbon and Arkema share a common vision for the industry in terms of strategic partnerships, tailored solutions for customers and material sustainability. This alliance is an exciting opportunity for both companies to dramatically grow the pipeline of production applications driving volume and revenues, through advanced materials technology, they say.

"We are eager to continue and strengthen our joint efforts in delivering Carbon next generation products and full solutions to our partners and customers, disrupting the way parts are mass manufactured and accelerating new market opportunities," says Thierry Le Hénaff, Chairman and CEO of Arkema.

"Since Carbon's early days, Arkema has been an important partner to us. It's rewarding to see all the amazing outcomes of our work together over the years bringing new, innovative materials to market," says Carbon CEO and co-founder, Dr. Joseph DeSimone.

www.carbon3d.com www.arkema.com

ALTANA Acquires Business From the Paul N. Gardner Company

In July, specialty chemicals group ALTANA acquired the operating assets of the Paul N. Gardner Company Inc. of Pompano Beach FL. Within the ALTANA Group, the business will be integrated

into the Instruments Business Line of the BYK Division (BYK-Gardner), and will continue to operate as Paul N. Gardner.

The Paul N. Gardner Company and BYK-Gardner have a common origin in the Henry A. Gardner Laboratory, founded in 1935 in Bethesda MD. Both companies are leaders in the production and sale of physical testing instrumentation and supplies for the paints, coatings, and related markets. These devices effectively assess the quality of color and gloss as well as the physical properties of coated surfaces.

"I can't think of a better business combination for our customers than ALTANA," says Paul N. Gardner Jr., President and CEO of Paul N. Gardner Company Inc. (Gardco). "I'm confident that this is the best avenue for our customers as well as our employees to take Gardco and BYK to the next level of growth."

BYK Instruments CEO Frank Wagner adds, "We are extremely fortunate and happy to be able to utilize the combined strengths of BYK Instruments and Paul N. Gardner Co. Inc. to continue to provide new and innovative solutions and increased value to our combined customer base."

Terms of the sale were not disclosed.

www.altana.com

Evonik Closes Sale of Methacrylates Business

Evonik has closed the sale of its Methacrylates business to Advent International as the next step in its focus on specialty chemicals. The official closing of the transaction took place on July 31, following the signing of the purchase agreement on March 4. The relevant anti-trust authorities had already granted their unrestricted approval.

The Methacrylates business has 15 production sites and 3,900 employees worldwide. From 2016 to 2018, the business generated an average annual EBITDA of about € 350 million and sales of about € 1.8 billion per year.

"The sale is a further step in aligning our portfolio towards specialty chemicals and becoming less dependent on economic cycles," says Christian Kullmann, Chairman of the Evonik Executive Board. "As the first half of 2019 has shown, our portfolio is now more robust in the face of macro-economic trends than it was in the past."

Evonik says it plans to use the proceeds from the transaction to strengthen its balance sheet and for the targeted expansion of its specialty chemicals portfolio.

www.evonik.com

IGM Announces Global Expansion in Photoinitiator Manufacturing



IGM recently announced that due to increased demands of its global business and the drive to introduce innovative, new products to the UV-cure market, it has commenced the development of a new photoinitiator production facility in Anqing, Anhui Province, China. The new site will be designed with a finished product capacity in excess of 10,000 metric tons and include backward integration into key starting materials. The site will also include a new pilot facility and flexible scale-up production capacity to facilitate the

introduction of new photoinitiators developed in support of key market trends, including LED curing, low migration and water borne UV technology. Work on the site will begin in Q3 2019 and the first production is scheduled for Q4 2020.

Further increasing its global presence and to ensure customer satisfaction, IGM also announced two major capacity expansion projects at its Mortara, Italy photoinitiator production site that will increase the site's capacity by 25 percent. The company says its new photoinitiator production facility in Anqing, in addition to IGM's existing site in Haimen, and the capacity expansion in Mortara, will ensure IGM is able to address the increasing global demand for high-quality photoinitiator products and successfully produce and launch new products.

www.igmresins.com

Madico Inc. Acquires Canadian Distributors

Madico Inc., a market leader in the manufacturing and distribution of quality window films, recently announced the acquisition of its two Canadian distributors, Courage Distributing and

Window Film Systems and the formation of a new entity, Madico Canada. The company will operate both former Courage distribution locations in Oakville, ON, and Richmond, BC, to serve the market.

Owned and operated by brothers Todd and Trent Courage, Courage Distributing has been a successful wholesale distribution company selling window film, paint protection film, and accessories since it was founded in 1993. The Courage brothers were inducted into the Window Film Hall of Fame in 2015, receiving the Award of Excellence for their dealer service and support as well as philanthropic endeavors.

All current Courage employees will become part of Madico Canada with both Courage brothers joining Madico in operations and sales leadership roles to ensure continuity and high-quality service to customers throughout the country.

In 2018, Window Film Systems celebrated its 40th year distributing and installing Madico window films. Owner Peter Yates will continue to liaise with valued dealers of Madico Canada. Window Film Systems will maintain its longstanding relationship with Madico in their successful film

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installation division. The company is known throughout Canada as a leader in the decorative films market and has completed many notable architectural installations.

“Both Window Film Systems and Courage have been outstanding partners and successful distributors for decades,” says Jim Black, Director of Window Film Sales. “We are so pleased that

this approach will allow Madico, our partners, and our customers to all benefit from this dynamic new entity. We intend to support the Canadian market like never before with enhancements such as a fuller range of products and significantly increased marketing support.”

www.madico.com

Canada Woodworking West Cancelled

Canada Woodworking West, scheduled to take place October 2 and 3, 2019 in Abbotsford, BC, has been postponed to a later date to be confirmed.

In consultation with the event’s stakeholders and partners, Master Promotions Ltd. made the decision to postpone with the best interests of the event, along with its exhibitors and visitors, in mind.

The team is actively working to build on the success of Canada Woodworking West’s previous editions, while maintaining the high quality its audience has come to expect. Ideas for the future include expanding the event’s offerings to include a wider scope of trades, changing the event’s time of year, and more. Contact Kate Stilwell at KStilwell@mpltd.ca for more information.

AkzoNobel Launches Wood Coatings Color-Matching System for Distributors



AkzoNobel says distributors can now fulfill more orders in less time, thanks to MaestroHue – a digital color-matching system developed by Chemcraft, AkzoNobel’s specialist wood coatings brand.

MaestroHue is a system that gives distributors the power to match virtually any color with accuracy and minimal waste. Quick and easy to use, it means customers no longer have to tint by hand, leading to a faster turnaround time and less waste.

Once a color is matched, a customer can save the exact formulation for future use. Orders can be processed quicker, with no mistints and no need for labor-intensive manual tinting, the company says.

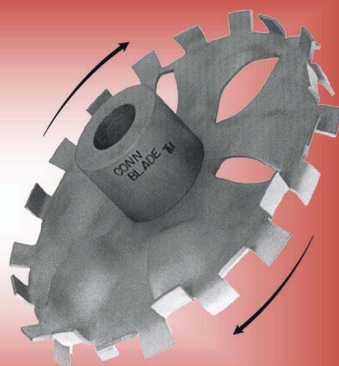
“Our new MaestroHue system helps customers drive business growth by enabling products to be tinted faster, with exceptional color accuracy,” says Anthony Woods, AkzoNobel’s Segment Marketing Director for Wood Coatings. “It was created with distributors in mind and is perfect for adding efficiency to their color kitchens.”

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6



CCAI Announces 2020 Women in Finishing Forum

The Chemical Coaters Association International (CCAI) announced the second annual Women in Finishing FORUM will be held at the Embassy Suites South Bend at Notre Dame in South Bend, IN, from May 6-8, 2020.

CCAI began its Women in Finishing (WiF) initiative at FABTECH 2017 in Chicago. An overwhelming response led to an expanded program with a focus on professional development and networking for women with careers in industrial finishing, including the Women in Finishing FORUM.

The 2019 Women in Finishing FORUM received extremely positive evaluations, generating excitement for future FORUMS. Laura Beach of Lippert Components says, "Gaining a community of women with a variety of backgrounds but with the common connection of a career in finishing/manufacturing was invaluable, and the sessions were engaging and informative. I truly appreciated the time spent at the FORUM and I



Women in Finishing FORUM attendees have the opportunity to network, make new contacts and learn from the experiences of other women in the finishing industry.

look forward to attending again in the future."

More details including program information, registration and sponsorship opportunities will be posted online.

www.ccaiweb.com/page/WiF

The innovation isn't just focused on products, adds Woods. "We're always looking for novel ways to bring benefits to our customers. Introducing market-leading digital color matching at the distributor level offers clear advantages to help distributors fulfil faster, more accurate orders with reduced waste."

Specifically formulated to deliver guaranteed color accuracy with compatible bases, Maestro-Hue produces consistently accurate colors with repeatability within 0.1dE. It also allows distributors to adjust colors if needed.

AkzoNobel's Chemcraft range offers coatings, stains and color systems for the finishing of wood products, such as kitchen cabinets and furniture. www.chemcraft.com

Cathay Industries Makes Exclusive Distributor Announcement



Cathay Industries USA, Inc. announced that effective August 1, 2019, Andicor Specialty Chemicals Corporation was selected as its distributor servicing all Canadian provinces. Under this agreement, Andicor Specialty Chemicals Corporation will be the distributor for Cathay and Hoover products. www.andicor.com

Dow Selects Univar Solutions as a Key Channel to Market for Polyurethanes in North America

Dow and Univar Inc. recently announced Dow has selected Univar Solutions as a key North American channel to market, distributing Dow's broad product portfolio of polyols and isocyanates effective April 1, 2019. Univar Solutions was

recently created from the combination of Univar and Nexeo Solutions.

"The power of Dow's wide-ranging solution sets paired with the customer experience that Univar Solutions offers, is the collaboration needed to help downstream formulators innovate and grow," says Caio Sedeno, North America Commercial Director for Dow Polyurethanes. "In CASE

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formulations, we have a broad range of polyols, formulated polyol blends and pre-polymer offerings that will help deliver on ever-advancing application needs.”

As both Univar and Dow emerge from recent merger and acquisition transactions, their priorities are aligned and remain clear: offering solutions and experiences to their customers that help drive value.

“Through our mission to streamline, innovate and grow, Univar Solutions focuses on enriching the buying experience to create an ecosystem of transparency for our customers and suppliers,” says Mark Fisher, President, Univar Solutions USA. “Combining the product and innovation breadth of Dow with Univar Solutions’ formulation expertise in our Technical Solution Centers, as well as through the digital tools that we deploy, will be a winning, value creating partnership for the industry.”

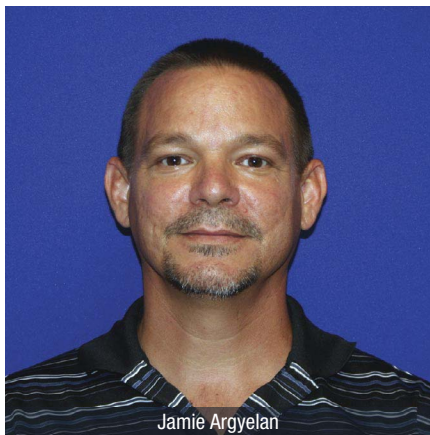
www.dow.com

www.univarsolutions.com

People

Gema Adds Territory Manager

Gema USA Inc. announced the addition of Jamie Argyelan as a Gema Territory Manager in the west region.



Jamie Argyelan

With 30 years of experience in the finishing industry, Argyelan brings a strong background in sales, technical support and management experience. Customers and industry partners will benefit from his knowledge of powder coating materials and equipment and the ability to provide application expertise and solutions.

www.gemapowdercoating.com

Christianson Rejoins Woodworking Network Events Team



Rich Christianson

Woodworking Network has engaged the services of woodworking industry veteran Rich Christianson to assist with marketing and promotion of the Wood Machinery & Supply Conference & Expo (WMS), Oct. 31-Nov. 2 in Mississauga, ON; Wood Pro Expo (WPE), Oct. 17-18, in Lancaster, PA; and other Woodworking Network productions.

Christianson will leverage his nearly 35 years of experience writing about the woodworking industry to provide a steady flow of audience-engaging content and marketing services to support the success of Woodworking Network’s impressive line-up of trade shows and conferences, which also includes the Cabinets & Closets Conference & Expo (CCCE) co-located with WPE in Arlington, TX, March 11-13, 2020; Salon Industriel du Bois Ouvré (SIBO), April 23-25, 2020 in Drummondville, QC; and the Executive Briefing Conference (EBC), Nov 8-10, 2020 in Colorado Springs, CO.

Christianson has toured more than 250 woodworking operations throughout North America, Europe and Asia and has written extensively on woodworking technology, design

The Canadian Paint and Coatings Association (CPCA) held its 106th Conference and Annual General Meeting in Vancouver, on May 22-23 where reappointment of four current members to the CPCA Board of Directors was approved.

The Board for 2019–20 includes:

André Buisson (Société Laurentide), Bruce Clatworthy (Dominion Color Lansco), Doug Crabb (Duha Group), Andy Doyle (American Coatings Association), Mark Huisman (BASF Canada), Brent Jamieson (Axalta Coating Systems), Curt Kaucher (Sherwin-Williams), Sharon Kelly (KelCoatings), Darrin Nobel (Home-Hardware Beauti-Tone), Vince Rea (PPG Canada), Jeff Snyder (AkzoNobel), Jean-Francois Tanguay (IMCD Canada), Richard Tremblay (Benjamin Moore), Fred Veghelyi (OPC Polymers Canada), Tim Vogel (Cloverdale Paint).

“The CPCA Board of Directors was reaffirmed at the most recent Annual General Meeting and we are pleased they will continue to provide good governance for the association,” says Benjamin Moore’s Richard Tremblay, newly elected Board Chair. Tremblay adds, “The entire Board of Directors were pleased to recognize the tremendous contribution made by Tim Vogel who served as CPCA’s Chair over the past four years and we are happy to say he remains on the board as Director.” CPCA continues to focus on new programs and services for members to add value to their respective businesses in Canada.

The 2019 annual Industry Awards Dinner was held at the venerable Royal Vancouver Yacht Club recognizing individual contributions to the Canadian paint and coatings industry. CPCA’s highest honour, the Roy Kennedy Outstanding Achievement Award, was presented to Lysane Lavoie, CPCA Director of Regulatory Affairs and Management Information. The Industry Achievement Award was presented to Fred Veghelyi, OPC Polymers and CPCA Board member and Mannie Cheung, Vice-President, Product Care Association.

The Industry Distinction Award was presented to outstanding individuals who are retiring or recently retired but have made a significant contribution to their companies and the industry generally. These were Mike Lynch (Cloverdale Paint), Luc Pepin (PPG Paints), Steve Wolinsky (Rustoleum), Claude Brosseau (PPG Paints), and Kamlaish Mudhar (Univar). CPCA also recognized important milestone anniversaries of several members as follows: Hero (50 years), Schwartz Chemical (50 years) and Product Care Recycling (25 years).

www.canpaint.com

CPCA Appoints New Chair, Doles Out Awards at Annual Conference and AGM Cloverdale's Tim Vogel and Home Hardware's Darrin Noble congratulate winners



Fred Veghelyi, OPC Polymers Canada.



Kamlaish Mudhar, UNIVAR.



Lysane Lavoie, CPCA.



Mannie Cheung, Productcare.



Mike Lynch, Cloverdale Paint.



Steve Wolinsky, Rustoleum.

Photos: Scott Brammer Photography © 2019

and supply trends. He has also directed and promoted dozens of woodworking trade shows, conferences and seminars.

“We greatly welcome the addition of Rich to our team,” says Tim Fixmer, President and CEO of Woodworking Network. “His vast industry experience and intimate knowledge of managing and promoting woodworking events strengthens our ability to orchestrate successful shows for our exhibitors and attendees alike.”

Christianson, owner of Richson Media LLC, a Chicago-based communications firm focused on the industrial woodworking sector, says, “I’m thrilled to reunite with Woodworking Network to help out, including with some of the events that I was personally associated with including WMS and the Cabinets & Closets Conference & Expo. I have a deep appreciation for the power and importance of events to connect wood product manufacturers and suppliers so that they can grow their businesses and ultimately advance this great industry.”

www.woodworkingnetwork.com

Bill Heise Retires; Debro Acquires Tartan Color and Chemical



In May, Debro acquired Tartan Color & Chemical, a Canadian distributor primarily focused on the industrial specialties market. The transaction makes Debro one of the leading independent distributors in Canada for industrial specialties, food ingredients and home and personal care. Debro is acquiring 100 percent of the shares of Tartan, and the two companies will be amalgamated.

President and CEO, William (Bill) Heise will retire September 30, 2019. In August, he assumed the role of senior advisor to the company and its new leadership team.

