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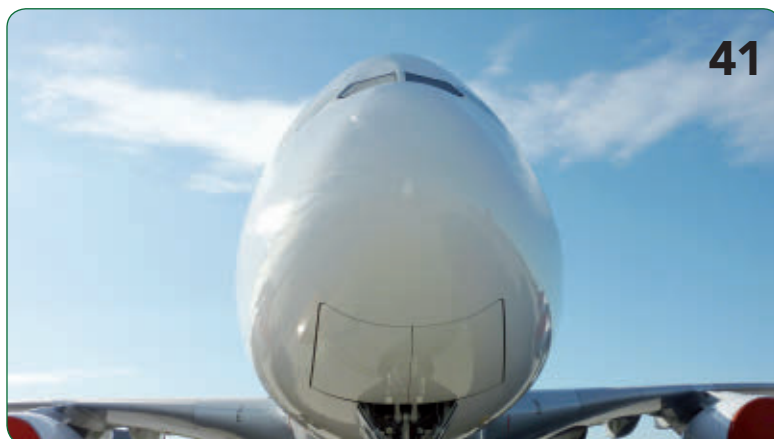
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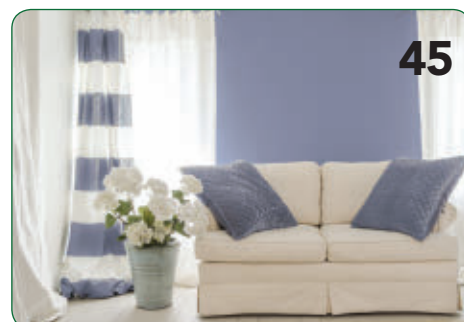
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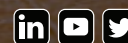
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Eastern Coatings Show Edition

Some of our readers may not be familiar with the Eastern Coatings Show. Now in its third year, the Eastern Coatings Show is fast becoming the East Coast's largest event dedicated to the coatings, paints, sealants and adhesives industries. This biennial conference will be held May 15-17, 2017, at Harrah's Resort in Atlantic City, New Jersey. The Eastern Coatings Show is a premier forum and gathering place for innovation and technology. The Show will present cutting-edge technical papers and panel discussions with industry leaders and organizers anticipate more than 150 exhibitors and 1,500 attendees.

The Technical Conference will feature 44 speakers and three concurrent tracks covering UV curing, resin technology, additives, colors and pigments, pigment dispersions, functional fillers and resins. In addition, a Coatings Short Course will be presented in cooperation with the University of Southern Mississippi School of Polymers and High Performance Materials.

"This impressive program presents a valuable opportunity for attendees to gain exposure to the latest trends and technology in all these areas as they relate to the paints and coatings and allied industries," said David White, Technical Committee Chairman. "Most speakers will also have booths at the show, offering attendees additional opportunities to interact."

For a list of select exhibitors please see The Eastern Coatings Show Exhibitor Showcase on page 55.

For more information on the Eastern Coatings Show, please visit their website: www.easterncoatingsshow.com.



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PPG Reiterates Invitation to AkzoNobel to Discuss Combination of Two Companies

PPG reiterated its invitation to AkzoNobel to enter into discussions to explore PPG's proposal to form a combined company. This follows the previous announcements on March 9, 2017 and March 22, 2017.

PPG continues to believe that a combination of the two companies has a strong strategic rationale and presents a highly compelling and unique opportunity for both AkzoNobel and PPG and their respective stakeholders.

"We made a compelling offer to AkzoNobel that provides its shareholders with a significant premium and the opportunity to benefit from the upside potential of a stronger company that is well positioned for future growth and value creation. Together, we can create a stronger company that will benefit all of AkzoNobel's stakeholders, including its Netherlands-based employees," said Michael McGarry, PPG chairman and CEO.

Although AkzoNobel has declined PPG's repeated invitations to meet, PPG remains committed to seeking engagement with AkzoNobel. PPG believes AkzoNobel should honor growing requests to engage and fully consider all relevant options to create the most value for all of its stakeholders, and benefit from the multiple months of preparation already completed by PPG.

"The resounding feedback we have received in the Netherlands, the UK and the U.S. further validates the merits of combining PPG and AkzoNobel," McGarry said. "We are now even more convinced that this combination is in the best interests of all stakeholders of AkzoNobel."

PPG has stated its commitment to address several areas of importance previously identified by AkzoNobel, such as continuing commitments to research and development, honoring existing employment terms of employees and social plans, locating key businesses in Europe

and in the Netherlands, maintaining important public-private partnerships, and further strengthening community investments and commitments to sustainability and social responsibility. PPG can provide detailed answers to any specific concerns that AkzoNobel may have, including with respect to antitrust matters where PPG's antitrust experts have conducted extensive analysis and are confident that there is a clear path forward to complete the transaction.

"We once again invite AkzoNobel to meet with us to learn more about our

specific proposals. We are prepared to address all of AkzoNobel's concerns in a collaborative and substantive manner, and the best approach for AkzoNobel is to engage with PPG in each of these important areas for the benefit of all stakeholders," McGarry said.

In accordance with Dutch law, PPG confirms its intention to make a public offer for all the issued and outstanding shares of AkzoNobel. A draft offer memorandum is currently expected to be submitted by PPG to the AFM no later than June 1, 2017. **CW**

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AkzoNobel Opens Powder Coatings Site in China

AkzoNobel has officially opened its €11 million powder coatings facility in Chengdu, western China. The new site will help to meet growing demand in the region and supply customers with a full range of powder products for the automotive, construction, furniture and IT industries.

The company now operates six powder coatings sites in the China region, while a seventh – the biggest powder coatings plant in the world – is currently being constructed in Changzhou and is due to open in October this year. AkzoNobel currently has more than 30 production sites in total across the whole of China.

“The opening of our Chengdu production site will strengthen our position as the global leader and China’s

largest powder coatings supplier,” said Conrad Keijzer, AkzoNobel’s Executive Committee member responsible for Performance Coatings. “It will allow us to leverage the strong growth that we see in the western provinces of China, furthering our organic growth momentum.”

Powder coatings have a sustainability advantage in that they do not require the use of solvents. The Chengdu site is also notable from a sustainability perspective as it is the company’s first powder facility in China to use innovative technology that allows full recycling of waste water.

Investment in the new site reflects the Chinese government’s Western Development Policy, which has prompted rapid industrial growth in the region. For example,

Longquanyi District – where the Chengdu plant is located – has become one of the largest car manufacturing centers in the country.

“We are going through a rapid change in western China and that is generating more demand for our business,” explained Eddie Wang, business director for AkzoNobel’s Powder Coatings business in North Asia. “The new Chengdu site is an important investment in the region and will enhance our support to local customers, particularly those in the automotive industry.”

PPG Acquires Automotive Refinish Coatings Company Futian Xinshi

PPG has announced that it has acquired certain assets of automotive refinish coatings

Alesta AP from Axalta Coating Systems Specified for French Project La Marseillaise

Axalta Coating Systems has been specified to provide its Alesta AP Architectural Polyester powder coatings for one of the largest urban planning projects in Europe – La Marseillaise – which is scheduled for completion mid-2018.

The superstructure in Marseille, France, will be 135 meters high, have 31 floors with 35,000m² of office space, and the capacity to house 2,500 people. When complete, La Marseillaise will contain an estimated total of 18,800m³ of concrete and 16,000m² of coated façades, including aluminum profiles and 3,800 sun shields made of ultra-high performance fiber-reinforced concrete (UHPC). The color of the external façades will vary depending on the height of the storey – from red ochre to white clouds – that will aim to increase the brightness of the structure. The project is the brain-child of real estate developer Constructa and architectural firm Ateliers Jean Nouvel.

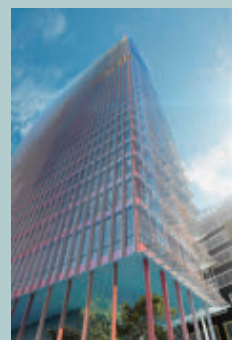
Ouest Alu, a well-established French company that designs and manufactures façades, was commissioned to work on this prestigious project. At the beginning of 2015, Ouest Alu approached Axalta to ask for the creation of tailor-made colors in Alesta AP matt finishes. In total, 15 unique products were specified, manufactured and delivered.

“We regularly use Axalta products in our construction projects, especially where very technical or high-quality requirements are involved. The team at Axalta listened to our needs and perfectly understood the architect’s requirements. This has been a long-term endeavor that has involved developing 27

new colors before selection of the final products by the architect. The availability and responsiveness of the Axalta team has been greatly appreciated and has resulted in a successful outcome,” said Christian Chevel, sales manager at Ouest Alu.

Axalta offers a complete range of environmentally-responsible architectural powder coating products under the Alesta AP brand, all of which have been formulated especially for application on aluminum, steel and galvanized steel. The entire line has excellent mechanical and weathering resistance properties and is therefore very well-suited for durability in demanding climates. Alesta AP is Qualicoat and GSB approved. The Axalta architectural grade products are manufactured and individually tested in accordance with ISO 9000 quality systems to ensure excellent performance and color consistency.

Philippe Leire, Axalta sales manager for powder coatings in France, said: “The La Marseillaise project is a double success. It is first of all the faith of a partner customer who entrusts us with the development of unique colors for a majestic project. It is also an exceptional showcase of a design that will engage the public in Marseilles, the city of the sun, which is the showpiece of this architectural gem.”



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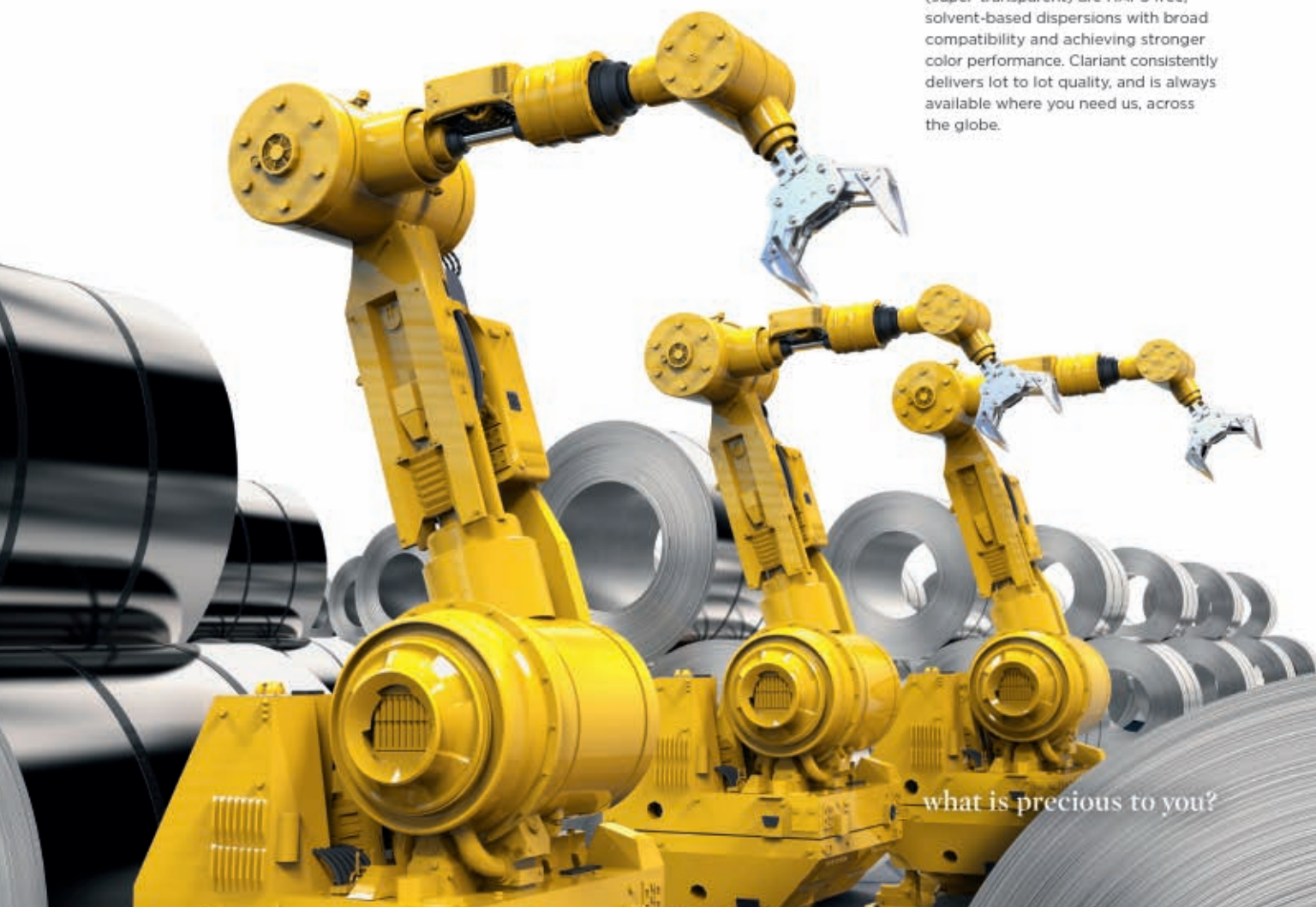
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company Futian Xinshi. Financial terms were not disclosed.

With approximate sales of \$15 million in 2016, Futian is a privately owned company based in the Guangdong province of China. Futian distributes its products in China through a network of more than 200 distributors. PPG will acquire Futian's trademarks, product technology and customer list.

"The acquisition of Futian will further enhance PPG's position in the growing Chinese automotive refinish coatings market," said John Outcalt, PPG vice president, global automotive refinish. "Futian has a proven track record of growth and profitability by leveraging well-positioned brands, mature technology, low-cost operations and a solid-performing distribution base."