Heise has been Debro’s President and CEO since 2005, leading the company through significant growth and transformation over the last 14

years. Yvonne Heise, current Business Unit Director of the Industrial Specialties division, will also retire. She joined Debro in 2011 and has led the Industrial division since 2015.

“On behalf of everyone at Debro, I would like to thank both Bill and Yvonne for their many years of service and to wish them a very happy and well-earned retirement,” says Brian Imrie, Debro owner and Chairman.

Debro also announced the following leadership changes: Paul Ruffo, current Vice President of Sales & Marketing will become President – Food & HPC and will lead Debro’s combined Food Ingredients and Home & Personal Care business units. David Houston will remain President – Industrial Specialties.

www.debro.com

Chris Merritt Celebrates 35 Years at Gema



Chris Merritt

Gema recently announced Chris Merritt, General Manager for Gema USA Inc., is celebrating 35 years of service with the company. Merritt is responsible for managing the powder coating business within the United States, Canada, Mexico, and Central America. Entering the finishing industry in 1984, he started as an engineer within the powder equipment group of Ransburg Gema, a division of the Ransburg Corporation. His extensive work experience includes successful positions in sales, engineering and management.

Throughout his career, Merritt has been an active participant and leader within the powder coating industry. As a published author and speaker about powder coating, he actively pres-

ents at a variety of technical conferences and training classes and is a member of several industry associations, including the powder coating industry trade association, The Powder Coating Institute (PCI). Merritt has served in a variety of leadership roles within PCI and is currently serving on the Board of Directors as the Past President. He holds several U.S. patents related to the powder coating industry.

www.gemapowdercoating.com

Elsbeth Janmaat Joins Nouryon as Chief Human Resources Officer



Elsbeth Janmaat

Nouryon has named Elsbeth Janmaat as its new Chief Human Resource Officer (CHRO), effective September 1, 2019.

“Elsbeth joins us at a crucial moment; we are preparing the ground for even better performance and making Nouryon a leader in specialty chemicals with a strong competitive edge,” says Nouryon CEO Charlie Shaver. “She brings valuable experience and will play a defining role in the company’s transformation process. I look forward to working with her.”

Janmaat says: “I am really looking forward to joining Nouryon at this exciting moment and working together with the company leadership and whole organization on the transformation for a sustainable future.”

Janmaat brings more than 25 years of human resources experience to Nouryon. She joins the company from Royal Vopak where she served as Global Human Resource Director. Prior to Vopak, she worked for FrieslandCampina and Shell in various HR positions.

www.nouryon.com

CFCM Buyers Guide Publication Moves to Fall

Please note that the CFCM Buyers Guide release date has been postponed to later in the Fall and will therefore be renamed the 2020 Buyers Guide. We are building a new database to better serve you and hope the new guide will be more accessible and even easier to navigate. Stay tuned for more info!



Cefla North America Expands Canadian Sales Team

Cefla North America strengthens its Canadian presence with the addition of Sales Area Manager Kyle Grodzinski. He will cover the provinces of Ontario, Manitoba, Saskatchewan, and Alberta. He is based in the greater Toronto region.

Grodzinski started his journey with Cefla in May 2019 and has been active in the field with both new and existing accounts. In addition, he has visited Cefla's offices in Charlotte, North Carolina, and Imola, Italy as well as attending the recent 2019 AWFS Fair in Las Vegas.

Grodzinski brings a wealth of experience from his roughly 25 years in the plastics industry. His background includes regional sales management throughout North America for various European original equipment manufacturers (OEM). He formerly held sales and management positions at Corma, TECHNE, Tecnipak Engineering Italia, Snell Packaging, and Graphics International Group. He was also a Director of the Blow Molding Division for the Society of Plastics Engineers (SPE).



www.cefla.com

Calendar of Industry Events

October 1-3, 2019: AAC Aluminum Anodizers Council Conference, Houston Royal Sonesta, Houston, TX.
www.anodizing.org

October 8-9, 2019: The Electrocoat Association Bootcamp, Embassy Suites Des Moines Downtown, Des Moines, IA.
www.electrocoat.org/event-3436081

October 15-16, 2019: Aluminum Safety Summit, Crowne Plaza Chicago O'Hare Hotel, Rosemont, IL.
www.AEC.org/AluminumSafetySummit

October 31-November 2, 2019: WMS Woodworking Machinery & Supply Conference and Expo, International Centre, Mississauga, ON.
www.woodworkingnetwork.com

November 11-14, 2019: Fabtech 2019, Chicago, IL.
www.fabtechexpo.com

November 13, 2019: Canadian Association for Surface Finishing Conference, Hilton Garden Inn, Vaughan, ON.
www.casf.ca

Feb. 17-20, 2019: Powder Coating 2020, Orlando, FL.
www.conference.powdercoating.org

March 9-11, 2020: BIG IDEAS for UV+EB Technology Conference, Orlando, FL.
www.radtech.org

March 31-April 1, 2020: American Coatings Show, Indianapolis, IN.
www.american-coatings-show.com

April 23-25, 2020: Salon Industriel du Bois Ouvre' (SIBO), Drummondville, QC.
www.siboexpo.ca

May 6-8, 2020: Women in Finishing FORUM, Embassy Suites South Bend at Notre Dame, South Bend, IN.
www.ccaiweb.com/page/WiF

May 20-21, 2020: Canadian Paint and Coatings Association 107th Annual Conference & AGM, Quebec City, QC.
www.canpaint.com

June 15-17, 2020: SUR/FIN, Atlanta, GA.
www.nasfsurfin.com

June 16-18, 2020: Fabtech Canada, Toronto, ON.
www.canada.fabtechexpo.com

Sept. 15-17, 2020: AAC Aluminum Anodizers Council Conference, Nashville, TN.
www.anodizing.org

October 22-23, 2020: Canada Woodworking East, Espace St-Hyacinthe, St-Hyacinthe, QC.
www.canadawoodworkingeast.ca

November 18-21, 2020: FABTECH 2020. Las Vegas, NV.
www.fabtechexpo.com

CPCA CORNER

Issues Update

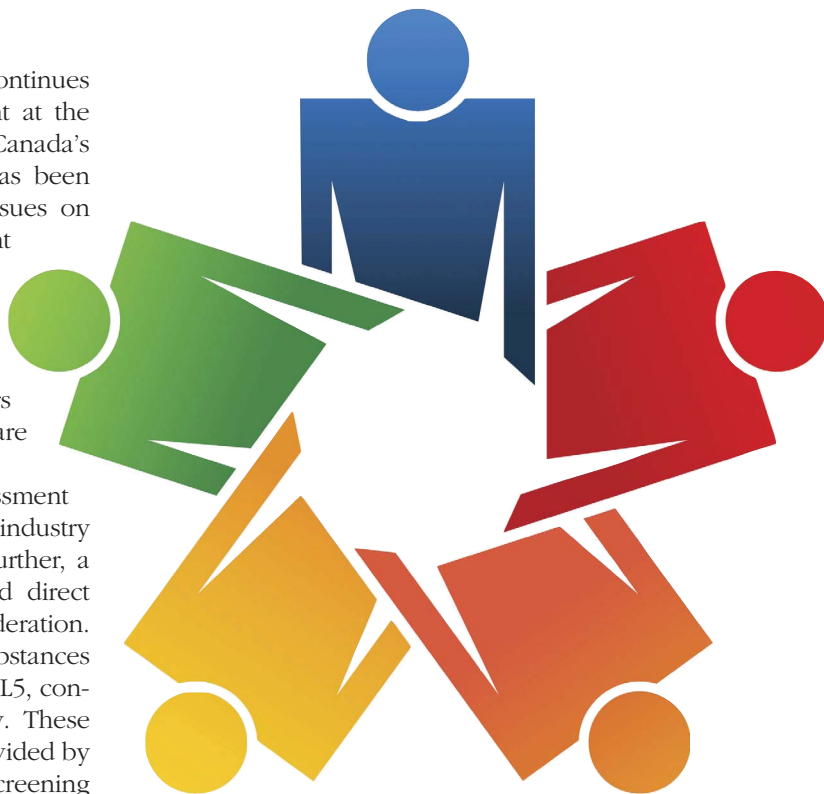
CHEMICALS MANAGEMENT IN CANADA: There continues to be a lot of activity on chemicals management at the federal level as we near the end of Phase 3 of Canada's Chemicals Management Plan. As usual, CPCA has been working diligently on a number of important issues on behalf of member companies. This included recent results on chemical risk assessments for three flame retardants in the previous CMP-2, which suggested the addition of one of those be added to Schedule 1 of CEPA due to its CEPA-toxic designation, but no further action for two others (Dechlorane Plus and DBDPE). The latter two are widely used in adhesives and sealants.

There were also three Final Screening Assessment Reports for substances of interest in the coatings industry and those are expected very soon. There was, further, a draft screening report for which CPCA provided direct input and which was published for industry consideration. These included the siloxanes group with six substances proposed as non-toxic and two siloxanes, D3 and L5, confirmed to be used in CASE products specifically. These continue to be monitored by CPCA with input provided by members as needed in advance of the final screening assessment to ensure final decisions are based on strong data to ensure they can remain in commerce in Canada.

Continuing with CMP-3, federal government Risk Assessors suggested suitable alternatives to furfuryl alcohol for paint removal during a recent CPCA Paint and Coatings Working Group meeting. CPCA members are encouraged to review and comment on the suitability of these chemicals in the context of whether possible substitution makes sense with respect to performance characteristics. The Association also continued to gather information on the "Substituted Phenols" category of substances via a member questionnaire, which will be used to help inform the final decisions on these chemicals used in the coatings industry. Members have been asked to provide input to ensure a positive outcome for those as well.

CPCA responded to a request for information from government on coal tar enamel in coatings products in advance of the final assessment of these chemicals expected in the Fall of 2019. The information provided relates to domestic/import status, concentration, usage, available alternatives, and the necessary time requirements to reformulate, if necessary. The final order adding BENPAT to Schedule I of the Canadian Environmental Protection Act was posted and all in industry should take note of the requirements under this recent government action.

Also added to Schedule 1 as per a final Government



Order were cobalt and soluble cobalt compounds, and as of June 10 all 50 cobalt and soluble cobalt compounds were declared CEPA-toxic. However, final screening assessment cleared two organic peroxide substances that are widely used in coatings and adhesive products.

Recently, the draft screening assessment report (DSAR) proposed that all zinc and its compounds be declared CEPA-toxic. It was noted that all 64 zinc and soluble compounds met one or more toxicity criteria for environmental concerns. Several of these were confirmed to be used in some industrial and consumer coatings products and in food packaging, but the risk management scope document largely focused on the reduction of releases into the water table from metals mining and base metals smelting and refining.

In the case of phosphoric acid derivatives, there were several that did not meet toxicity criteria and thus can continue to be used in products as in the past in Canada. In the final screening assessment report (FSAR) for the Heterocycles Group, non-toxic conclusions were maintained and use levels were not impacted. It was the same for macrocyclic lactones and ketones, ionones and the cyclohexanone group; and non-toxicity conclusions are main-

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tained for all 11 substances. CPCA would like to thank all members for contributing important data that helped in the decision-making related to those assessments, which were most important for securing the final outcomes obtained for the paint and coatings industry in Canada.

The federal government completed the SNAC review of 110 High Hazard “not-in-commerce” substances and proposed to vary or rescind the SNAC requirements related to new uses for 105 substances considered to have environmental effects of concern and thus expected to remain subject to the SNAC provisions. There is no longer concern with the remaining five substances.

CPCA recently requested that these decisions be provided in Excel file formats for proposed notices and orders and was pleased to have received those in August for the benefit of member companies operating in Canada. This will further facilitate ongoing compliance in Canada. For the proposed regulations on formaldehyde emissions from composite wood products CPCA continues to solicit comments from members for a final submission, which is also expected to lead to a positive outcome for industry.

Consultations continued throughout the summer on an integrated strategy for the protection of Canadian workers from exposure to chemicals in the workplace. This is a

new initiative under the federal Chemicals Management Plan that is generating a lot of debate. Workplace health is covered under WHMIS and as such is considered fully addressed under the ‘best placed federal Act’ on all matters related to chemicals in the workplace rather than duplicating efforts under the CMP. Debate on this matter is sure to continue in the coming months. Another “innovation” under the CMP is consideration of recyclability and the circular economy as a major concern since 80 percent of all products sold in Canada are imported. The federal government is now building a platform inspired by Europe for enhanced supply chain transparency and that too will garner much debate in the days ahead.

VOC & AIR QUALITY INITIATIVES: CPCA recently issued a bulletin on the upcoming surface coatings materials amendment and took measures to ensure members were fully informed on the amendment. A surface coating material is defined as a paint or other similar material that “dries” to a solid film after applied to a surface. It excludes a material that forms or changes to a solid film by a means other than drying, such as a powder coating that is applied electrostatically and cured under heat.

The definition of a surface coating material will be amended in section 1 of the SCMR to capture all surface



 **CANADIAN PAINT AND COATINGS ASSOCIATION** **ASSOCIATION CANADIENNE DE L'INDUSTRIE DE LA PEINTURE ET DU REVÊTEMENT**

SUPPORTING COMPLIANCE & MITIGATING RISK

CPCA helps you navigate the Canadian regulatory landscape with confidence. Established in 1913 to represent the national paint and coatings industry, including adhesives & sealants and elastomers (CASE). CPCA champions the interests of manufactureres, suppliers, distributors and affiliated companies doing business in the coatings industry.

To learn how to become a member visit us online!

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Implications for industry in this regulation are not as grave as the ones already in place for the AIM and Automotive sectors, but those will also come under scrutiny soon.

coating materials regardless of how they form a solid film after application to a surface. The applicable limit will be 90 mg/kg total lead limit. Changed restrictions will also apply to lead in applied surface coating materials on children's products and furniture.

The third VOC Regulations for Certain Products recently published by the federal government proposes to establish VOC limits for 130 product categories and subcategories covering products used by consumers. It also covers those used in institutional, industrial or commercial applications including automotive and household maintenance products, adhesives, adhesive removers, sealants and caulks, thinners, and other miscellaneous products. CPCA has been gathering further comments from members on these over the summer and will ensure all member views are presented before final decisions are made.

Implications for industry in this regulation are not as grave as the ones already in place for the AIM and Automotive sectors, but those will also come under scrutiny soon. All regulations will be reviewed over the next 10-year period, including the VOC Architectural Coatings Regulations, the VOC Regulations for Automotive Refinishing Products & the 2-Butoxyethanol Regulations. Companies doing business in the coatings sector must be prepared to act; the earlier the better.

Under the Federal VOC Agenda 2010-2020, several remaining Canadian Council of Ministers on the Environment (CCME) VOC emission guidelines are outdated for voluntary VOC measures. However, they may still be used in some permits and certificates of approval regarding the operations of automotive OEM, auto parts and wood furniture manufacturing plants. The CCME Federal VOC Agenda 2010-2020 will likely be renewed for 2020 and may involve new industrial categories that will have a direct impact on the coatings sector in Canada.

ANTIMICROBIAL CONTROL IN PAINT: CPCA recently provided the Pest Management Regulatory Agency (PMRA) with a list of biocides suitable for paint and coatings products, which is unfortunately getting shorter. The list was provided to highlight the importance of these biocides for paint-related preservation for the 12 in-can and eight dry-film preservatives registered for use in Canada.

The compilation was provided to the PMRA team of risk assessors due to recent unexpected decisions on use restrictions for key paint biocides. All Architectural and Industrial members' comments received clearly demonstrated that there are very few suitable alternatives left for single or combined biocides that could ensure full protec-

tion of the uses of paint products either in the short or long-term. This will have to be considered by the entire industry going forward.

As a result, PMRA postponed decisions in August on several biocides used in paint until later in 2020. This will allow time for CPCA and member companies to ensure that relevant data is provided on uses and exposure scenarios with respect to microbial control in paint products. Industry remains hopeful that unfortunate decisions related to use restrictions for certain biocides such as those rendered for OIT and CMIT/MIT – due to lack of relevant information – will not occur in future and hopes that recent data provided on exposure for those decisions will be altered and use levels reinstated.

TRUE COPY OF LABELS ISSUE CONTINUES: CPCA and other industry groups met with Health Canada officials to discuss the persistent issue of True Copy labels under the Health Products Act, which was created by labour groups. In order to identify possible solutions or alternatives and then fully brief senior management, Health Canada officials wanted to understand in greater detail the true copy label challenge for industry such as the frequency of label changes, occurrence of illegible labels, latent health adverse effects, etc.

As well, they needed a better understanding of the assessment methodology related to cost burden figures presented to the Treasury Board in April 2019 by several industry groups. According to the federal government, no issues were encountered with respect to “true copy of labels” during hundreds of past inspections in the field. Provincial jurisdictions insist on keeping this requirement in place, while Labour still alleges that workers have died because of the unavailability of true copy labels being available onsite. Industry has asked Labour groups to demonstrate why this information is important to them, but to date they have not.