Axalta Announces its Automotive Color of the Year 2017, Gallant Gray

Axalta Coating Systems announced its Automotive Color of the Year 2017

– Gallant Gray. This luxurious color is enhanced by blue and silver flakes that produce a unique sparkle effect and dark undertones that enrich the finish, adding sophistication. A year-long Color of the Year celebration commenced with a variety of events during the 2017 North American International Auto Show (NAIAS) Preview Days in Detroit including a video reveal at the EyesOn Design awards program. The color was also prominently featured at the Axalta-sponsored Charity Preview, which raises funds to support services for children.

Daily inspirations, coupled with extensive research, helped Axalta color designers and product experts select Gallant Gray as the Automotive Color of the Year. A high percentage of the market is interested in a neutral palette and adding slight hints of hues can add life to these colors. Gallant Gray is designed to look spectacular on any size vehicle, according to the company. The complex color is dark in value with various sparkling flakes that

add depth and color.

"At Axalta, we monitor automotive trends and forecast how color tastes are changing in the automotive market," said Nancy Lockhart – Axalta Global Color marketing manager. "We are pleased to partner with automakers by using our coatings to give their vehicles beauty and character, and we're confident customers will appreciate Gallant Gray. With hints of blue and green, it exemplifies modernity and elegance. Taking everything into account, we think Gallant Gray is the new silver."

Axalta's recently released 2016 Global Automotive Color Popularity Report, which documents vehicle color trends by geography, showed a rise in the popularity of gray shades around the world. Neutral colors have dominated the market over the last ten years. Although white and black maintained the top positions worldwide, gray is now tied with silver for third place at eleven percent. Gray leads silver in



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popularity in Europe (by six percent), North America (five percent) and South Korea (seven percent). Gray is most popular in Europe (17 percent), North America (16 percent), South Korea (19 percent) and India (12 percent). Axalta's Global Automotive Color Popularity report is in its 64th consecutive edition.

Human Cities Project Transforms Neighborhood in Uruguay

Eighty artists have helped to transform a neighborhood in Montevideo, Uruguay, as part of a Human Cities initiative developed by AkzoNobel's Inca paint brand.

The eye-catching event saw muralists, graffiti artists and painters take to the streets of La Teja to create murals on more than 40 walls to help brighten up the lives of local people and make their surroundings more liveable and inspiring. The walls were chosen jointly by neighbors and the artists.

Staged over the course of a weekend, the event attracted artists from Argentina, Chile, Brazil, Mexico and Cuba. All those who took part were from the Pintó artists group. They used more than 700 liters of Inca paint to revitalize the neighborhood through the use of essential color.

Commenting on the event – which created huge excitement among the locals – one of the artists said: "Working in the street means generating energy with the people of the neighborhood, transforming the negative into positive, having people identify with the work and learning together. This is bringing love to the people."

One of the local residents added: "Seeing the walls full of color is different. We want to do things, care for the neighborhood and improve it. Somehow we feel that this is a starting point for making changes."

Launched in 2014, AkzoNobel's global Human Cities initiative aims to help the world's cities deliver a stronger sense of community purpose, pride and happiness.

RPM Acquires Consumer Foam Brand Touch 'N Foam

RPM International Inc. has acquired the foam division of Clayton Corporation, best known for its consumer polyurethane foam brand Touch 'N Foam, to be part of its DAP business. Based near St. Louis, Missouri, the foam division of Clayton Corporation has annual net sales of approximately \$60 million. Terms of the transaction, which is expected to be accretive to earnings within one year, were not disclosed.

The company markets two low-pressure, spray-polyurethane foam brands, Touch 'N Foam for the consumer do-it-yourself market and Touch 'N Seal for the professional industrial market. They are used around homes, buildings and other structures to eliminate air leaks and drafts, seal gaps and cracks, and insulate against the elements. These brands primarily serve the North American market. The acquired product range will be marketed as part of the overall DAP product portfolio, which

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"The addition of Touch 'N Foam polyurethane expands DAP's product coverage, while providing a cost-effective U.S. manufacturing and technology platform," stated Frank C. Sullivan, RPM chairman and chief executive officer. "We intend to harness DAP's category management and marketing expertise to improve Touch 'N Foam's placement and market impact. At the same time, we will leverage the Touch 'N Foam sales organization to aggressively market DAP core products into new channels and accounts."

Color Pigments Manufacturers Association Celebrates Accomplishments at 87th Annual Meeting

The Color Pigments Manufacturers Association (CPMA) heard from several

industry experts, honored retiring Board members and Committee Chairs, and shared key regulatory and advocacy accomplishments from the year at its 87th Annual Meeting at the Crowne Plaza Times Square Manhattan in New York.

"In looking back on the past year, there were many regulatory accomplishments for the color pigments industry that we are particularly proud of," said CPMA president John Marten. "As we move forward into 2017, CPMA will continue to proactively engage with regulators, stakeholders and downstream customers on North American and international challenges."

During the Annual Meeting, Dr. Walther Hofherr, executive director of the Ecological and Toxicological Association of Dyes and Organic Pigments Manufacturers (ETAD), provided insight on regulatory challenges facing the pigments industry in Europe, and Dale Pritchett, group publisher of Rodman Media, shared top stories in

2016 from the coatings and inks markets. Dan Moss, director of Government Relations at the Society of Chemical Manufacturers and Affiliates (SOCMA), discussed the new political landscape, including future opportunities and challenges for the chemical industry, and new SOCMA President and CEO Jennifer Abril shared her vision for SOCMA and CPMA's collaborative relationship.

Highlighting the event, CPMA recognized retiring Board members Matt McClure of Apollo Colors and Mike Klein of Dominion Colour for their many years of dedicated service and leadership. CPMA president John Marten noted Mike Klein's valuable guidance as past Board Chair and longtime Board and Executive Committee member. Klein reflected on the shift of the color pigments industry over the years and the significance of CPMA's role as the industry voice.

Additionally, CPMA celebrated 2016 accomplishments and recognized the

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integral leadership of General Issues Committee Chair Steve Camenisch of BASF Colors & Effects, Organic Pigments Committee Chair Dr. Robert Mott of Sun Chemical, and Inorganic Pigments Committee Chair Aram Terzian of EMD Performance Materials.

In 2016, the association:

- Provided industry expertise about the chemical properties and performance requirements of color pigments at the American Chemical Society Green Chemistry and Engineering Conference.
- Advocated for the passage of Toxic Substances Control Act (TSCA) reform and engaged regulators on the future implementation process.
- Collaborated with stakeholders to advocate for a consistent nanomaterials definition in North America.
- Concluded a successful multi-year collaboration with the Canadian Ministries on the Second Phase of

the Chemicals Management Plan, resulting in the continued use of diarylide and monoazo pigments in commerce.

- Represented industry in U.S.-Canada Regulatory Cooperation Council Chemicals Management activities.
- Provided members with guidance for duty suspension application under the Miscellaneous Tariff Bill.
- Participated in partner association events, including the National Association for Printing Ink Manufacturers annual conference, the EUROCOLOUR International Technical Meeting and ETAD's General Assembly.

Axalta Announces Inaugural Supplier of the Year Awards

Axalta Coating Systems has announced its inaugural Supplier of the Year awards. Axalta honored top performing suppliers at an award ceremony and reception held earlier this year. The awards recognize the

critical role that suppliers play in Axalta's ability to deliver superior products and services to its more than 100,000 customers around the world.

"Exceptional raw materials and services are necessary for the development and production of exceptional products," explained Martin Horneck, Axalta senior vice president and chief procurement officer. "Our ability to provide customers around the world with the superior products they expect from Axalta relies on our access to the highest quality and most competitive raw materials and services. The Axalta Supplier of the Year program will recognize those vendors who partner with us and enable us to meet our objectives."

Suppliers were selected from among the company's global procurement base across Axalta's operations in North America, Latin America, Asia-Pacific, and in Europe, the Middle East and Africa. Cross-functional stakeholders from Axalta's R&D/Technology,

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Operations, and Procurement organizations selected the recipients based on four key criteria: quality, service, technology and price. In accordance with Axalta's own focus on customer service, accountability and innovation, eligibility will also be dependent on the supplier's ability to exhibit consistent product availability and commitment to continuous improvement in performance and service.

AkzoNobel Launches Global Chemicals Start-up Challenge

AkzoNobel is launching Imagine Chemistry, an opportunity to partner with start-up firms, students, research groups and career scientists from across the world to jointly exploit the knowledge of chemistry and solve several real-life chemistry-related challenges.

The challenge is part of an integrated approach to further deploy AkzoNobel's

innovation capability in support of its growth ambitions. The company believes there is tremendous potential even in mature chemistries, and the challenge aims to tap into that as well as uncover new opportunities.

Imagine Chemistry, launched in conjunction with KPMG, aims to address a number of specific societal challenges as well as finding new sustainable opportunities for AkzoNobel businesses.

"Our world is made of molecules and we believe that chemistry, mastering the elements, is essential to making the world a better place," explained Peter Nieuwenhuizen, RD&I director for AkzoNobel's Specialty Chemicals business.

"To get there, we believe open innovation will be vital, seeking ideas both internally and externally to advance our technology and mutually gain from creative thinking. Imagine, with all of our knowledge of chemistry, we can work together to solve some of life's biggest

problems. It's a great opportunity for everyone to get involved."

Imagine Chemistry focuses on finding solutions within the following five areas:

- Revolutionizing plastics recycling
- Wastewater-free chemical sites
- Cellulose-based alternatives to synthetics
- Bio-based and biodegradable surfactants and thickeners
- Bio-based sources of ethylene

In addition, there are "open challenges" for broad ideas in two further areas: Highly reactive chemistry and technology and Sustainable alternatives to current technologies. All challenges are business-driven and should go commercial in a 3-5 year time horizon.

A dedicated online challenge platform has been launched, operated by KPMG, where participants can submit their ideas and solutions. Anyone who registers will get feedback from AkzoNobel chemicals experts.





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The challenge will give the winners the chance to see their ideas become a commercial reality. "We will provide access to customers, investors, subject matter experts, mentorship and an accelerator program, along with additional support. The collaboration could take on many forms: a joint development agreement, having AkzoNobel as a launch customer, organizing partnerships, or investing in your startup. Our ultimate goal is to innovate together," Nieuwenhuizen added.

"Imagine Chemistry is just the latest example of the commitment of AkzoNobel to fostering innovation, and also to doing innovation differently," he added. It follows a recent decision by the company to participate in a €50 million collaborative venture capital fund, run by Icos Capital, that will focus on investing in early stage chemical and clean technology innovation start-ups, as well as plans to establish an Open Innovation Center at the AkzoNobel

Chemicals Research Facility in Deventer, the Netherlands.

Axalta Coats London Skyline with its Alesta Anodic Collection

Skidmore, Owings & Merrill LLP (SOM), one of the largest and most influential architecture, interior design, engineering, and urban planning firms in the world, has specified Axalta Coating Systems for its Manhattan Loft Gardens project. The unique structure coated in Axalta Alesta products will be a prominent addition to the famous London skyline, offering a new take on London garden squares by creating an environment suited to neighbourhood life and the development of urban biodiversity.

Kyotec Group, which offers installation of high-quality curtain walls, is also renowned for maintaining very close relationships with developers, contractors and architects. In December of 2014, Kyotec chose to reach out to Axalta after

their successful partnership on one of the tallest residential skyscrapers in Poland and the European Union, Zlota 44. Kyotec and Axalta worked together to carefully select samples that would best fulfil SOM's unique vision for Manhattan Loft Gardens.

SOM ultimately chose Anodic Natura from Axalta's Anodic Collection, a range of powder finishes offering a viable alternative to the anodising look. The collection is designed to give specifiers a flawless aesthetic appearance at a competitive price, with all the technical and environmental benefits of a powder coating. Alesta AP was applied on the internal portion of the façade; on exposed elements, SOM chose Axalta's super durable powder coating Alesta SD. The products will be delivered to Reynaers Polska, the coater of aluminium profiles for the Manhattan Loft Gardens project.

"This iconic project demonstrates Axalta's capabilities to handle international projects as a united global team by



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supporting the architect in London, the fabricator and the system house in Belgium and the applicator in Poland,” said Michael Cash, Axalta’s president of Industrial coatings. “It also shows our determination in fully understanding our customer’s projects and designing to achieve their vision. That level of partnership and co-creation is Axalta’s competitive advantage, and the success of our customers and end-users is our ultimate goal.”

PPG Completes Acquisition of Romanian Paint and Coatings Manufacturer DEUTEK

PPG has completed its acquisition from the Emerging Europe Accession Fund (EEAF) of DEUTEK S.A., a leading Romanian paint and architectural coatings manufacturer that reported sales of €30 million in 2015. Financial terms were not disclosed.

DEUTEK manufactures and markets a large portfolio of professional and

consumer paints, including the OSKAR and Danke! brands. Its products are sold in more than 120 do-it-yourself stores and 3,500 independent retail outlets in Romania.

“DEUTEK is a well-managed business with a long heritage of excellent customer service and a portfolio of well-recognized brands in Romania. The acquisition adds the fastest-growing paint brands in Romania, where PPG has only a small presence in architectural coatings,” said Jean-Marie Greindl, PPG senior vice president, global architectural coatings, and president, PPG EMEA (Europe, Middle East and Africa). “This important acquisition in Romania extends our presence in the region and complements our positions in Poland, Czech Republic, Hungary and Slovakia.”

Deutek CEO Gabriel Enache said, “We have always focused on building a market-leading position based on trusted brands and innovative products. This vision is fully shared by PPG, which

supports the management team and its development plans. We are confident that joining PPG will accelerate our innovation and thus help us to achieve performance consistent with our vision.”

Sika Acquires Leading Austrian Manufacturer of Waterproofing Systems

Sika is acquiring Bitbau Dörr, a leading waterproofing system manufacturer, headquartered in Innsbruck, Austria. The transaction is subject to approval by the Austrian competition authority. The product portfolio includes complete waterproofing systems for roofs, buildings and civil engineering applications. In the past business year, the company with its 85-strong staff recorded sales of CHF 50 million.