Industry was asked to provide further details on technical issues related to the maintenance of true copy labels used in the supply chain (suppliers, manufacturers and distributors/workplace). CPCA continues to work toward preparing further details on the cost and administrative burden relating to practical, technical issues for industry on the requirement for true copy label retention for industry including suppliers, distributors and manufacturers. ■

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FABTECH Offers Technology and Innovation to Transform Your Finishing Operation

Your plans should be well underway to attend FABTECH 2019 from November 11-14 at McCormick Place in Chicago. With a short time to go until the show opens its doors, the CCAI FINISHING Pavilion at FABTECH 2019 is sold out with nearly 200 exhibitors covering more than 54,000 square feet of space. 45,000 attendees are expected to visit the almost 1,800 exhibitors showcasing everything from welding, forming, fabricating, and stamping to finishing across three exhibit halls. The CCAI FINISHING Pavilion is packed with suppliers that will bring countless products, services, innovative ideas and equipment to attendees interested in all aspects of the finishing industry.

FINISHING Pavilion Exhibitors (as of August 26)

A.C.T. Dust Collectors
Accudraft Paint Booths
Accu-Labs, Inc.
ACT Test Panels, LLC
ADF Systems Ltd.
AFC Finishing Systems
AkzoNobel Powder Coatings
Alconox, Inc.
Alliance Manufacturing, Inc.
American Industrial Sales, LLC
Amiberica, Inc.
Anaerobia Ingenieria y Proyectos
Andreae Team, Inc.
Apel International Inc.
Argon Masking Corp.
Atotech USA LLC
Axalta Coating Systems
AZZ Metal Coatings
Baril Coatings USA
Bayco by Guspro Inc.
BCI Surface Technologies
(Bulk Chemicals, Inc.)
BEKO Technologies
Benko Products, Inc.
BEX Spray Nozzles
Bi-State Rubber, Inc.
Blast Cleaning Technologies
Blast Guru, LLC
The Blast Shop
BlastOne
BlastOne International
Brush Research Mfg. Co.
Burleigh Industries
Caldan Conveyor A/S
Calvary Industries Inc.
*Canadian Finishing & Coatings
Manufacturing*
Caplugs, Inc.
Carbit Paint Co.
Cardinal Paint & Powder
Cardinal Parts and Equipment, LLC
Carlisle Fluid Technologies
Castrol
Catalytic Industrial Systems
CCAI
Chemco Manufacturing
Chemetall US Inc.
ChemQuest Inc.
Chemtec North America, LLC
ClearClad Coatings, LLC
Clemco Industries Corp.
Cold Jet, LLC

Col-Met Engineered Finishing
Solutions
Columbus Industries, Inc.
Combustion and Systems, Inc.
Cool Clean Technologies, LLC
Coral Chemical Co.
Cortec Corporation
CPR Systems
CTI Systems S.a.r.l.
Custom Fabricating & Supplies
Daifuku
Decoral System USA Corp.
DeFelsko Corporation
Delfin Industrial
Diamond H2O
Diamond Vogel
Dinamec Systems LLC
DMP Corporation
DuBois Chemicals
Duroair Technologies Inc.
Durr Systems, Inc.
Dynabrade Inc.
Echo Engineering &
Production Supplies, Inc.
Egyptian Coatings
Elcometer Inc.
The Electrocoat Association
Emitted Energy
Engineered Paint Applications
Enhancement Technologies/
Sublitex
EPSI Masking Solutions
Ervin Industries Inc.
ESMA Incorporated
Euroimpianti SRL
Eurovac
FANUC America Corporation
Fischer Technology Inc.
Flex Trim USA
Fostoria Process Equipment,
div. of TPI Corp.
Frank Lowe
GAT Finishing Systems
Gema USA Inc.
General Fabrications Corp.
George Koch Sons, LLC
Global Finishing Solutions LLC
Goff, Inc.
Graco Inc.
HafcoVac
Hedson Technologies North
America Inc.
Henkel Corporation

Hentzen Coatings Inc.
Heraeus Noblelight America
Herr Industrial, Inc.
Hubbard-Hall Inc.
IFS Coatings, Inc.
Integrity Metal Finishing Supplies
Intek Corporation
IntelliFinishing
Intertek
Iowa Area Development Group
*IPCM - International Paint &
Coating Magazine*
IST International Surface
Technologies
IXS Coatings - Ultimate Linings
Jamestown Coatings
KeepTheHeat
Keyland Polymer UV Powder, LLC
Klinger Paint Co.
Kyzen Corporation
LDPI, Inc.
Lesta USA
LPI, Inc.
M L Filters
Magic Rack - Production Plus
Marpol Parlatici San. Tic. As.
Marvel Industrial Coatings LLC
Master Finish Company
MAXAIR Systems
Michigan Metal Coatings Inc.
Midco International, Inc.
Midwest Finishing Systems, Inc.
Mighty Hook Inc.
NikoTrack LLC
Nilfisk, Inc.
Nordic Air Filtration
Nordson Corporation
Northern Coatings & Chemical
Omnirobotic Inc.
Parker Engineering of America
Patriot Metal Finishing Systems, Inc.
PEM Inc.
PKG Equipment Inc.
Pneu-Mech Systems Mfg. LLC
Pollution Control Products Co.
Polymer Molding, Inc.
Porcelain Enamel Institute, Inc.
Powder Coated Tough
The Powder Coating Institute
PPG Industries, Inc.
PrestiVac Inc.
Proceco Ltd.
Products Finishing Magazine

Quaker Houghton
Quality Finishing Systems
Rapid Coating Solutions
Richards-Wilcox, Inc.
Rohner
RollSeal, Inc.
RPB Safety LLC
Ruwac
SAMES KREMLIN
Sata Spray Equipment
Scientific Control
Laboratories, Inc.
Selas Heat Technology
The Sherwin-Williams Co.
Singer Safety Company
Southern Systems
International, LLC
Spray Systems, Inc.
Spray-Tech
Sprimag Inc.
Surface Engineering and
Alloy Co.
SurTec USA
SWECO
System Technologies, Inc.
Sunkiss USA
Tanis Inc.
TCI Powder Coatings
Technotrans America
Therma-Tron-X, Inc.
Thermion, Inc.
Tiger-Vac, Inc.
Transmet Corporation
Trimac Industrial Systems, LLC
UniCure Spraybooths
Uni-Spray Systems Inc.
United Surface Solutions, LLC
V & S Galvanizing LLC
Valmont Coatings
Vapor Technologies
Venjakob/Nutro, Inc.
VentCor Systems
Vitracoat America Inc.
Vulkan Blast Shot Technology
W Abrasives
Wagner Industrial, Inc.
Washington Mills
Ceramics Corp.
Webb-Stiles Company
Wheelabrator

FINISHING Education Program Most Diverse Ever

CCAI continues to offer outstanding FINISHING technical sessions as a part of the FABTECH Education Program. This year's agenda is the most diverse ever with 19 NEW sessions, providing finishing professionals with a vast array of learning opportunities. Sessions are divided into basic, intermediate and advanced levels so attendees of all backgrounds can find applicable topics.

CCAI is excited to once again offer 30% off ANY FINISHING education session by using code **FINISHING30** when you register. This offer is ONLY available for CCAI's FINISHING sessions. Review the topics listed in the matrix below and view complete session descriptions at www.fabtechexpo.com/education. REGISTER NOW for technical sessions during FABTECH 2019.



FINISHING Conference Schedule-at-a-Glance

8:00 AM – 9:30 AM	10:00 AM – 11:30 AM	12:00 PM – 1:30 PM	2:00 PM – 3:30 PM
MONDAY, NOVEMBER 11			
KEYNOTE PRESENTATION	■ C20: ABCs of Infrared	VISIT SHOW FLOOR	■ NEW! C40: It's Your Money - Control Your Costs
	■ NEW! C21: I Want to Powder Coat, Now What?		■ C41: Powder Coating Basics
	■ NEW! C22: Corrosion Basics and Prevention		■ NEW! C42: Understanding the Basics of Pretreatment
TUESDAY, NOVEMBER 12			
■ NEW! C50: Lean and Green Cleaning	■ NEW! C60: Mother Earth Still Needs Our Help	VISIT SHOW FLOOR	■ C80: Identifying and Solving Finishing Defects - See It, Touch It, Fix It
■ NEW! C51: Powder System Design for Success	■ NEW! C61: How It's Made: Knowing Where Your Powder and Equipment Come From		■ C81: Lean and Mean - Making Powder Systems Work
■ NEW! C52: 1K, 2K, New K and Fluid Delivery Methods	■ NEW! C62: Oven Selection Solved		■ C82: Make Safety a Priority
WEDNESDAY, NOVEMBER 13			
■ C90: Architectural Coatings - Today and Future	■ NEW! C100: Conveying Effectively	VISIT SHOW FLOOR	■ NEW! C120: Quality Still Counts
■ C91: Optimizing Powder Operations	■ NEW! C101: Mastering Batch Powder Coating Operations		■ NEW! C121: Powder Coating Troubleshooting
■ NEW! C92: Creative Finishing Solutions	■ NEW! C102: Choose Your Weapon - Finding the Right Liquid Applicator		■ NEW! C122: Automation Roadmap for Liquid Finishing Operations
THURSDAY, NOVEMBER 14			
■ NEW! C130: Power Up and Hang On for Efficiency and Savings	VISIT SHOW FLOOR		
■ NEW! C131: Using the Dirty Dozen to Optimize Your Powder Coating			
■ C132: Test for the Best - Best Practices and Measurement Methods for Quality			

■ = Basic ■ = Intermediate ■ = Advanced

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SPECIALTY POWDER COATING can incorporate a host of special effects in the finish from textures to metallics to veining. Factor in colors and gloss levels, and the realm of possibility for creating custom finishes is wide open. No matter which industry – from automotive to electronics to home appliances to architecture – the manufacturer wants their product to stand out to consumers and new, decorative finishes make this easily achievable.

The major benefit of powder coating itself, says CSI Coating Systems, is the resultant high-quality, durable finish. Powder coating is a dry coating process which has become increasingly popular due to its efficiency, durability and minimal effect on the environment. Powder materials can be applied to a variety of metals or anything that can hold an electrostatic charge, making them highly versatile and sought-after.

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 colors, making them ideal for outdoor applications. Decorative applications are applicable to all of these coatings.

METALLIC

Metal-effect coatings are almost indistinguishable from real metal, and can be used in several applications. They adhere to plastic substrates and have high durability. These powder coatings include mica and aluminum metallics, as well as colors with a metallic sheen that add luster and sparkle.

Other visual effects can include the illusion of looking into a hologram. Here, the powder coating technology manipulates particles in the paint to achieve the holographic effects. There are also laser etch coatings, where intricate designs can be etched into coatings applied to plastic substrates, allowing light to pass through. These are often used by the automotive and consumer electronics industries. By varying the depth of the etching, it is even possible to create a range of colors.

ANTIQUÉ

Antique finishes are usually based upon black leatherette, although other base colors are occasionally employed. This leatherette base is then simply blended with the metallic pigment of the required color, such as aluminum, so that a black antique with a silver vein is obtained.

CLEAR

With clear finishes, no pacifying pigment or filler should be employed. It sounds straightforward, but major problems can occur as a result of slight incompatibility between the flow agent and the resin base. There are no simple methods for correcting this effect, (which invariably leads to a milky-looking finish), and as a result, the devel-

opment 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 finishes are a variant of the clear finish, and are produced by incorporating a small proportion of a solvent soluble dyestuff (usually at a one to five percent pigment level). Tinted finishes yield a good, hard, resilient coating when correctly applied. Two major factors must be observed in the application. Firstly, they must be applied over a high-luster, blemish-free substrate such as polished nickel or chrome. Secondly, being transparent, their resultant colors 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.

A common mixing approach is the slow speed tumble. This method is quite satisfactory for those customers who apply the powder via a spray-to-waste technique. However, as the popularity of the finish has grown, many coaters have attempted to recycle the overspray, and have discov-

ered the problem of this type of powder – the separation of the metallic pigment from the powder base so that when attempting to respray the material, zoning occurs.

The encapsulation process was developed to handle this. While the post additive and encapsulation approach produces a powder system which yields a high luster 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 is open to environmental attack. To avoid these deficiencies, a second coat of clear lacquer must be applied.

TEXTURED

Textured finishes are produced via the incorporation of texturing agents such as polypropylene or high filler contents. At Prismatic Powders, “Texture” is color with the consistency of sandpaper or a cast finish. The company also offers River, a single color with an orange peel or hammer finish, as well as Wrinkle (a wrinkled finish) and Vein (an orange peel or hammer finish with a secondary color throughout).

GROWING MARKETS

The growth in powder coating is so great, fuelled in part by many of these ever-changing product offerings that



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Axalta, for one, announced in May a major new growth strategy for its China powder coatings business.

The company says the new strategy positions it to more effectively unlock value in the high-end Chinese

powder coatings market in the next three years.

“China is one of the largest markets in the global powder coatings industry and continues to grow,” says Rajeev Rao, Industrial Coatings VP of

Axalta Global Powder and Business Development and Strategy. “Our new growth strategy aims to enable Axalta to seize opportunities in the high-end market and gain market share by leveraging our innovative powder coatings solutions.”

Axalta will focus on developing the high-end powder coating market, introducing new product lines and service models. Its flagship brands, Alesta, Abcite and NapGard are well known in China in a variety of end-user applications such as transportation, architecture, oil and gas pipelines, rebar, appliances, general industrial and many other segments. Axalta will also be introducing other high-quality brands, Plascoat, Wireguard and Talisman, commonly used in the decorative and functional industries.

“China’s powder coating market has undergone tremendous changes in the last 20 years with the most significant being the increasing demand for high-end powder coatings,” says Willie Wu, president of Axalta Greater China. “Axalta has a stable customer base and has established itself as one of the leading companies in this market. We’re committed to bringing global technology and services to China’s customers to meet their growing demand for high-quality powder coating solutions using sustainable business practices.”

This is backed up by a new study from Global Market Insights which shows the powder coatings market is expected to reach approximately USD \$16.5 billion by 2024. Asia Pacific currently accounts for more than 40 per cent of that share.

When customers have very specific requirements that cannot be satisfied with off-the-shelf solutions, whether they are looking for special colors, effects or textures that will differentiate their products from the competition, powder coat manufacturers are answering the call with product solutions for every need. ■

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The Emma and Georgina Bloomberg Center at Cornell Tech Roosevelt Island, New York

Architects specify rainscreen systems to fulfill two primary functions: the first is to keep moisture from entering a building; the second is to prevent heat from escaping. Thanks to a collaboration between Morphosis Architects, A. Zahner Company and PPG, the rainscreen system on The Bloomberg Center at Cornell Tech does more than serve those purposes – it also works as a color-shifting wall of art.

Set on New York City's Roosevelt Island, The Bloomberg Center is the first academic building on the new Cornell Tech campus, an educational partnership of Cornell University and the Technion-Israel Institute of Technology. The 160,000-sq. ft. structure was designed to be the "intellectual nerve center" of the campus, with classrooms, instructional labs, conference rooms, a lecture hall, cafe and other shared spaces. The center also was planned with the ambitious goals of melding environmental sustainability with leading-edge design to achieve net-zero energy use and LEED certification at the Platinum level.

The most visible expression of those objectives is the exterior layer of the rainscreen, an aluminum panel system that envelops the four-story building to decrease its cooling load, while serving as a visual tether for its floating 40,000-square foot solar canopy.

Featuring iridescent, color-shifting PPG DURANAR VARI-COOL coatings, the panels were designed to create an artful facade that harmonizes with the local landscape.

Zahner finished the panels with PPG's iridescent coating; then, using its proprietary Louvered ZIRA system, perforated 337,500 two-inch circular tabs across the exterior surface of the rainscreen.

Because the perforations are individually programmed to reflect a specific volume of light, they act like pixels that, when viewed from afar, produce a continuous image depicting Manhattan's skyline on

the west facade and the famous gorges of Ithaca, New York – near Cornell University's main campus – on the east facade.

Formulated with an advanced 70-percent polyvinylidene fluoride (PVDF) resin, PPG Duranar VARI-Cool coating combines pearlescent pigments that change color according to ambient lighting conditions, with PPG's proprietary ULTRA-COOL infrared-reflective coatings technology, which deflects solar heat away from buildings to keep them cooler. While The Bloomberg Center design team chose the coating in part to manage heat gain, the ability to shift color made it the product of choice for this project.

"We were interested in the concept of a dynamic building that changes under different light conditions during different seasons and from different perspectives," says Ung-Joo Scott Lee, a principal with Morphosis and project leader for The Bloomberg Center. "We had never used the VARI-Cool product before, but we are always interested in exploring new materials and finishes."