The acquisition of Bitbau Dörr GmbH will enable Sika to expand its product portfolio. Both companies will benefit from growth opportunities resulting from expanded distribution channels and



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a broader customer base. In the future, Sika will be able to offer its customers a wider range of durable, high-grade waterproofing systems based on polymer-modified bitumen membranes.

Since the family-owned company was founded 150 years ago, Bitbau Dörr has evolved into a highly respected provider of waterproofing systems. Its quality products are used on flat and pitched roofs, bridges and parking decks, and in civil engineering works. The company's headquarters, with central warehouse and production facilities, is located in Innsbruck. With three further distribution sites in Vienna, Graz and Linz, Bitbau Dörr ensures nationwide coverage in Austria and also exports its high-class products to neighboring countries.

Paul Schuler, regional manager EMEA: "Thanks to our acquisition of the leading Austrian manufacturer of bitumen-based construction products

and complete waterproofing solutions, Sika's customers will benefit from a broader choice of products. On account of its central location, highly skilled research and development unit, and expandable production capacity, Sika will establish the new site as its Central European center of excellence for bitumen waterproofing systems. We would like to welcome all Bitbau Dörr employees to Sika and look forward to working together in expanding our joint business operations."

AkzoNobel Introduces its Latest Innovations in Color

This year, AkzoNobel's Metal Coatings team has worked on several new colors and effects to respond to market demand for new innovative products for coated steel and aluminum. Several examples of recent innovations were presented in "The Color of The Year" book including CERAM-A-STAR Frost, the award-winning Wine Metallic finish

for domestic appliances, and the new Copper 3D color.

In late 2016, AkzoNobel introduced a new CERAM-A-STAR Frost with a special 'frost' texture that combines excellent durability and appealing appearance with sustainability.

"Our high-performance paint systems are recognized as the best in the industry. Based on the superior performance of those systems, we developed a tough and durable two-coat exterior finish with a unique chemistry, able to create a textured coating surface utilizing a special pigmentation that can help reduce energy consumption," said Dominique Fort, global marketing director, AkzoNobel Metal Coatings.

The frosted look gives a soft finish and is available in the most popular colors. Beyond providing an attractive exterior, when used with AkzoNobel's high-performance primer, this two-coat system provides exceptional durability. It offers superior resistance to moisture

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and UV exposure while maintaining excellent flexibility and abrasion protection. The unique and highly durable topcoat gives the highest color stability and gloss retention of any special effect finish currently available.

AkzoNobel won the Product innovation award from Ternium, the leading steel company in Latin America, for its new generation of metallic and pearl finishes for the appliance market, which has become the coating of choice to represent pre-painted steel products and technologies.

This new system has a highly appreciated iridescent color, manufactured with pearl and aluminum pigments. It meets all general appliance specifications (refrigeration, range, and laundry) and allows only two coats (basecoat and clear coat) to be used, instead of the traditional three (primer, basecoat, and clear coat). This means materials can be painted in just one pass through a production line, saving time and money.

The latest development of AkzoNobel's Metal Coatings color team is an imitation of copper fabric, Copper 3D, with new innovative visual effects.

Seneca Foods, Valspar Debut valPure Can Linings in Flagship Libby's Brand Canned Vegetables

Seneca Foods Corporation, a fruit and vegetable processing company, has announced its continued commitment to food safety education by partnering with The Valspar Corporation, adding their valPure logo to many of its canned vegetable labels.

valPure, Valspar's brand of non-BPA can lining technologies, provides superior protection for food while addressing consumers' desire to avoid materials of concern. The valPure lining has been evaluated using Safety by Design, a process modeled on pharmaceutical development, ensuring a safe and sustainable solution. As the first major canned vegetable processor to switch to BPA non-intent linings, Seneca has updated its labels to provide greater transparency of the materials used in place of BPA.



Teknos to Acquire Powder Coatings Business From Śnieżka

Teknos has entered into an agreement to acquire the powder coatings business from Śnieżka in Poland. Through the acquisition Teknos gets ownership to the powder coatings production lines and strengthens its' sales and R&D

organization. Teknos' vision is to be the leading supplier of technically advanced coating solutions. Through the acquisition of the powder coatings business from Śnieżka, Teknos will strengthen its' R&D and production capabilities closer to the growing Polish market and shorten the supply chain for special products. **CW**

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


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1

Agglomerate-free mixing

By: Dr. Hans-Joachim Jacob, Process Engineering, Ystral
Rick Isherwood, President, Powder Technologies, Inc.

Producing products that perform as expected is not an easy task when their manufacture requires mixing powders into liquids. The quality of the final product is highly influenced by the wetting and dispersing of the powders used in creating the product. Particularly good results are achieved with the Ystral Conti-TDS, which inducts the powder dust-free, disperses it under vacuum and distributes it homogeneously throughout the carrier liquid without any agglomerates remaining.

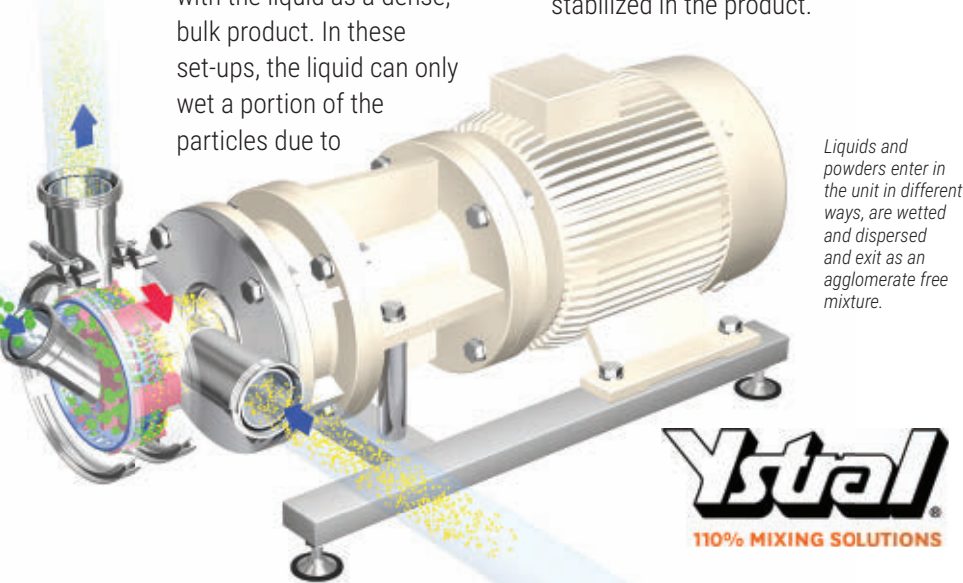
To have coatings achieve optimum coverage or glues provide proper adhesion, all powdery material used in its manufacture needs to be effectively dispersed. This can be difficult because powder particles have an enormous surface area requiring wetting and dispersing. Indeed, these surfaces can quickly add up to over 1 million feet² per pound of powder. Consider: when powder is mixed into liquids by conventional means using stirrers, dissolvers, injectors or inline blenders, the

particles come into contact with the liquid as a dense, bulk product. In these set-ups, the liquid can only wet a portion of the particles due to

the mismatch of the large surface area of the powder and the very small surface area of the liquid. Agglomerates are an inevitable result leading to yet another obstacle – trapped air between the powder particles in the agglomerates. This locked-in air cannot escape and further hinders penetration of the liquid.