After reviewing a number of different colors, the design team selected Copper Brown Patina for its wide-ranging brown to greenish-blue hue. "The brown tone provides an industrial machine-finish quality that is similar to the Queensboro bridge nearby," Lee explains. "The bluish-green hue is the color of the East River and the Cornell Tech landscape. Together they, very literally, marry the building to its new Roosevelt Island campus in New York City."

Scott Moffatt, PPG Market Manager, Architectural Coil and Extrusion Coatings, worked with Zahner to make sure the coating would meet the long-term performance challenges associated with the building's riverside setting.

"Zahner contacted us because they planned to laser-cut the perforations into the panels after the coating had been applied, and they were concerned about disrupting the paint finish," he says. "They sent us a few sample panels and we ran the corrosion tests. The results were positive, so everything was approved."

Quick Change **ARTIST**

WHEN IT COMES TO POWDER COATING, the demand for a smooth and fast color change never abates. Customers want little to no downtime, and no mixing or wasting of materials. Manufacturers are always responding with new technologies in quick color change systems.

The main principles behind a fast color change are application efficiency, recovery efficiency and overall system efficiency. With this formula, fast color change begins with allowing the least amount of powder in process through the color change system during operation. Application efficiency means, for example, that guns are not spraying if there is no part in front of them. In addition, the flow settings are set at their optimum level, coating parts with minimal overspray. This results in less powder on the floor and on the booth walls that would need cleaning during a color change.

Recovery efficiency means quickly collecting powder overspray and transferring it out of the cyclone and back to the powder feed source, ensuring that recovery efficiency is as high as possible. Optimizing these processes to minimize use of powder in process, and the amount of powder that requires cleaning during color change, makes it possible to achieve a fast color change.

Gema's Magic Systems are easy to customize in booth dimensions, air volume, number, and position of guns and touch-up stations. The company says the system offers efficient powder application and a quick color change.

The powder circuit begins in the feed station and powder is transported to the electrostatic guns that charge it and apply it to the pieces. A cyclone separates the overspray powder from the extraction air. The pump transports the powder back to the feed station where a sieve integrated in the powder recovery circuit removes contaminants. The final filter retains dust particles and clean air returns to the ambient.

MagicCompact EquiFlow is Gema's compact color change solution, though systems can be made to suit the customer. A switching device is an attractive solution to combine the quick color change capabilities of a multi-color recovery with the high recovery efficiency of a single-color recovery. These systems promise easy and fast switching between single and multi-color operation, contamination-

free operation, short ROI, and space-saving layout (compared to two dedicated systems).

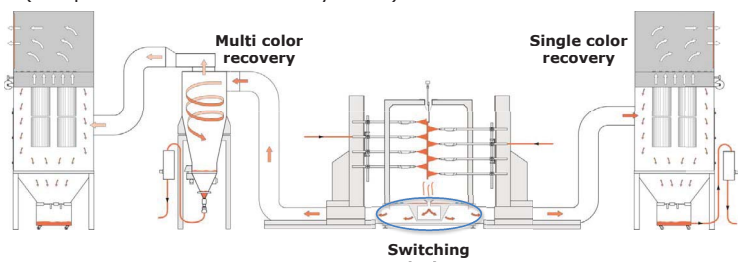
MultiColor Switch guns are the other part of the Gema equation. Gema says this integrated solution allows switching between different powder colors "in just the blink of an eye", for super-fast and contamination-free color changes. Gema says customers can go from one production batch to the next in just a few seconds, avoiding idle times and maximizing the productivity and flexibility of the coating line. The automatic color switching process reduces human errors and ensures application quality.

Nordson's Plug and Spray Quick Color Change System saves an average of 61 percent in total time spent per color change and up to 70 percent of powder material waste, the company says. The Plug and Spray system offers a simple, quick disconnect design to change colors fast and easily in manual spray gun applications. An accessible panel design allows the operator to effortlessly change from one color to the next in as little as 20 seconds per color. The system is adaptable to any type of Venturi powder coating equipment and applications, and the flexible color change system offers up to 10 colors per panel, with the ability to mount as many panels as required for the application.

In addition to reduced process time, Nordson says there is less wasted powder and hose wear while the modular design enables the panel to fit into all types of manual systems, with a rail mount or wall mount bracket.

The SAMES KREMLIN CS130 Powder Pump is a quick

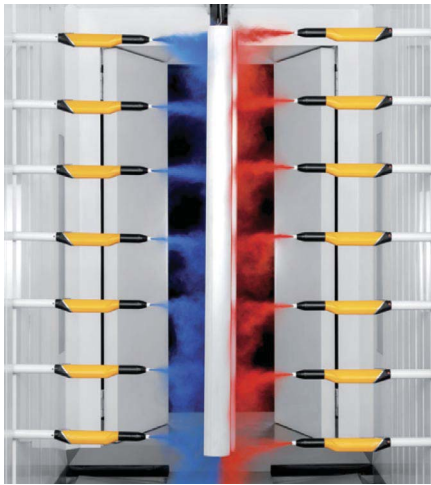
- A **switching device** is an attractive solution to combine the quick color change capabilities of a multi color recovery with the high recovery efficiency of a single color recovery.
 - **Easy and fast switching** between single and multicolor operation
 - **Contamination-free** operation
 - **Short ROI and space-saving layout** (compared to two dedicated systems)



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8

Gema's Magic Systems.



Gema's MultiColor Switch.

feeding system for powder paint, designed not to retain color, for optimal color changes. Key customer benefits, according to the company, are the strength of the body, access to the ejector without removing the tip

of the powder hose, quick air coupling connectors with color coding, metal body and injector allowing solvent rinsing, a conductive output tip that improves the evacuation of triboelectric charges that may be generated, and a quick clamping system with a uniform distribution regardless of the number of powder pumps.

Howard Marten offers Nordson fast color change powder booths which it says have long been at the forefront of technologies that are ultra-fast, easy to use and extremely efficient. The Vantage FCM (fixed collector module) powder spray booths provide performance in a cost-effective design. Ideal for job shops, start-up operations and economically expanding existing production, the booths are available in configurations from 6000 to 12000 CFM capacity to accommodate various product sizes.

Global Finishing Solutions' (GFS) High Production Powder Booths are



SAMES KREMLIN CS130 Powder Pump.

often used in conveyORIZED powder application systems. GFS says the modular designs are engineered for optimum airflow and maximum transfer efficiency, and are ideal for mass



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Global Finishing Solutions' (GFS) High Production Powder Booth.



Nordson's Plug and Spray Quick Color Change System.



POWDER COATING BOOM

- The powder coatings market is expected to grow from USD \$10 billion in 2017 to approximately USD \$16.5 billion by 2024.
- A broad variety of applications including architectural, agricultural/construction equipment, decorative, A&T components, and outdoor furniture are among the key factors propelling the powder coating market share.
- Shifting consumer focus toward the adoption of new green building construction techniques along with surging preferences toward eco-friendly building materials are other contributing factors to growth.
- The incorporation of new and sustainable solutions and rapid technological advancements to meet efficiency, durability, and environmental requirements are also fuelling the powder coating market expansion.
- Consumer preference for durability, corrosion resistance, and high luster and shine will further augment product portfolios.
- Metallic substrate leads the powder coatings market accounting for more than 95 percent of the powder coating industry share in 2017.
- Asia Pacific accounted for more than 40 percent of the overall powder coating market share in 2017.

Global Market Insights, January 2019



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Continuous research and development and new technologies are answering the need for quick color change in powder coating as the bar inches ever higher. ■



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Evaluating and Solving Racking Needs on Any Scale

BY DONOVAN DIXON

TAKING ON A NEW PROJECT can be challenging. There are seemingly endless details to take into consideration, especially if you are installing a new line. Some questions you will be asking yourself are: What size paint booth do I need and how many guns? Do I need a large curing oven? What is my line speed going to be? Racking is often one of the last details that are considered. However, nothing has more impact on overall system performance than racking design.

There is a step-by-step process that most suppliers use to make sure they are optimizing their capabilities, no matter the project. First, answer the following detailed questions about your system and parts. The proper rack design will accommodate both and maximize your finishing process.

SURVEY YOUR SYSTEM

- What is your application – powder, liquid, ecoat or conversion coating? This answer will determine how much part control is needed and what type of rack adjustability can be used to re-establish electrical ground, if required.
- What type of conveyor do you use – P and F, monorail, hoist or batch?
- Can you paint parts from both sides or must the rack swivel?
- Are there inclines and declines on the conveyor? What is the maximum degree? This will affect the center of gravity on the rack, if hanging from two points. The maximum degree will also be used to calculate maximum rack width.
- What is the conveyor pendant style – H attachment or swivel casting? Is it centered on six,

- eight, or 24 inches? What is the maximum weight per pendant? Are there load bars?
- Will the racks be burned off or exposed to an acid to be cleaned? (Stainless hooks and racking may be required versus high-carbon steel.)
- What are the smallest dimensions of the booth, oven, washer or tanks?
- How fast does the line travel? Can racks or heavy parts be loaded at that speed?
- Are load bars required to carry the parts around the line, relieving conveyor stress or distribute weight across pendants?
- How will racks be moved to and from the line area? How will they be loaded onto the conveyor and removed? The rack must be easy on and easy off.



Once a supplier has familiarized themselves with your system, the next step is rack design. AutoCAD files and/or samples of the part being racked are often required to start the design process. Generally, a quote is put together for the design phase (which includes prototyping) of the project. Then, once accepted, 3D drawings are created, showing your part hanging on their rack going through your system. These solutions are reviewed and tweaked until a final prototype build is agreed on.

Combined with the samples and/or CAD files, suppliers will also look at other criteria regarding your part:

- What is your coating – powder, liquid or ecoat?
- Are you painting both sides of the part?
- Is masking required?
- Will the part be washed? Will it drain naturally?
- Are there preferred holes for hanging this part?
- Is the part light enough to blow off of a standard hook in the washer?
- What is the most important coverage area?
- Will a custom hook be needed?
- Is a dedicated rack needed for this part or will an adjustable rack with interchangeable crossbars work?
- Will the hooks need to be changed out of the rack to accommodate other parts? If so, can you change the

hooks at any time?

- Can the part be stabilized on the rack versus hanging freely?
- Are any blemishes allowed?
- What is the desired hanging position – side or front?
- What is the weight of the part?

With these criteria in mind, here are other ways to save money through the design process:

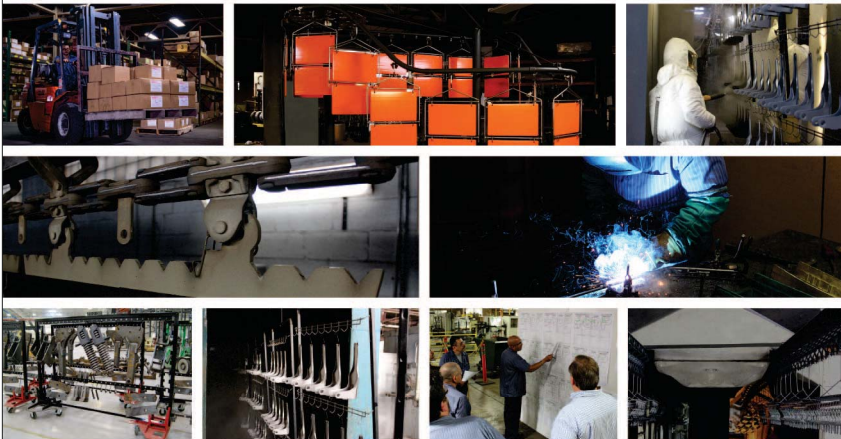
Add more parts to the same space. Maximizing part density is the number one money-saving criteria in rack design. Ease-of-rack use is paramount when high density is implemented.

Eliminate the labor cost of “daisy-chaining” hooks. This costs 50 percent or more in labor versus racking because the hooks must be hung before hanging the actual parts. Profitable finishing lines use racks instead of individual hooks, which allows lines to run at maximum speeds, sometimes as much as 70 feet per minute.

Look at offline loading and unloading. Often, racks can be loaded and unloaded offline, again allowing lines to

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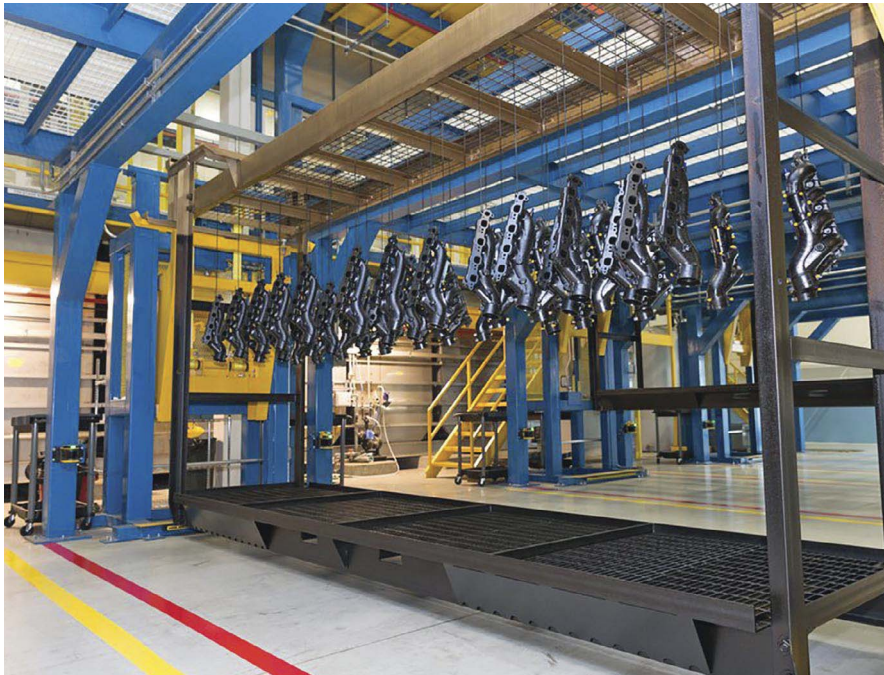
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HOOKS AND RACKS



reducing the cost per part associated with the hourly overhead of the finishing line. This includes costs such as chemicals, utilities, maintenance, labor, paint, cleaning, waste disposal, and more.

When analyzing racking potential, it is best to stage and load racks at the workstation, if possible, to eliminate rehandling of parts. Seriously consider offline loading and unloading of racks. Carts can be used to transport the racks to and from the line, burn-off facilities and more.

Fully taking advantage of today's technologies, including using 3D software, allows seamless communication between the design team and project managers. Thinking about racking needs as one of the first steps in your project will help ensure you have the time and resources to achieve a successful and profitable end result. ■

Donovan Dixon is Vice President of Design and Manufacturing at Production Plus Corp. Text also appeared in Products Finishing, May 2019.

run at maximum speed while fully loaded racks are moved to and from the line. Sadly, most lines run slower than designed, hindered by how fast people can hang parts

directly on the line.

Reduce hourly overhead line costs. Racking increases the number of parts finished per foot per hour,

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The 34,000-square foot Canada House at Killarney Mountain Lodge is currently the largest log conference center in the world. It was protected inside and out with Sansin Classic 1-2-3.

THE WATERBORNE WOOD COATINGS market was worth US\$ 2.2 billion in 2018, says a report released earlier this year by ResearchAndMarkets.com. Indeed, manufacturers have been very busy in research and development to meet the demand for waterborne products that are now so advanced, they have the same or better results and are almost indistinguishable from traditional products.

The market for waterborne wood coatings is currently exhibiting continuous growth, the report says. Catalyzed by growing urbanization in emerging economies across the Asia Pacific, Latin America, and Eastern Europe, there has been a significant rise in the demand for waterborne wood coatings. Increasing urbanization has triggered a rise in the residential, commercial, and industrial infrastructure, creating demand for wooden products in these regions. Moreover, rising production of wooden artefacts and decorative items catalyzed by the growth of the global decor industry has also been driving demand.

Waterborne wood coatings offer numerous advantages compared to the alternatives, including robustness, stain resistance, corrosion resistance, and flexibility. Other factors driving the demand for waterborne wood coatings include government regulations to reduce VOC (volatile organic compounds) emissions, product innovation, and increasing wood use.

Looking forward, the report says the waterborne wood coatings market value is projected to reach US\$ 2.9 billion by 2024, exhibiting a compound annual growth rate of approximately five percent from 2019 to 2024.

Wood coatings are generally traditionally created by combining various layers of shellac, drying oil, lacquer, or varnish, where every layer is followed by sanding, says ResearchAndMarkets.com. On the contrary, waterborne

WATERBORNE WOOD FINISHES AND STAINS

wood coatings are made from a wide range of resins which include ingredients such as acrylic, polyester, polyurethane, fluoropolymer, waterborne powder. Water is added to these coatings to enable the resin to disperse easily.

The coatings are applied on the wood surface to protect and enhance its appearance. The high water content makes them easy to apply and environmentally friendly as well. The consistency and the composition of the waterborne coatings vary and different solvents can be added depending on the use.

Waterborne wood coatings are non-flammable, almost odorless, contain fewer solvents than their oil-based cousins, clean up easily with water, dry quickly, and are non-yellowing. Because they dry so quickly, applicators will find there is not a lot of dust adhering to the finish.

Clean up is easy – water and a mild detergent do the job – which is another benefit of this type of coating.

Katilac Coatings (KCI) offers a variety of water-based wood finishes. All of them meet or exceed all current North American Environmental Standards including Greenseal GS-11, Greenguard, LEEDS, and South Coast Air Quality (SCQMD) Rule 113-R-VOC.

Offerings include the Vista Prowipe Waterbased Wiping Stain, which mimics the look and performance of traditional solvent-based stains. Deep color development is possible with the use of compatible pigments and dyes while providing excellent workability, Katilac says. Vista Prowipe is designed to be overcoated with AE Series Aqua-Elite Clear Topcoat to achieve a high-quality, waterborne finishing system. Katilac has just launched its Vista waterborne wiping glaze and waterborne power glaze.

The AE& AEW Series Aqua-Elite topcoats are KCI's next



Rotunda to Harbour Room: Sansin's deep penetrating waterborne wood finish, Classic 1-2-3, provides durability, while allowing the natural character and beauty of the wood to shine through at the Canada House at Killarney Mountain Lodge.

generation line of self cross-linking waterborne, acrylic hybrid wood coatings. Aqua-Elite comes in clear and white with a wide range of glosses. They are non-yellowing, non-flammable, low VOC, HAPs-free, formaldehyde and isocyanate-free self-sealing coatings that are specifically designed for high-demand interior wood finishing. Aqua-Elite offers chemical and moisture resistance with the look, feel and of a solventborne lacquer. The AE Series Aqua-Elite clear is a self-sealing product. The AEW Series Aqua-Elite White topcoat can be custom color-matched to any color.

To complement the AEW Aqua-Elite White topcoat there is AU1 Aquasurf Ultra Waterborne Universal White Primer. It is a self cross-linking acrylic-based surfacer/primer for MDF and hardwoods. It is low VOC, HAPs-free and does not contain any formaldehyde or isocyanates. It is fast-dry-



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WATERBORNE WOOD FINISHES AND STAINS



ing, easy to sand and high filling. Aquasurf Ultra is the basecoat for a variety of KCI topcoat systems including waterborne, pre-catalyzed lacquers, post-catalyzed coatings, conversion varnishes and 2K urethanes.

Katilac also manufactures an interior/exterior waterborne system. The

AX Series Woodguard is an interior or exterior grade waterborne, single component, polyurethane that is based on the latest waterborne technology, the company says. It provides a durable finish that exhibits longlasting protection against the effects of mold, mildew, sunlight, moisture, as well as most household chemicals. It contains a broad spectrum UV absorber that provides long-term protection of light-sensitive substrates. To further the performance of Woodguard, Katilac offers Fiberset which is a sealer that utilizes lignin chemistry to strengthen the wood at the cellular level prior to the topcoat application.

Axalta's waterborne products also incorporate new coatings technology to match the durability and performance of traditional solvent-based products, but with low odor, VOC-compliant solutions. Products range



from acrylic resins designed for durability on building exteriors to primers that provide excellent hide for doors and molding products.

Axalta says its Zenith line is formulated to provide intense, rich color tones and yield a finish that is tough and resists household chemicals. The Zenith waterborne collection also includes products that surpass



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Kitchen Cabinet Manufacturers Association (KCMA) performance requirements when properly applied and cured. GREENGUARD certified products are also available.

Designed for distributors, Axalta's Color Choice program "offers one of the most comprehensive color matching and finish design programs for the wood coatings marketplace – combining design, formulation and program management guidance along with a full complement of products, raw materials and equipment," Axalta says. Color Choice enables companies to efficiently produce an unlimited number of custom colors and finishes with accuracy and consistency. The program can be tailored to meet individual business needs and budgets. "We work closely with our customers throughout the product development and commercialization process," the company emphasizes.

The Sherwin-Williams waterborne OEM range includes both clear lacquers and pigmented products, designed for furniture and fittings. These products significantly improve the work environment on the production line and radically reduce solvent emissions to the outdoor environment, the company says. Interior and exterior products are available.

Sansin bills itself as "the global leader in environmentally friendly wood protection". The company has been

creating waterborne wood finishes since 1986.

Sansin Enviro Stains are waterborne. Water carries modified natural oils and resins deep into the wood's cell structure. Sansin says that as the water evaporates, the finish bonds directly with the wood substrate, forming a durable barrier that won't crack, peel or blister. Formulas offer every possible level of finish from penetrating natural stains, to high-gloss barrier coatings.

When the massive new convention center, called Canada House, opened at Killarney Mountain Lodge opened in Killarney, ON, this spring, the 34,000-square foot facility facing Georgian Bay became the largest log structure in the world.

Logs were sourced from Quebec, Ontario and BC. Killarney General Manager Kelly McAree said the structure is so unique and impressive that tours were given before the structure opened and 2019 weddings were fully booked.

A Sansin finish was used to protect the structure. "Sansin was chosen to protect and beautify the enormous logs for the Canada House," says Sansin's Sales and Marketing Director, Caroline March-Long. "Sansin's deep penetrating wood finish provides the durability required, while allowing the natural character and beauty of the wood to shine through," she adds, summing up what consumers want when it comes to wood protection. ■

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Publisher & Sales

Pete Wilkinson
1-705-296-3030
Mobile: 1-416-428-7838
pete.wilkinson@cfcmm.ca

Associate Publisher & Sales

Gillian Thomas
1-416-277-1269
gillian.thomas@cfcmm.ca

Editor

Theresa Rogers
1-416-201-1975
theresa.rogers@cfcmm.ca

cfcmm.ca

Down the Line: **AUTOMATIC ANODIZING SYSTEMS**

ANODIZING ALUMINUM is an electro-chemical process that creates a layer of protection that makes the lightweight, durable material ideal for applications from automotive parts to bakeware.

Depending on your capabilities, you may decide to outsource the job, or you may perform it in-house.

Ideal for a variety of applications from parts for vehicles, and marine and medical, to commercial bakeware and food and beverage packaging, aluminum is extensively used in aerospace applications. The lightweight, durable metal offers versatility and strength. Like most metals, aluminum can be susceptible to corrosion and deterioration under certain conditions but unlike most other metals, it can be made stronger and more corrosion-resistant through anodizing. The surface of the aluminum is converted to aluminum oxide so the anodized film is part of the substrate/material and will not flake or chip off.

Understanding the process from prototype to production is highly important. Vollrath Manufacturing provides custom manufacturing and engineering design consulting, standard and made-to-order parts, and custom tool fabrication.

The company says when your project calls for anodized aluminum, it's important to work with a manufacturing partner that not only understands the process, but has the capacity to work with you from the initial prototyping phase through to production. If a supplier has a complete picture of your product's journey, they are better able to provide you with the right recommendations and processes for your particular piece. Suppliers that only provide anodizing services, Vollrath says, may be excellent at anodizing, but they may not be the most efficient choice for the job. A supplier that has a variety of capabilities in-house, such as metal fabrication, racking, tooling, and surface finishing could be the difference between a successful rollout and one that misses the mark.

Vollrath operates two anodizing tanks on both the Type II and Type III lines. Tanks accommodate large parts up to five feet wide by 10 feet long and allow processing of load sizes larger than 600 square-feet. The



Galvatek aluminum plant with cascade rinse steps which saves water usage and improves rinsing result.

anodizing facility can process one piece or as many as 30,000 pieces per day.

If you want to install your own automated aluminum anodizing line, a company like Galvatek can help. It designs, manufactures, supplies and installs automated anodizing systems mainly for the aviation and aluminum industries.

In the aviation industry, automated aluminum surface treatment plants are used for the chemical treatment of challenging aircraft parts and frame components. Aluminum anodizing plants can also be combined with etching, cleaning and non-destructive testing (NDT) processes. In the aluminum industry, the process often also includes electro-coloring for the production of aluminum profiles and components.

Galvatek's anodizing plants specific to the aviation industry are mainly used for high-grade aircraft parts, aerostructures and other aluminum components. Anodizing plants for the aluminum industry are typically designed for the high-capacity anodizing of profiles.

Galvatek says its aluminum finishing plants are typically fully automated turnkey deliveries that utilize the latest technologies in ventilation, multiple loading/unloading stations, and energy-efficient solutions. A state-of-the-art control system ensures accurate film thicknesses. Anodizing tanks are typically supplemented by

AUTOMATIC ANODIZING SYSTEMS



Galvatek automated anodizing line for extruded aluminum profiles. Plant includes ventilated transporters with tilting capability.



Palm anodizing process lines can be customized.

degreasing, rinsing, etching, desmut, and hot sealing, as well as electro coloring tanks/stations. The control system constantly records individual treatment and alarm history, which helps with anodizing process certification, such as NADCAP approval used in the aviation industry.

Plants can be scaled and designed according to the needs of the customer and the maximum product

dimensions in the treatment process. Galvatek says it has delivered tanks up to 49 feet long; however, the usual tank length is approximately 29 feet or less for aluminum profiles or other anodized aluminum components.

Tartaric sulfuric acid (TSA) anodizing provides excellent corrosion protection and paint bonding properties for a wide range of aluminum alloys, Galvatek says. TSA anodizing can be

used to replace the use of hexavalent chromium in chromic acid anodizing (CAA) processes and is an approved method that complies with various legislations. The company says many of its customers have installed or upgraded to these plants recently.

Palm Technology supplies process lines, instrumentation, and tanks and components for a variety of processes including automated anodizing. It can supply a complete automatic line, upgrade an existing line or provide an individual tank or component.

The company says it is a “leader in the engineering, fabrication and installation of process lines.” Palm uses in-house engineering and has its own 20,000-square foot manufacturing facility. Every step of the equipment building process is controlled, providing customers with a quality product that will perform reliably in an industrial environment.

Palm Technology is also an affiliate of Palm International, an international supplier of specialty chemicals and metals, which is a handy one-stop-shop if that’s what you are looking for.

“Palm’s modular design minimizes installation time, provides the customer with process flexibility and allows for the line to be easily expanded,” the company says. “We listen to our customers and will work with you to develop a solution that will provide you with the reliability and capabilities to meet your current and future requirements.” ■

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Who Should Attend?

Business owners, supervisors, managers, continuous improvement and environmental systems personnel, sustainability managers, and employees, consultants or professional service providers responsible for reducing costs and liabilities through innovative surface finishing technologies.



ENGINEERING **HARDCOAT**

HARD ANODIZING, also known as hardcoating or Type III anodizing, creates a hard-wearing, corrosion-resistant coating on a variety of metals.

Because the resulting product both looks great and is protected from day-to-day wear and tear, much of the metal around us is anodized. The process adds an oxide layer to the outside of the metal (opposed to above the surface like paint), meaning it won't chip or scratch off.

Last fall, Palatine, IL-based Arlington Plating Company (APC) announced the expansion of its aluminum anodizing operations to include hardcoat parts processing to meet MIL-A-8625 Type III, Class 1 and 2 standards.

The fully automated, 5,000-square foot line produces conventional and hardcoat anodizing with high pH sealants and organic die coloring capabilities. Offering bright dip and satin finish applications, the rack line meets pH 13.0 automotive industry requirements for exterior trim applications.

"Our new hardcoat capabilities allow us to continue to expand our market reach into food process equipment, medical and aerospace applications that require wear resistance, corrosion protection and appearance," says Richard Macary, President of Arlington Plating Company (APC).

In addition to the automotive industry, APC's aluminum anodizing customers have grown to include consumer goods manufacturers that require the durability, non-stick properties, and corrosion resistance that hardcoat anodizing provides. Furthermore, the expanded hardcoat service is being offered to meet the increased performance and design demands by the aerospace, oil and gas, equipment, and electronics industries.

Anodizing includes two broad sub-categories: decorative and hard anodizing. The main differences between the two are how thick and durable the coating is, and the process used to create it.

Anodizing a metal part involves putting it into a liquid that is electrically conductive, typically an acid solution, called an electrolyte, says wisegeek.com. Circuits have a positive electrode (cathode) where electrons enter and a negative one (anode) where they leave; in anodizing, the metal part becomes the negative electrode. When an electric current is passed through the solution, the action of the electrons leaving the circuit through the metal part causes a tough, corrosion-resistant coating of oxidation to build up. The coating can either be left as it is after this treatment or further enhanced with decorative dyes or other performance-improving additives.

Hard anodizing, however, uses electric currents that are generally higher and electrolyte solutions that are slightly



APC anodizing line.

weaker. The temperature of the electrolyte solution is also lower allowing for less distortion of precision parts and better adhesion of the coating. Generally, the anodizing process is considered relatively environmentally friendly and the byproducts are recyclable.

Hard anodized coatings are typically applied to heavy wear industrial parts intended for use in aggressive or highly corrosive applications. These coatings are typically far thicker and harder than decorative ones, and usually lend the parts a durability approaching that of hard faced or case hardened steel. They also penetrate and cover surface imperfections such as fissures better. Typical applications include aerospace, firearms, machinery, electronics, oil and petrochemical, ordnance, cookware, molds and dies, and sporting goods.

Generally, hard anodized parts have coatings which exceed 10 μ m (0.01 mm or 0.00004 inches) with typical coatings exceeding 25 μ m (0.025 mm or 0.0001 inches). Decorative anodizing usually features coatings of less than 10 μ m and, although durable, doesn't have the same exceptional wear characteristics of hard anodizing.

Hard anodized metals don't conduct heat or electricity well. This is especially useful for applications that require the part be used at high temperatures. The coating is also chemically stable and non-toxic.

APC's hardcoat line is fully automated and produces anodized parts up to 100 inches in length. Comprised of 44 process tanks, APC has capabilities to dye parts black with seals capable of meeting 13.5 PH automotive requirements. Further hardcoat capabilities include thickness ranges of 0.0001 inches to 0.0030 inches; depending on

the alloy, anodizing thickness constitutes 50 percent build up versus 50 percent penetration into the substrate and must be accounted for when calculating pre-anodize machining tolerances. There is also rack anodizing; precision masking; in-house coating weight analysis; taber abrasion testing; and post anodize seals are available for increased corrosion resistance meeting GM 14665 and Ford WSS-M4P13A requirements.

Precision Plating in London, ON, offers Type II (Conventional) and Type III (Military Hard) rack anodizing on aluminum parts with a Class 1, non-dyed (clear) finish or a Class 2, dyed finish in black, blue or red. Brown, gold, gray, green, olive, purple, and yellow are offered as custom colors. These colors and others require a small lead time, at an additional cost. Type III coatings that are undyed will range in color from light

gray, green and bronze to almost black depending on the thickness and the aluminum alloy being anodized. Parts to be anodized should have radiuses on internal and external corners because anodic coatings will develop voids at sharp corners.

Valmont Coatings specializes in hard anodizing at its George Industries facility in Los Angeles. Valmont says it specializes in making product stand out. "Our protective anodizing services convert the surface of aluminum products into an attractive, colorful, corrosion-resistant finish." Valmont offers 18 standard colors available in bright-dip or etch (matte) finishes. Material is racked on a conveyerized system of seven feet long by 20 inches wide by 40 inches deep.

Hard anodizing is one of the best established metals coating processes in industry. At the same time, its full

potential is not always realized, precisely because it seems so familiar that it can be thought unlikely to meet the requirements in more demanding applications.

There is a possible concern, especially with tight-tolerance parts, that the anodized layer will push them out of spec. The answer here is to machine the parts smaller than required for the end-use, so that the anodized layer brings them up to full dimensional tolerances.

Performed carefully, hard anodizing can offer a simple, cost-effective solution for producing highly capable parts. And as always, an anodizing shop's willingness to run proper trials for a new or difficult part design are key indicators that the finish requirements will be met or, ideally, exceeded, and the application will be successful in the field. ■



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MAINTAINING YOUR

Rectifier

AS WITH MOST EQUIPMENT, rectifiers can go from fairly simple to very sophisticated with a wide range of electronic controls. Proper maintenance is always a worthwhile investment and means more money in your pocket in the end.

Here are some ideas to get the most out of your rectifier:

SCHEDULED PREVENTIVE MAINTENANCE

Scheduled preventive maintenance has a major influence on the life of a rectifier. Remember that calibration of the meters every year does not mean that the rectifier is working properly. Three-phase rectifiers can lose a leg and the volt and amp meters may not be fast enough for you to see the dropped wave. The rectifier maintenance schedule falls on management's shoulders to make the right decisions to achieve a balance between cost and downtime. If service is needed they can use in-house personnel or factory authorized service. The whole point of scheduled preventive maintenance is reducing unplanned down time. Metal finishing shops are not known for their wonderfully aerie environments. So we have a simple rule: the dirtier the environment, the more effort you need to maintain the system.