To achieve the desired mixture, these partially wetted agglomerates have to be destroyed by long stirring or additional dispersing – something which is only rarely desirable. For example, in dispersions and lacquers, the additional stirring process stresses the binder and impacts quality, while with polymer or active ingredients, the product is heated up excessively and has to be cooled down again.

Also, these additional processes require time, energy and capacity in the vessel – increasing costs of production. The air in the product becomes detrimental to the dispersion of the agglomerates when the inline dispersing is carried out immediately after the powder has been added, either using the same or another machine. The air is actually finely dispersed and stabilized in the product.



Liquids and powders enter in the unit in different ways, are wetted and dispersed and exit as an agglomerate free mixture.

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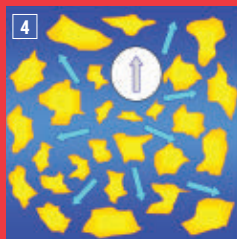
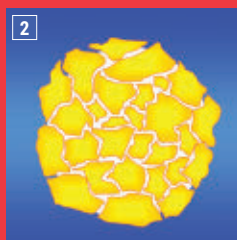
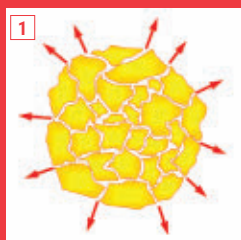
Mobile processing system for product development with a powder hopper, induction hose and tube



The Ystral Conti-TDS totally avoids this problem by offering agglomerate-free wetting and dispersing. Due to its optimized and patented tool geometry, powder and liquid are immediately mixed and dispersed with maximum turbulence at the very first contact. Because powders have very different properties – in that they can attract liquids or repel them and they can swell, stick, thicken, be abrasive or sensitive to shear energy or even react with the liquid – the Conti-TDS can be easily adapted to specific conditions, and if necessary, equipped with several powder inlets to meet these challenges.

Consider the difference with the Ystral Conti-TDS

- It offers a shear gradient that is about a thousand times higher than what is achieved with conventional mixing systems. Its complete mixing energy is applied in a tiny space resulting in very high energy density that is directly converted to wetting energy. Even particularly problematic products can be dispersed without any difficulty.
- It builds up a strong vacuum inside the wetting and dispersing zone and inducts powders directly from sacks, hoppers, big bags or silos into liquids. Particles of the powders are



1. Air expands and escapes under vacuum.
2. Wetting under maximum vacuum.
3. Liquid is sucked in under pressure like an implosion.
4. De-agglomeration and separation of the air.

Removing agglomerates in the powder itself

Powders very often contain dry agglomerates so solid they do not break up when the air expands inside them. However, even these agglomerates are no problem for the Conti-TDS. In its wetting zone, the vacuum is at its peak, expanding the trapped air to its maximum volume. At the same time, the agglomerate is completely wetted from the outside. After passing through the wetting and dispersing zone, the product is transferred back to the vessel under pressure. This pressure contracts the air inside the agglomerate similar to an implosion and sucks in liquid while simultaneously the dispersing effect breaks up the agglomerates and completely wets the particles. In the outer area of the rotor, the dispersion is subjected to strong centrifugal forces. Due to the lower density created, the air separates from the dispersion and coagulates to form large air bubbles that can easily escape from the inside of the process vessel.

separated and solid powder agglomerates destroyed.*

- The powder is completely wetted with maximum turbulence at the first contact with the liquid
- The mixing head actually enlarges the surface of the liquid to far exceed the surface of the powder to be wetted – mandatory for complete wetting.
- The centrifugal effect separates the air from the dispersion
- Dispersion takes place during wetting and not after it – as a result of this, the separated air does not remain in the dispersion and can easily escape
- To avoid any potential build-up of agglomerates, the powder and liquid

are guided directly into the wetting and dispersing zone on completely different paths inside the Conti-TDS totally avoiding the baked agglomerates and crusts on the wall of the vessel, cover and mixing shaft that very often crumble away, fall into the mixture and thus reduce the quality of the final product.

- **Experience has shown that the costs for manufacturing paints and lacquers can be reduced by more than 90 %. Resins are dissolved in about one fiftieth of the time.**

The Conti-TDS is available in several sizes with powder induction rates from 1 to 1,100 lbs./min. The machine is connected to one or more processing vessels by a piping system and automatically pumps the product in a

loop. The special ATEX version, which can be supplied for hazardous areas, permits even dusty, potentially explosive powders to be handled safely and legally in designated areas..



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*This effect only occurs in a flowing powder that is inducted under vacuum. For bulk powder in a vacuum processing vessel or in a metering valve, where powder is transferred into a chamber under vacuum, the conditions are identical but the volume of the bulk powder does not change. Air is withdrawn but the distance between the particles remains the same.

Axalta Launches Imron 8460S Clearcoat for Commercial Transportation Market

Axalta Coating Systems recently introduced Imron Elite 8460S Clearcoat – its newest premium clearcoat for commercial vehicle customers in North America. Imron Elite 8460S is a two-component, low volatile organic compound (VOC), high solids polyurethane clearcoat.

Designed to improve vertical sag stability, Imron Elite 8460S clearcoat is formulated to deliver a high-quality appearance while reducing cycle time due to its fast cure rate. Imron Elite 8460S clearcoat can be used over all approved commercial finish base coats. Suggested applications for the coating include fire and emergency vehicles, heavy duty trucks, and other commercial vehicles. It is also ideal for customers with air-dry or force-dry capability that desire a premium appearance without sacrificing robustness.

“Axalta’s Imron Elite 8460S will build on our leadership position in the commercial vehicle market because the coating’s technology offers reduced cycle time resulting in increased productivity,” said Joseph Wood, vice president of Commercial Transportation Coatings at Axalta. “This clearcoat has been developed with our customers in mind. We are confident they will value the improved appearance and productivity of Imron Elite 8460S combined with the superior durability and performance in which they already trust.”

PPG Introduces SPECTRACRON ADVANTEDGE HPP primer

PPG has introduced SPECTRACRON ADVANTEDGE HPP primer, a patented polyurethane primer for use in heavy-duty equipment, general finishing and transportation applications. The new primer provides extended overall corrosion protection, better performance on sharp laser-cut edges, and superior chip resistance compared to traditional two-component epoxy primers.

Because it incorporates proprietary resin and anticorrosion pigments and is formulated with no heavy metals, Spectracron AdvantEdge HPP primer offers customers a more sustainable solution for achieving superior corrosion resistance and sharp-edge performance. The new primer also offers compatibility with common hardeners, shorter wet-on-wet application time and a wide application window to help increase process efficiency.

Tnemec Introduces Endura-Heat Coatings

Tnemec Company Inc. has introduced a line of products built to provide durable protection for surface temperatures up to 1200°F (649°C). The innovative Endura-Heat line of coatings offers performance against high heat, thermal shock and corrosion under insulation (CUI).

Endura-Heat coatings consist of primers, direct-to-metal (DTM) coatings and topcoats that can be combined in a variety of systems to protect valuable steel and stainless steel surfaces from the threats of corrosion, according to Chris Ard, Industrial Market manager for Tnemec.

“This new line of Tnemec products provides additional corrosion-resistance and aesthetic longevity to our long-time customers in power facilities, steel mills, water and wastewater facilities, refineries, pulp and paper and chemical processing plants,” stated Ard. “The Endura-Heat line includes products designated for service in corrosive environments as well as coatings that protect substrates up to 1200°F (649°C).”

At the time of introduction, Endura-Heat coatings consist of seven products, ranging from a zinc-rich silicone primer to an advanced multipolymeric DTM coating. The new Tnemec products offer several notable characteristics including high-film build and both ambient and heat cure options.

“These coatings are easily applied, versatile and offered in a variety of standard colors with custom color matching available,” commented Ard. “Using quality pigments and resins, the Endura-Heat line is formulated to provide enhanced color-stability in exterior high-heat environments.”

The coating line continues Tnemec’s commitment to providing high-performance options for owners, engineers and applicators working in the industrial facilities. Over the past decade, the coatings manufacturer has introduced numerous products for customers in this sector, such as chemical storage tank linings, secondary containment systems and thermal insulating coatings made to protect valuable structures and personnel in various industries.

Volatile Free, Inc. Announces New VFI- Deck Coating System

Volatile Free, Inc. (VFI) has launched the new VFI-Deck Coating System. It features a five layer system designed to protect various types of concrete structures. VFI-Deck Coating System provides superior waterproofing protection while maintaining maximum slip resistance to the substrate.

The types of concrete structures include; balconies, patios, ramps, elevated walkways and previously coated deck systems.

Volatile Free, Inc. has been in business for over 20 years, manufacturing high performance polymers. Since 1995, VFI has successfully manufactured polyurethane spray foam, silicone, acrylic, urethane and polyurea hybrid coatings and related products. Utilizing advanced techniques in chemistry and technology along with steady company growth, demonstrates Volatile Free Inc.’s commitment to provide quality products and services. **CW**

Scientific Methods Applied to Strategy Development (Part Two of a Two Part Series)

by Phil Phillips, PhD
Contributing Editor
phillips@chemarkconsulting.net

The Seven Steps to Strategic Planning

1. Structure a Choice: One must move from Issues to Choice

Conformist strategic planning is determined by the calendar and related trends to center on issues. Those trends such as declining revenue/profits or market share. The cross-over problem in planning in this fashion is falling into the entrapment of investigating statistics related to these trends rather than exploring and testing probable resolutions.

2. Produce Possibilities:

Unlock all the possibilities

Once several possibilities are developed, priority choices can be made. For example, XYZ Coatings Company, a USA domestic only formulator marketing to the Building & Construction segment, desirous of multiple GDP growth rates may have these options for profitably growing its business:

- Acquire a domestic formulator in this same segment with similar offerings . . . Broaden brand footprint.
- Acquire a domestic formulator in this same segment with different but complimentary offerings Broaden brand offerings
- License a domestic formulators' products in the same segment with similar offerings . . . Broaden brand footprint.

- License a domestic formulators' products in the same segment with different but complimentary offerings . . . Broaden brand offerings

The desired harvest of this step is to develop the "story" just about the options describing where, how, when it plays in each story and the tactics to win. Reason is key but it needs not be proven at this point. It makes the cut as long as it could be valid. The mandate is to produce more than one "story". One will know that he/she has a solid set of possibilities for further work if two truisms are evident: (1) The status quo option doesn't look like a brilliant idea & (2) At least one possibility makes most of the group uncomfortable.



3. What are the Conditions for success? What must be true?

Here we must NOT over-analyze. Does the option “feel” logical is the question? The discussion is about “what would have to be true” not, “what is true”. This approach forces skeptics to specify the exact source of any skepticism rather than issue a blanket condemnation.

During this step the group discussion cannot be allowed to slip into whether or not conditions are true. This has to be strictly prohibited. The point here is very simple . . . to ferret out “what would have to be true” for every member of the group to feel cognitively and emotionally committed to each possibility under consideration.

Time to Weed the List: The previous exercise typically overshoots and the list of conditions crosses the line between MUST HAVE & NICE TO HAVE. Question then for each possibility is if every condition but this one held true, would you eliminate the possibility or still view it as viable? If the answer is the former, the condition is a must-have and should be maintained. If it is the latter, it is a NICE TO HAVE and should be removed.

4. ID Barriers to Choice

At this time we must direct a critical judgment on these conditions. To do this effectively, here’s the crucial questions that must be considered:

- Ask each group member to imagine they could buy a promise that any

particular condition will hold true. To which condition would they apply that promise?

- The condition they choose is the biggest barrier to choosing the possibility under consideration.
- The next condition to which they would apply a promise is the next-biggest barrier, and so on

5. Design Tests for the Barrier Conditions

You have acknowledged and prearranged the key barrier conditions, the group must test each one to see whether it holds true. The tests can be many and detailed but the group as a whole must agree with the selection.

6. Conducting the Tests

Simply, testing conditions in the reverse order of the group’s confidence is efficient use of time and money. That is, the condition the group feels is least likely to hold up is tested first. If the group’s suspicion is right, the possibility at hand can be eliminated without any further testing. If that condition passes the test, the condition with the next-lowest likelihood of confirmation is tested, and so on.

Typically, at this step you may want to bring in people from outside the strategy team – consultants or experts in relevant functional or geographic units, who can help fine-tune and conduct the tests you have prioritized. It is important to ensure that they concentrate solely on testing. You are not asking them to revisit the conditions.

7. Make the Choice

With the possibilities-based approach, the choice-making step becomes uncomplicated, even anticlimactic. The group needs only to review the analytical test results and choose the possibility that faces the fewest serious barriers.

First, in the early steps, they must avoid asking “What should we do?” and instead ask “What might we do?” Managers, especially those who pride themselves on being decisive, jump naturally to the former question and get restless when tackling the latter.

Second, in the middle steps, managers must shift from asking “What do I believe?” to asking “What would I have to believe?” This requires a manager to imagine that each possibility, including ones he does not like, is a great idea, and such a mind-set does not come naturally to most people. It’s needed, however, to identify the right tests for a possibility.