KEEP IT CLEAN

Because the metal finishing environment is so unforgiving to equipment in general but especially for electrical equipment, cleanliness is even more important. When shop dust and dirt mixes with the very humid air common in metal finishing atmospheres, the dust and dirt can become sticky and adhere to the interior electrical parts and wires. Now, add to this the acids vapors that are drawn into the cabinet and the metallic salts they form. Both the acid vapors and the salts are corrosive and conductive. Conditions in the housing are ripe to cause electrical shorts as the conductive salts create a pathway between electrically charged parts. These conditions work together to speed up the deterioration of the electrical and non-electrical parts, alike. In most cases an annual preventative maintenance program is enough to ensure that the rectifier will not fail you just when you start that critical job for the new customer you want to impress.

PREVENTIVE MAINTENANCE LIST FOR AIR-COOLED RECTIFIERS

- Use LOCKOUT/TAGOUT procedures and secure/test all power sources before starting.
- Vacuum up loose debris around the outside and wipe down the exterior with a clean cloth.
- Clean around and under the base particularly near the air intake(s).
- Use a combination of a vacuum cleaner and a soft

cloth/brush to clean the interior components. (The brush should be stiff but not metallic.)

- Vacuum the air inlet/outlet screens and clean/replace the filters.
- Clean the cooling fan blade and motor (check the bearings).
- Clean the heat sinks using a stiff brush (non-metallic) to remove the buildup/corrosion in the cooling fins. (They may be removed for heavy duty cleaning/replacement as needed.)
- Check out all of the electrical and mechanical connections to be sure they are clean and tight.
- Clean the controls/electronics with a soft bristle brush and aerosol canned air to gently clean debris from control surfaces.
- Examine the shunt for signs of corrosion and its wires for cracking of the insulation. Exposed wire from the cracking may cause incorrect amperage and voltage readings.

You may need to contact the equipment manufacturer or others for help if the problems are too numerous or technically more than your team can handle safely.

ADVANCED CONTROL SYSTEMS

For example, in reel-to-reel plating, the data from real-time thickness measurements can be used by a computer to control the rectifier/plating amperage of the cell to keep the deposit thickness within the specified range. Rectifiers can be wired into a most complex computer system. You can watch the voltage, amperage and time from your desk. Brighteners can be automatically added based on the amp-hours. The larger system can track the conductive of the soak cleaner, electro-cleaner and acids and make chemistry adds while monitoring the level of the concentrate be it a 55-gallon drum or larger tote.

NOT JUST DIRECT CURRENT

Pulse rectifiers can supply the amps needed to work extremely well with high current processes like hard chromium and anodizing. Hard coat anodizing and hard chrome plating are the two most successful, large-scale (based on the size of the rectifier) commercial applications.

HARD CHROMIUM

Pulse current in hard chrome plating a deposit is crack-free and very smooth. The smooth deposit, in turn, creates a very hard chrome layer. The electroplating of engine cylinders is an interesting application of this property. By using pulse at the beginning of the plating cycle a smooth hard chrome layer is placed next to the base metal. Then, the

waveform is changed over to DC to produce microcracking in order to give oil a place to cling. A pulse rectifier can be used to get the best of two worlds out of the same plating bath chemistry. Chromium III chemistries that are additive-free can provide comparable thickness and hardness to chromium plated from hexavalent chemistry with the use of rectifiers that can modify DC waveforms.

DUMMYING

Under certain conditions, it is advantageous to set up a separate power supply/plating cell inside of the plating tank or in an auxiliary tank outside to the plating tank. You can use a wide range of electro-chemical reactions to your benefit. For example, plating at low current density can remove metallic contaminants from your plating bath to extend its useful lifetime. The common term for this is Dummying. Continuous dummying is often used by

high-volume shops to minimize downtime. The copper that can build up in nickel bath from the parts can be dummed out using a very low current density (CD). A large piece of corrugated steel (the ripples help to lower the CD even lower) is placed into the nickel bath and plated at normal current density for about 20 minutes to coat the steel with nickel to prevent iron contamination before lowering the CD to three amperes per square-foot and lower. We are taking advantage of the fact that copper plates out preferentially to nickel. Please note that because of the concentration of nickel metal to copper metal in the bath nickel, the nickel will be the majority of the deposit but the copper content in the bath will be dramatically lowered. High current density is also a helpful tool to extend the lifetime of plating baths. Excess brightener can plated out a higher than usual current densities. This may work better than a carbon

treatment if you only have to remove a little bit of brightener. Another way to use high current density dummying is with a hexavalent chromium bath as you can remove chlorides and oxidize trivalent chromium back to the hexavalent form. One way trivalent chromium is from in a "hex" bath is when organic contamination occurs (oils, greases, shop dirt, etc.) because the hexavalent "chews up" the organics and is converted to trivalent chromium. The trivalent chromium ion can be oxidized back to "hex" by dummying. A very high cathode CD of over 500 amps per square-foot is used.

There are some very good reasons to maintain and/or upgrade your current rectifiers. These include better and faster results, and lower production costs to name a few. The use of the right technology to strengthen your company makes a lot of dollars and cents. The right, well-maintained rectifier improves the bottom line. ■



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SUR/FIN 2019

SUR/FIN, hosted annually by the National Association for Surface Finishing (NASF), is where surface technology companies connect, collaborate and contribute. It is the primary conference and trade show dedicated specifically to the surface technology industry. Representing the \$28-billion finishing industry, it attracts noted business leaders and prominent thinkers to a forum where relevant issues are addressed and technologies presented.



Mike Black and Janice Jacula, Dynamix Inc.



Tim Tam, Carl Brown and Dave Andreotti, De Nora.




Trevor Carroll, Canada Metal (Pacific) Ltd.

Chemicals

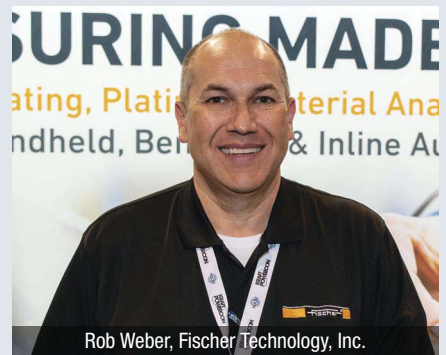
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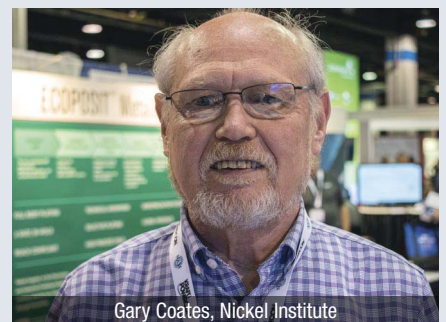
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INTRODUCTION TO ELECTROPLATING COURSE

Designed and sanctioned by CASF for Canadian electroplaters and suppliers, the Introduction to Electroplating course consists of 12 modules taught over 2 days. Each lesson provides valuable and practical information about the basic science and process of electroplating. (Full course outline available at www.CASF/events)

Upon completion of this course, students will have a basic understanding of electroplating processes and principles, electrochemistry, the equipment used in electroplating, maintenance techniques and the best practices for successful electroplating. This is an excellent introduction for those new to the electroplating industry.

With a PhD in Electrochemistry and a Master Surface Finisher Certification, course instructor, Danielle Mousse, has 30 years of experience in the electroplating industry. Danielle also has extensive teaching experience at the University and College levels. Danielle is currently the Operations Manager for Techsolutions R.J. Inc.



Who Benefits?

This training course benefits those who have little or no experience or training in electroplating, such as new hires for plating line work or environmental systems personnel, supervisors, sales and account management personnel serving metal finishers, and managers who want an introductory technical primer on the subject. This course will also be helpful for those who wish to progress with more advanced

Goals

The goal of this course is to provide a basic understanding of electroplating terminology, knowledge of surface treatment and process equipment used in electroplating operations and safe and best practices in the industry. It is often said electroplating is a delicate blend of art and science!

November 14th & 15th, 2019

Nov. 14th: 8:00am – 5:00pm

Nov. 15th: 8:00am – Noon

Location:

Homewood Suites
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Upon completion of this course, attendees can expect to:

Gain a basic level of understanding of electricity, math, and chemistry/electrochemistry as it relates to the electroplating process.

Achieve the ability to identify and describe the main equipment and components in the electroplating process.

Have a broader understanding of the different kind of finishes commonly applied by the electroplating process.

Learn basic troubleshooting and maintenance techniques of an electroplating process.

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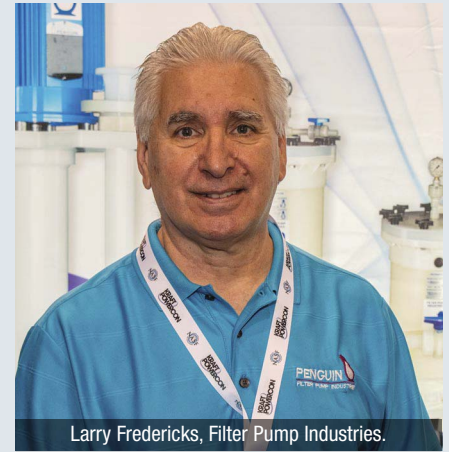
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Dining area featuring Dulux Chinese Porcelain, Color of the Year 2020.

AS FINISHING and coatings manufacturers, you know that much of the work in painting doesn't occur in the physical act itself, but in the effort made by manufacturers and suppliers to ensure consistent, quality tinting and coloring.

The two major components that lead to a consistent product are equipment and raw materials, with colorants being at the top of the list.

"People paint for two main reasons: to protect their most valuable assets and to revitalize them with colors that reflect their tastes and to bring their personal spaces to life,

either at work or at home," says Rob McDonald, Senior Marketing Manager, Dulux Paints Canada. "And they know that everyone is a critic, so they want to get it right. Ultimately, paint is just the vehicle. The result, the color, is what makes it worth the effort. Colorants are an essential part of that."

This is why close contact is essential between the paint manufacturer and materials supplier. It is impera-

Axalta Unveils Color Trends Shaping Automotive Industry

Axalta recently unveiled a spectrum of automotive colors designed for the future of automobiles in its 2019 Automotive Color Trend Report: Color Combo. The report showcases unique color combinations, such as Comeback Duo and Smart Duo, and the emerging global automotive trends and latest innovations in color science driving them.

“New color technologies have allowed us to introduce a spectrum of unique colors and effects that not only capitalize on current trends, but also address the formulations required to meet the needs of tomorrow’s vehicles,” says Nancy Lockhart, Global Product Manager – Color, Axalta.

The color combinations for 2019 include:

Smart Duo: Axalta colors, Optimized Wisdom and Common Sense, make up the Smart Duo, combining luxury, style, and practicality in their black color tones. This color duo showcases the differing color spaces that can be used for vehicles with LiDAR or Radar technology to detect other vehicles. Autonomous driving and fuel economy will influence color choices in this category, as high-tech vehicles will require color spaces to be optimized for coatings detection and transmission.

Topnotch Duo: This pairing features deep rich reds that evoke emotion. The Topnotch Duo colors demand attention with new technology that offers premium effects. The set pairs colors with worldwide appeal alongside colors designed for a luxurious finish.

Comeback Duo: These sage green versions of Axalta colors offer unique hues in both light and dark versions. This Comeback Duo group is in response to the increasing demand of colors inspired from the past, as they are reminiscent of colors found on vehicles and consumer products from the 1970s – 1990s.

Contrast Duo: Shades of blue that appeal to younger generations. This pair is full of character and offers a light and fashionable shade of blue with a dark, luxurious blue. These trendy colors are targeted for both eco-concepts and luxury vehicles.

Power Duo: These teal hues appeal to a wide variety of audiences. The colors of the Power Duo have surprising characteristics of highly chromatic colors and uniquely muted color spaces. These colors are specifically designed for smaller vehicles and offer shades that are both playful and sporty. Popular Duo: Yellow and beige concepts that will invite a smile. The colors of the Popular Duo explore how mainstream color spaces are developed for mass consumer acceptance and mass customization options. This duo represents worldwide favorites with high usage rates on cross-vehicle types. Earlier this year, Axalta announced the 2019 Automotive Color of the Year, Sahara – a color primed for vehicle customization at manufacturing facilities and in the aftermarket. Sahara is a golden bronze tone that radiates warmth, richness, and strength for vehicles of all sizes, and can serve as the principal color of two-tone designs.

tive that colorant suppliers provide products that are controlled tightly for color, color strength and weight per gallon. The colorants must flow well and data must be accessible for testing purposes.

Manufacturers say they are looking for mass tone color and tint strength control. At Engineered Polymer Solutions, for example, the tint strength of its NovoColor Superfine colorants for waterborne coatings is controlled within +/-2 percent. The company’s ExacTint 700 solventborne coatings are controlled within +/-1 percent.

In addition, light fastness, alkali resistance, viscosity and low VOCs are essential requirements in the

selection of a colorant system. The ability to produce color matches is also important.

At Chromaflo, labels that signify an environmentally friendly solution, such as EU Ecolabel and Blue Angel in Germany, are becoming more important. Customers are increasingly expected by their end-users to provide eco-friendly paint and coatings. Chromaflo says it is staying ahead of this trend by offering colorant lines that meet the standards of eco labels. These lines, which include Novapint E, Colortrend 807, Hydrasperse EU, Monicolor C, and Coltec C, provide eco-friendly solutions, as all are APE-free and either low VOC or VOC-free.

Many customers are looking for a totally sustainable solution, says Chromaflo. For example, the process of pouch packaging colorants is a fast-growing alternative to standard packaging that utilizes cans. Pouch packaging minimizes the quantity of residue left in the product container, making it more cost-effective and easier to dispose. It’s also easier to handle in factory settings, and its lighter weight reduces shipping and supply chain costs.

Chromaflo has also recently introduced its Colortrend Pearls 2020. It is a solid colorant concept consisting of 10 to 12 pearls that can be used for waterborne architectural and industri-



Bedroom featuring Dulux Chinese Porcelain, Color of the Year 2020.

al applications. This technology is eco-friendly because it does not use biocides. An additional benefit of Colortrend Pearls 2020 is that its narrow particle size allows it to be volumetrically dosed. This technology was created to address the evolving landscape of ecolabels and environmental regulations while meeting the needs of customers and end-users.

At the retail level, low-VOC point-of-sale colorants are available in either in manual or automatic dispensers. The company says its color systems colorants ensure tightly controlled color and color strength, and are formulated not to settle in the canisters.

Lorama says its ColorFal line of universal colorants provides compatibility with a broad range of resin systems. The ColorFal Zero chemistry ensures that even the company's VOC-free colorant will flow and



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stop on demand, providing hassle-free performance in any point-of-sale dispenser. Again, this ensures accurate color reproduction and consistent color strength can be achieved in any machine.

For companies like Dulux, which just unveiled Chinese Porcelain, its 2020 paint Color of the Year, a cobalt blue, and for the first time, a stain Color of the Year for 2020, Teak, a semi-transparent medium-brown stain that the company says has a 1970s retro vibe, obviously colors, and getting them right, means absolutely everything.

The company developed other complementary trending colors that pair well with both Chinese Porcelain and Teak. They are deep mineral tones such as Gracious Glow, a yellow-olive green; Talavera, a warm taupe; Brown Clay, a soft terracotta; and Gray Marble, a stone gray.

Dulux says the combination of these nature-inspired hues delivers a feeling of simple luxury, especially when accessorized with warm metal accents and linear geometric patterns. Staying on top of trends like this and offering ready-made, reliable palettes helps consumers make easy choices in the store.

In 2018, Dulux Paints made a massive investment in each of its stores to introduce a new colorant system - the PPG Next Generation system, says McDonald. "These excellent colorants are high-strength and deliver outstanding opacity in all color areas - that makes it better for painters to get the best result with the fewest coats."

The colorants are durable to resist fading and close to zero VOC. A range of 12 colorants allows the company to reach a huge amount of color space, adds McDonald.

"The colorants are manufactured

with tight quality control to ensure that the strength and the hue of each batch of colorant is maintained," he adds. "That's a great start but to really deliver exceptionally good color matching across the Dulux network, we also invested heavily in new, state-of-the-art autotinters, each perfectly calibrated to make sure that our colorants were dispensed accurately. Then we invested in a massive amount of R&D time to make sure that we have perfect color formulas for each of our own Dulux colors, in every product." Every store was also outfitted with new spectrophotometers and color-matching software, and every employee was retrained.

"Color accuracy and durability are essential to our customers and our business," says McDonald. "Our customers tell us it was worth all the effort.

Without consistent, high-performing colorants, we have nothing." ■

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WOOD COATING Resins Boom

THE WOOD COATING RESINS market product segments include acrylic, polyurethane, alkyd, polyester, nitrocellulose, and epoxy.

It's a rapidly growing products segment. Insights into the global wood coating resins market, available in an analysis from Reportbuyer, suggest a compound annual growth rate of 5.39 percent until 2021.

The report predicts the global wood coating resins market will reach a value of US \$4.24 billion by 2021. An increase in the availability of green, environment-friendly, healthier coating systems, more durable coating resins providing better performance and better aesthetics, growing demand for waterborne and solvent-free coating resins, VOC regulations further driving the demand for waterborne coating resins, and growing end-use industries, are all expected to drive the global wood coating resins market.

Reportbuyer cites the major restraining factors in the global wood coating resins market as the higher price levels of waterborne coatings when compared to their solventborne counterparts, higher consumption of solventborne coatings that do not comply with VOC regulations, and an inclination of furniture manufacturers toward the use of particleboard and other products such as metal.

The wood coating resins market can be divided into four different segmentations:

RESIN TYPE

On the basis of resin type, the global wood coatings resin market is segmented into polyurethane (PU), acrylic, epoxy, alkyd, polyester and nitrocellulose.

Polyurethane is the major resin driving the entire wood coating resins market. Polyurethane wood coatings have excellent versatility and exceptional chemical and physical resistance. They produce hard surface topcoats with excellent results. PU-based wood coatings strengthen the properties of wood-based substrates, providing color and protection. Polyurethane-based wood coatings offer numerous high-performance properties such as, a long-lasting surface finish; superior chemical, solvent and scratch resistance; resistance to UV light damage, general wear and tear, and extreme temperature variations. Polyurethane is quick-drying; and it has excellent sanding,

multi-coat, rubbed, or buffed finish qualities.

End-use Industries (furniture, cabinets, doors and windows, flooring, decoration, and others)

On the basis of application, the global wood coatings resins market size is segmented into furniture, doors and windows, flooring, decoration, and cabinets. The furniture segment accounted for the largest share of the global market due to the need of manufacturers to find new organic and inorganic products. Superior resistance to dirt, abrasion, and water are the most important features required for wood coating resins in this segment. In addition, superior chemical resistance to shoe polish, nail polish remover and other agents are also recognized as important for wood coatings. The growth in demand for modern as well as conventional furniture is directly in proportion for the demand of wood coating resins.

TECHNOLOGY

On the basis of technology, the global wood coatings resin market size spans solventborne, high-solids, radiation cure, waterborne and powder. Waterborne products account for largest share in the global market owing to proliferated use for different applications due to their properties such as hardness, chemical resistance, and block and print resistance.

REGION

The geographical market is segmented into North America, Europe, Asia-Pacific, Middle East and Africa.

The North American wood coating resins market will grow rapidly owing to recovery of refinishing and cabinetry activities across the region. A favorable regulatory landscape and rising demand for more sustainable products will further support the industry region.

Asia-Pacific regions are witnessing rapid transformation and growth owing to stable economic growth and improving infrastructure. APAC is turning into a global hub to serve increasing demand for wood coating resins. The success factors of APAC market contribute to the raised standards of living and spending on infrastructure. The increase in size and spending of the middle class population, rising disposable incomes, and demand from end-use industries are expected to continue to fuel demand, thus driving the market in the region.



CONSUMER PRODUCTS continue to evolve and improve, from lighter and faster computers to energy-saving building materials and construction methods to more fuel-efficient cars, and fire safety technology such as flame retardants allows these products to comply with safety standards and laws.

Flame retardants are materials that can be used in or on these products, whether made from plastics, textiles, foams or wood, to reduce the chances of a fire starting and to delay the spread of fire if it does.

According to the American Chemistry Council's North American Flame Retardant Alliance (NAFRA), flame retardants are a key component in reducing the devastating impact of fires on people, property and the environment.

Flame retardants are used predominantly in four major areas: electronics and electrical devices; building and construction materials; furnishings; and transportation.

Flame retardants are not all the same, and they are not interchangeable when it comes to the protection of different materials and products. Sometimes, a variety of flame retardants is necessary because the elements in flame retardants react differently with fire. In addition, materials that need to be made fire-resistant are very different in their physical nature and chemical composition, and they behave differently during combustion. As a result, chemical manufacturers have developed different flame-retardant chemistries to suit different products to render them flame-resistant and allow them to retain their intended functionality and performance standards.

Bromine, phosphorus, nitrogen and chlorine are commonly used in flame retardants. Inorganic compounds are also used in fire retardants, either alone or as part of a flame retardant system in conjunction with bromine, phosphorus or nitrogen. Their areas of application are often specific and substitution can be difficult.

Flame retardants are added to different materials or

applied as a treatment to materials (e.g., textiles, plastics) to prevent fires from starting, limit the spread of fire and minimize fire damage. Some fire retardants work effectively on their own while others act as "synergists" to increase the fire protective benefits of other flame retardants. The elements in flame retardants also react differently with fire. As a result, flame retardants have to be matched appropriately to each type of material. Flame retardants work to stop or delay fire, but, depending on their chemical make-up, they interact at different stages of the fire cycle.

When flame retardants are present in the paint or coating, they can act in three key ways to stop the burning process.

They may work to:

- Disrupt the combustion stage of a fire cycle, including avoiding or delaying "flashover," or the burst of fires that engulfs a room and makes it much more difficult to escape.
- Limit the process of decomposition by physically insulating the available fuel sources from the material source with a fire-resisting "char" layer.
- Dilute the flammable gases and oxygen concentrations in the fire formation zone by emitting water, nitrogen or other inert gases.

Flame Control Coatings in Ajax, ON, has been supplying flame retardant and heat-resistant coatings for more than 35 years through major paint companies and independent paint stores.

Flame Control's flame retardant coatings have been tested and listed by testing laboratories such as Underwriters Laboratories of Canada, Southwest Research, FM, and others, and proven to reduce flammability or improve fire endurance and comply with building code requirements. Products available include paints, varnishes, mastics, and other treatments.

The company's flame retardant coatings are widely used in construction. In the event of a building fire, flame retardant paint and coatings allow additional time to exit a building and extra time for firefighters to do their job before the fire spreads. The coatings provide protection for structural steel so that buildings don't collapse in a fire. Flame Control also offers a Flame Retardant Fabric coating to help protect drapes, tarps and other fabrics from fire.

The coatings come in both paint and varnishes so decor is not compromised. The Fire Retardant Paints are available in white, black and a wide selection of pastel colors and sheens. The Fire Retardant Varnishes are designed for various service conditions all the way up to a floor varnish. Finishes include flat, low, semi, and high-gloss sheens.

Most public and/or large buildings such as schools, nursing homes, child care centers, and hotels, to name just a few, are required to use these materials.

The coatings can be used on all surfaces where it is either necessary or desirable to reduce the surface burning characteristics of combustible materials and/or to retard the penetration of heat. This may include roof decks, ceilings, stairways, railway ties and trestles, piers, electrical and communication cables, mass transit, and many other surfaces requiring fire protection.

If the coatings are not properly applied, they cannot provide the necessary protection and very often, the coatings are not applied to the required thickness or are substituted with other coatings.

The coating must be applied at the thickness at which it was tested in order to provide the rated fire protection. Refer to the test information shown on the ULC label to determine the amount of coating required. It may not be possible to apply the required thickness in one coat and two or more coats may be necessary to build the required coating thickness.

Many flame retardant coatings may be applied by any paint contractor or the property owner, but some coatings may require a licensed applicator.

Flame retardant coatings can be topcoated to increase their durability, but topcoats must be as designated in the test information on the label. Note that many conventional coatings, used as topcoats, are inherently flammable or may interfere with the performance of the fire retardant coating. Do not confuse the two.

Use of a Certificate of Application, signed by the coating supplier and the applicator, will provide an inspector with confirmation that the proper type and amount of coating has been purchased and used on the project. The certificate can be retained as a permanent record for future reference.

Further innovation by the chemical manufacturing industry will always be required to keep pace with advancements in consumer products. ■

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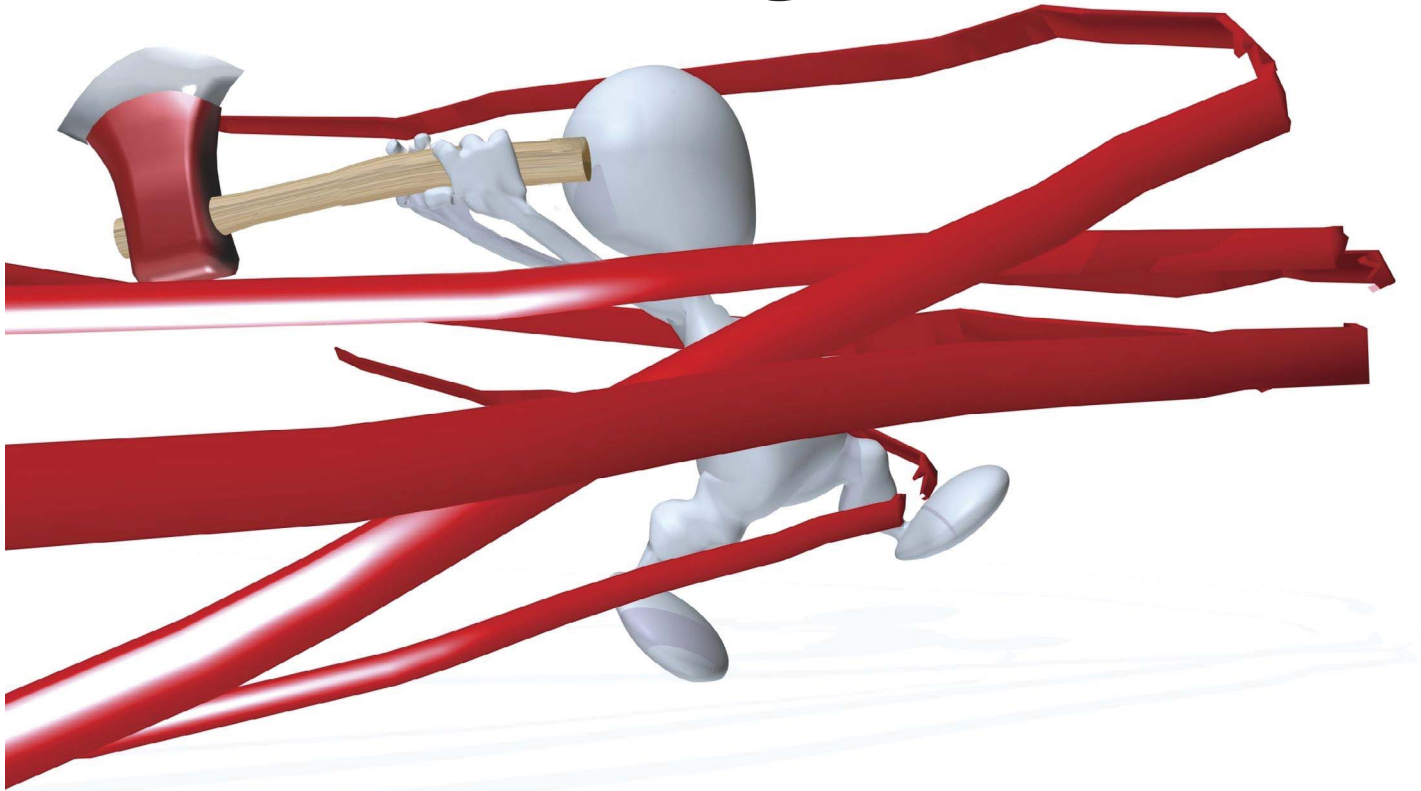
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It's Time to Reduce Red Tape in Waste Recycling in Ontario



BY GARY LeROUX

THE PAINT AND COATINGS INDUSTRY has been a leader in waste recycling in Canada for more than 25 years and has exceeded established waste targets for paint recycling in Ontario since 2009. A recent economic impact study of the paint and coatings industry revealed an economic impact of \$12.3 billion in Canada, 60 percent of which is in the Greater Toronto Area. Much of the recent shifts in manufacturing from Ontario to the United States, in our industry and others, has been a direct result of increasing regulatory burden. This is not a sustainable scenario for manufacturing in Canada or in Ontario, especially. Waste recycling is now included as part of that burden.

The previous government in Ontario created a new Act and Oversight Authority for waste recycling that quadrupled the previous Agency's budget in less than three years. The budget is now more than \$8 million and growing, up from less than \$2 million; tripled the staff from nine to 27 and growing; and created upheaval in the waste sector in Ontario.

All of this is paid for by industry under "extended producer responsibility" legislation. Government already requires producers to pay for the costs of recycling of

materials under the Municipal Household and Special Waste (MHSW) program. In fact, the reason consumers were not required to pay for those costs is due to the current government, while in opposition, demanding that consumers not be charged environmental fees which it said amounted to taxes.

The current turmoil and growing red tape for waste recycling in Ontario is unnecessary and causing concern for those Ontario businesses that are obligated under legislation to do the recycling. There has already been a large increase in the regulatory burden, including increased costs, in the transition to the new Act.

All of this is being done without any comprehensive cost-benefit assessment of whether or not it will reduce waste in the province or how much it will actually cost industry. Despite that fact, it is clear industry will have to raise prices on a wide range of products to recoup the increased costs of recycling due to increased administrative burden.

The transition to a new Act, now in its third year, is being done by an Agency at arm's length from the government wherein there appears to be governance issues and

accountability challenges. The new government must consider addressing those issues sooner than later to reduce regulatory burden, while at the same time build on recent successes in environmental outcomes.

Many have argued, and rightly so, that this Agency is duplicating existing program operations for various waste categories. Professional program operators, fulfilling brand owners' recycling obligations, must already submit recycling plans and targets for approval, and have both operational and financial audits done annually. Moreover, the paint industry has excelled in meeting and exceeding established targets for paint waste recycling in Ontario.

Why then the increased administrative cost burden for industry with little prospect of positive outcomes for recycling in future? There have been no cost-benefit studies done on how recent actions to transition to a new Act would actually achieve better outcomes, yet budgets continue to grow and be approved. The Minister of Environment receives the Authority's budget before it is approved by the Oversight Authority and as such should do what's necessary to rein in the red tape. One thing is clear. There will be escalating costs for companies in many sectors doing business in Ontario.

The approach in Ontario is in stark contrast to that of British Columbia, for example, which has but one Act - as in other provinces - where the Environmental Protection Act governs waste recycling. With one Act, BC continues to meet and/or exceed targets for paint and other recycling materials. In fact, the per capita cost of recycling paint per tonne in BC is as much as 40 percent lower than in Ontario. BC has only one Act without the regulatory burden, the increased costs to industry and the constant acrimony that has been the norm in Ontario for years on the waste file. There is no end in sight to this being resolved in the new "open for busi-

ness" environment promised by the new government.

The obligated stewards under the various waste Acts in Ontario are the brand owners, the companies that must ensure that recycling gets done via an extended producer responsibility approach. However, they are rarely listened to by the Agency despite many attempts to effectively engage. This is a situation that can no longer be ignored by industry or the government.

Part of the obvious inconsistencies, which is the bottom line for industry, is that this the new Oversight Agency's recent actions go against Ontario's new mantra of being "open for business" with a new focus on "reducing regulatory burden." This new approach for waste reduction has been nothing but a growing regulatory burden over the past several years with no sign of it abating any time soon!

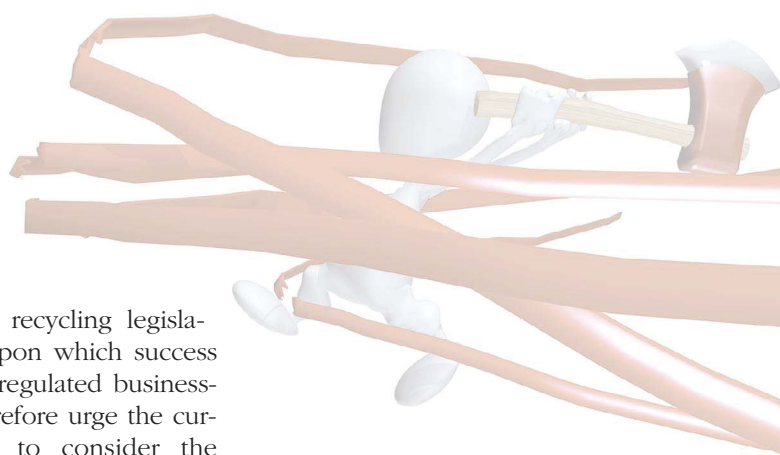
If Ontario's oversight agency for waste had done its job in the first place, there would not now be a surplus of \$53 million in the Municipal Household and Special Waste Program (MHSW). Those funds were collected from paint companies and other industries in Ontario with zero services rendered for those costs, (MHSW), 30 percent of which was paid by paint stewards. Why this is the case has never been addressed by anyone in government or by the oversight agency.

This was done in direct contravention of the original Waste Diversion Act mandating that funds be collected for the actual costs of recycling services only - nothing more - and no cross-subsidization of waste categories. Why has this been allowed to continue for the past five years with no action taken by the Oversight Authority to return those funds to the companies who paid them from internal sources, as they were not permitted to apply a visible environmental fee as was the case in several other waste categories?

A recent Ministerial direction states the paint industry will not be reimbursed those surplus funds even though they were paid from internalized operating funds and no services were rendered for them. This is the case despite being forced by the Agency to internalize those fees and pay them retroactively each quarter out of operating revenues, without a visible fee for consumers. This required paint industry stewards, the obligated companies, to absorb 100 percent of the costs for paint recycling in Ontario, as required by the government under Extended Producer Responsibility legislation for MHSW.

In this case, the consumer did not even have the advantage of knowing a fee was used to recycle paint, which would likely have increased recovery efforts. To make matters worse, other recycling programs have already been fully reimbursed some surplus funds that were accumulated related to their recycling efforts, with those funds now sitting in their bank account. And, they have also been permitted a "fee elimination" period to use up the surplus accumulated over several years by Stewardship Ontario. This means that recycling operations will be provided at no cost to companies in those respective industry sectors until the surplus funds are used up.

The same approach, however, is not permitted for the paint industry, which has more than \$16 million in surplus funds still with Stewardship Ontario, all collected from paint stewards before 2015. The paint industry has not used the services of Stewardship Ontario since 2015, and recycling operations have been performed by Product Care Recycling. CPCA made the decision in 2014 to create a new Industry Stewardship Plan (ISP) under Product Care to improve efficiencies, obtain better governance and increase accountability. The Paint ISP has been operational under Product Care since mid-2015. The question remains: Why are funds, which were improperly collected in the first place, still with



Stewardship Ontario despite no services being provided to the paint industry since early 2015?

The paint companies in Ontario have been told the funds paid for recycling – now on the books as surplus funds – are “consumers’ money” and must be returned to consumers. Yet, in the past, the current government, then in opposition, was adamant that 100 percent of the costs for MHSW materials such as paint, batteries, solvents, etc. was to be paid for by industry under an Extended Producer Responsibility (EPR) approach, not taxpayers or consumers. This was forced by the Conservative opposition party at the time.

How is it now that there is a surplus where those same funds are referred to as “consumers’ money?” One cannot say on the one hand industry has to pay 100 percent of the costs, which it did, and on the other hand say that fees paid by industry are consumers’ money. Which is it? All this is being done with no credible explanation provided to the paint industry or other industries under the MHSW program. Only in Ontario could this happen and be viewed as normal.

A critical, independent review of the Oversight Agency for waste in Ontario, the various Acts and their objects should be undertaken. The accumulated surplus funds have arisen directly as a result of mismanagement and improper oversight provided by those responsible. This is only made worse by recent advice given to the Minister to direct industry to pay surplus funds to consumers, which literally resulted from over charges by the respective authorities responsible for recycling.

The current government should also inject some business acumen into the process with respect to decision-making and advice by appointing a Ministerial Industry Steward Council to advise the Minister. One would expect this to be a standard practice given that the only “obligated” stew-

ards under waste recycling legislation in Ontario, upon which success depends, are the regulated businesses. We would therefore urge the current government to consider the following recommendations:

RECOMMENDATION 1

The only way to rectify this situation is to have an industry steward council that consults with the Minister and/or those designated by him, as part of the decision process as it relates to policy directions and other matters impacting obligated stewards and address key aspects related to red tape reduction and the “open for business” approach in Ontario.

Part of the role of the Industry Council is to advise the Minister on potential impacts on industry from the Authority’s DRAFT business plan, which the Minister reviews 90 days before the end of the year.

Annual business plan

33. (1) At least 90 days before the beginning of the fiscal year, the Authority shall adopt and submit to the Minister a business plan for the implementation of its objects during that fiscal year.

RECOMMENDATION 2

Have RPPRA provide a rationale as to why surplus funds for MHSW are designated as “consumers’ funds” when they were collected via a retroactive, internalized fee that could not be made visible to the consumer and could not be marked up as additional to the cost of the product.

RECOMMENDATION 3

Given the large and increasing budgets of RPPRA and the concern continually being expressed by industry regarding lack of oversight, confusing objectives, and lack of clear cost-benefit of the Agency, there be an independent review conducted of the Authority immediately per 31(1) of the Act, and specifically per 31. 2 (b)

“by a person specified by the Minister.”

31. (1) The Minister may require that reviews be carried out of the Authority, of its operations, or of both, including, without limitation, performance, governance, accountability and financial matters.

RECOMMENDATION 4

The Minister issue a clear statement to obligated stewards on how “policy directions” or “Ministerial directions” noted in the Act are made by the Minister. For example, are the obligated stewards or entities representing the stewards consulted? The Authority has told industry that these decisions are taken by the Minister alone and the Authority merely implements them.

CONCLUSION

The CPCA Board has been seeking to address this issue for more than two years and to obtain a more reasoned approach to this unfortunate situation. Rest assured that the paint industry in Ontario continues to be committed to EPR for leftover paint waste as it has for more than 10 years in Ontario and more than 25 years in some parts of Canada.

Last year, more than 22 million kilograms of paint was recycled in Ontario, enough to paint more than 500,000 average size homes. It’s time for the Ontario government to revisit the waste file in Ontario and get it under control before becomes a serious political issue that does not serve its long overdue and much lauded “open for business” approach. ■

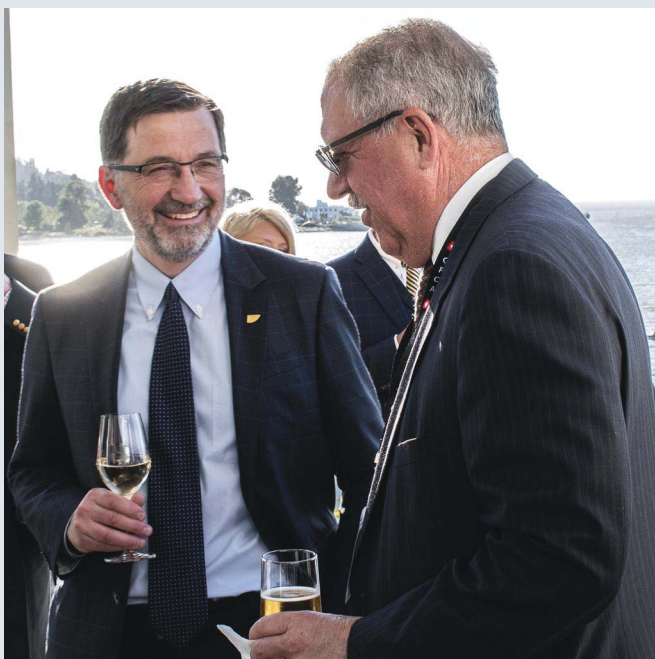
Gary LeRoux is President and CEO of the Canadian Paint and Coatings Association. www.canpaint.com



Canadian Paint and Coatings Association Conference and AGM

The Canadian Paint and Coatings Association (CPCA) held its 106th Conference and Annual General Meeting in Vancouver, on May 22-23, where attendees enjoyed informative sessions and the CPCA Board of Directors was approved. The 2019 annual Industry Awards Dinner was held at the venerable Royal Vancouver Yacht Club recognizing individual contributions to the Canadian paint and coatings industry.

Photos: Theresa Rogers













Dan Murad, ChemQuest.



Cynthia O'Malley, Master Painters Institute.



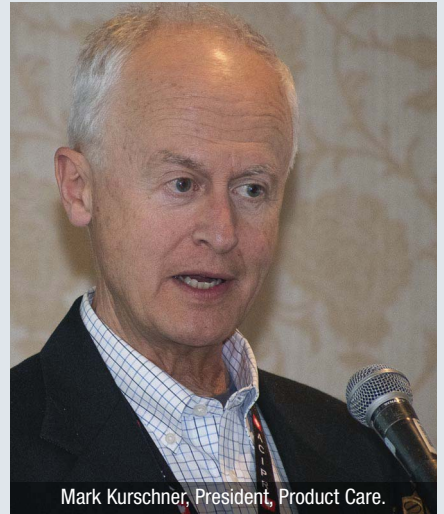
Steve Sides, Vice-President, Global Affairs and Chief Science Officer, American Coatings Association.



Brian Martin, EHS Corporate Executive.



Tania Morrill, British Coatings Federation.



Mark Kurschner, President, Product Care.



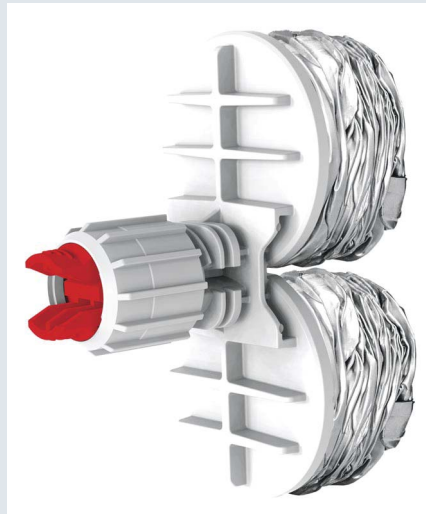
Piya Baptista, Global Reporting Initiative.

Sulzer Mixpac launches ecopaCC

Sulzer Mixpac Ltd. has developed ecopaCC, a collapsible primary packaging for adhesives and sealants that can be used with existing dispensers. The company says the design cuts costs, resources and waste, with more savings potential across the value chain from transportation to disposal.

Sustainability is a key concept for Sulzer Mixpac, and is of central importance to Sulzer's next-generation of functional cartridges for two-component packaging and dispensing applications.

EcopaCC collapsible cartridges are a compact solution. When filled with adhesives, ecopaCC is able to compress and reduce its size as the contents are dispensed. Once empty, the cartridges can be removed from the reusable support sleeve for disposal. For example, a 600mL collapsed cartridge occupies a weight up to 75 percent less than packaging waste from conventional, rigid products, which subsequently reduces disposal costs.



The foldable design of ecopaCC not only reduces waste, but also minimizes the space required for both empty and filled options, allowing industrial adhesives manufacturers as well as users to benefit from substantial reductions in shipping and storage costs.

EcopaCC also features improved shelf life

and leak-proof properties while increasing the system versatility by enabling a broad range of film cartridge materials suitable for different substances. In addition, Sulzer Mixpac collapsible cartridges and their support sleeves are fully compatible with current dispensers from the Mixpac, COX and MK range. The technology is available in several sizes and ratios and can support both front and back-end filling options.

"Less packaging material is a first but very important step toward sustainability in our industry," says Marc Haller, Head Business Unit Mixpac. "Sulzer's focus goes beyond delivering high-quality products: our goal is to deliver sustainable solutions for both our customers and the environment. Our solution clearly demonstrates to adhesive manufacturers as well as the end-users that a reduced environmental footprint is highly beneficial for them since they can also significantly lower their costs."

www.sulzer.com



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new PRODUCTS

Graymills Unveils Smarter Ink Pumps

Graymills will formally unveil its Smarter Ink Pump Family at Stand #9A59 at Labelexpo Europe 2019 in Brussels. The Smarter Ink Pump Family is the company's newest innovation in Peristaltic Pumps. Smarter Pumps have a new physical appearance and smaller footprint than previous Graymills models and can be mounted vertically or horizontally and easily adjusted in the field. They feature Graymills' proven quick-disconnect removable head technology, which allows the pump head/tube changes to be accomplished in seconds without tools. Four distinguishing features of the new pumps



are a display that indicates rotational speed; a predictive hose failure monitor; one button reverse drain shutdown sequence with an adjustable timer; and a remote analog control with available digital connectivity. According to Kristen Shields, President of Graymills, "I'm pleased that we will launch this new pump family at Labelexpo 2019. This year we are celebrating our 80th anniversary with the tagline, "After 80 years, we've got innovation down to a science. The Smarter Pump family is a clear example of our commitment to working with press builders, converters and ink makers to develop innovative ink circulating and conditioning systems that meet their unique requirements." Graymills says unlike conventional peristaltic pumps adapted from other industries, all Graymills peristaltic or "tube" pumps are engineered specifically for flexo and gravure printing applications and can easily accommodate a wide variety of fluids from inks and coatings to adhesives including water-based, solvent and UV/EB. The steel pump housing, which protects the pump against splashing and damage, has a baked-on hybrid powder coating for a long lasting durable finish. Three swivel lock fasteners quickly release the pump head cover, without tools or loose parts, facilitating a quick tube change. The Graymills head design allows the tube to run "straight-thru" from the bucket to the print deck, eliminating "pinch points" where kinks form that slow the flow and weaken the tube. Dual roller technology combines just two rollers with a longer compression cycle to provide greater flow with fewer rotations. This results in lower friction, reduced tube fatigue and less flow pulsation.

www.graymills.com

Asterion Introduces Corrosion-Resistant Zinc Plating Systems



Asterion has introduced the industry's next generation of alkaline and chloride zinc plating systems. Possessing "incredible" white corrosion and red rust resistance, according to Asterion, extended NSS performance is consistently achieved when choosing any one of the company's new, multi-level Asterion systems: Ultra, UltraPlus, or UltraMax.

Engineered for both rack and barrel operations, Ultra, UltraPlus, and UltraMax zinc plating systems offer ease of operation and waste treatment. Based on production-proven processes approved by Harley-Davidson, the RoHS-compliant systems are comprised of a TECHNIBRITE hexavalent, chrome-free zinc, a TECHNICOAT trivalent passivate and a water-based TECHNISEAL sealant for the maximum in corrosion protection.

www.asterionstc.com

Frank Lowe Launches WOW Pads



Frank Lowe has launched what it calls a new, innovative and cost-effective method to

stack, pack and ship finished and coated products. Users can say goodbye to cardboard, bubble wrap or thin foam sheets that can cause scratches, dents and other defects during transit. These shipping pads are engineered with a removable adhesive on one side that leaves no residue, just like a Post-it note. Simply peel and stick.

"While the shipping pads are small and seemingly tiny, they are extremely helpful and pack a huge value. Simply put, our pallets don't shift, don't move, and are much more secure," says Ellen Reinig, General Manager at JAS Powder Coating.

Free samples are available from the company. WOW Pads are available in a variety of densities, thicknesses and sizes.

www.franklowe.com

SAMES KREMLIN launches MAGMA 500 Heater Range



SAMES KREMLIN has announced the release of its new MAGMA 500 heater range. This MAGMA 500 heater works up to 500 bar (7250 psi).

The company says its MAGMA heaters will heat paint evenly without any burning effect. A fully stainless steel construction makes them compatible with most materials. They can be used in paint kitchens for circulation to maintain a constant temperature for each color or for direct heating to increase the temperature of the paint just before the application.

MAGMA heaters will optimize the heating

of fluid materials. Their modular design makes it possible to replace the lower fluid body without changing the electrical modules eliminating the need to purchase a completely new heater.

As an option, the MAGMA heaters can also heat the atomizing air for faster drying times and increase finish quality in Airmix or Air-spray applications.

www.sames-kremlin.com/usa/en/product-magma-500.html

Mixing System Incorporates SLIM Technology



The ROSS Model HSM-405SC-25 is an inline high shear rotor/stator mixing system incorporating SLIM (Solids/Liquid Injection Manifold) technology. The company says unlike conventional eductors, the unique SLIM rotor/stator generates a powerful vacuum without the aid of external pumps and pulls powders directly into the mix chamber, promoting instantaneous wet out under high shear conditions.

Mounted on a multipurpose skid with load cells, actuated valves and level switches, the HSM-405SC-25 recirculates into a 400-gallon jacketed tank and can be controlled from a computer.

www.mixers.com



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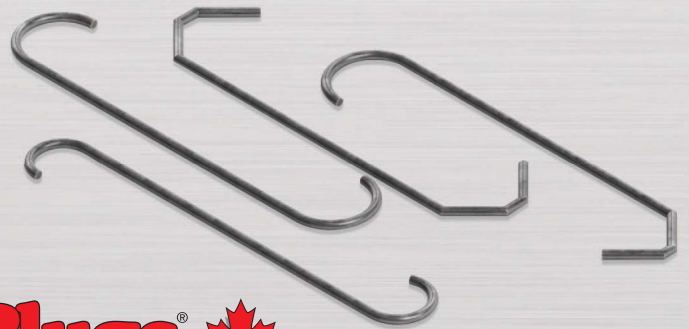
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