Finally, by focusing a team on problem-solving the critical conditions and tests, the possibilities-based approach forces managers to move away from asking “What is the right answer?” and concentrate instead on “What are the right questions? What specifically must we know in order to make a good decision. The possibilities-based approach relies on and fosters a team’s ability to inquire. And genuine inquiry must lie at the heart of any process that aims to be scientific. **CW**



Yuen Liang Industrial Co., Ltd. Arochem Corporation.



HEADQUARTERS

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Company Introduction

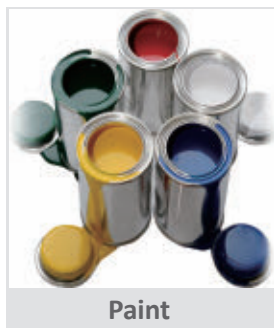
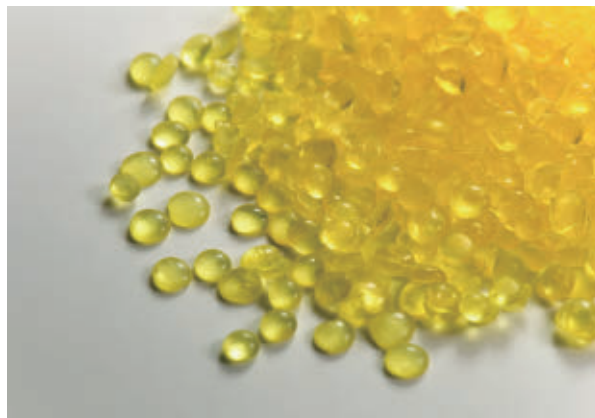
Yuen Liang Industrial & Co Ltd. (a.k.a. YL), established in 1975, is a privately owned manufacturer of petroleum resins for a wide range of industrial applications in Taiwan. For the past 40 years, YL has acquired the ability to manufacture different kinds of C9 resin products to help customers in optimizing their products. YL keeps investing in their research and development, enriching employee training, broadening their after-sales services and enhancing cooperation with various customers to achieve the goal. YL's vision is to grow with their cherished customers in every footstep.

Product Application

YL's manufacturing and raw material flexibility allows them to provide and supply products for various applications including lithographic printing ink, gravure ink, paint, hot melt adhesive, contact adhesive, rubber compound, color asphalt, Wetter in Plastic and Filler. YL is proud of their innovative research and development team, which constantly releases new product developments and world-leading customized petroleum resin to meet the diversifying needs of customers and the evolutionary resin industry. They also work with the technical service and manufacturing teams to assist the customer and help them achieve optimum application performance as well as helping the customer solve technical problem. Together, research and development, technical service and the manufacturing team provide material qualification.

YL's market representatives are not only salespeople, each has laboratory experience and is fully trained to understand the complete line of YL products and their specifications.

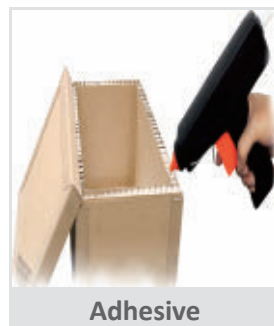
YL has obtained its reputation globally to present, it is an important for customers from places such as Europe, North and South America, the Middle East, Central Asia and the Asia Pacific, etc.



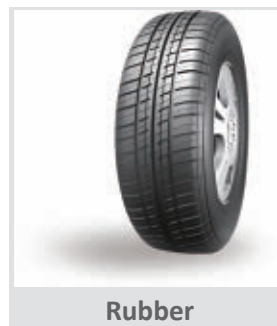
Paint



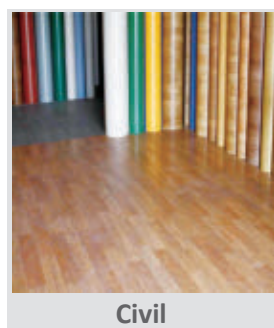
Printing Ink



Adhesive



Rubber



Civil



Color Asphalt

China's Longyu Expands South America Network

by Charles W. Thurston
Latin America Correspondent
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China's largest pigments manufacturer has expanded its South American sales network by adding Argentina to the mix, choosing a moment in time when the country is on an economic rebound.

Longyu Pigment & Chemicals, based in Changzhou Chemical Development area, in Jiangsu Province, has designated Buenos Aires-based Química Soraire, known for premium-quality products, as its country distributor, through the parent's international marketing arm, Union Colors, of Stockport, UK. Soraire is a member of the Asociación Tecnológica Iberoamericana de Pinturas, Adhesivos y Tintas (Atipat).

Longyu already has similar sales agreements in place in Brazil, Chile, Peru, Colombia and Venezuela. Longyu offers a wide range of pigments for the architectural and industrial market segments, as well as for the automotive refinish market. The company is ISO9001 certified for quality management in manufacturing.

The company has previously created larger distribution networks in India, South Africa and Europe. With a professed production capability of 60,000 metric tons per year, the company provides azo, phthalocyanine and solventborne pigments under the brands Hongying, North American and Meixu, along with United Colors.

In Brazil, Longyu has partnered with Forscher Solution Provider in Sao Palo; in Chile with Adizol of Santiago; in Peru with Transquímica Del Peru of Lima; and in Venezuela with Distribuidora Prosequim of Caracas.

Argentina's economy is improving rapidly, with expectations for a 3.7 percent increase in GDP this year, compared with 0.8 percent last year. Center-right President Mauricio Macri was elected on a platform of market-friendly reforms. He has cut subsidies, encouraged private investment, permitted the peso to float freely on the exchange market, and limited consumer credit expansion which has dampened last



Source: Time Out Buenos Aires

year's inflationary 40-percent-plus consumer price index. According to Moody's Investors Service, "In the six months to January 2017 inflation fell to less than 17 percent on an annualized basis, compared to 40 percent for 2016 as a whole."

Foreign direct investment is a key focus of President Macri, who has a background in real estate development. International capital inflows have boosted the central bank's official international reserves, which stand at over \$51 billion compared to less than \$25 billion in December 2015, according to Moody's.

Macri was scheduled to meet with President Trump at the White House in late April, following a February phone call in which the two discussed the plight of Venezuela. Trump has been working on developing a Trump Tower Buenos Aires project that still needs city approval.

In March, Moody's changed the outlook on the Government of Argentina's rating to positive from stable and affirmed the issuer rating at B3. The agency said, "The first driver supporting the positive outlook is Moody's forecast that Argentina's economy will return to growth in 2017 and 2018, supported by the government's improved policy mix which has sought to reduce inflation and increase investor confidence."

Following an April Economic Forum meeting in Buenos Aires, IMF deputy managing director David Lipton commented on the Argentine economy: "There are early signs of policy success. We expect the economy to rebound this year and next, and inflation to continue to decline." **CW**

Longyu Pigment & Chemicals has expanded its South American sales network by adding Argentina to the mix.

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Raw Material Suppliers Consolidate to Become Single Source Suppliers

A major impetus behind the changes is the desire among raw materials producers in Europe to become a one-stop source of supplies in certain parts of the European market so that they can gain greater influence over the product development in finished coatings.



by Sean Milmo
European Correspondent
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The trend towards further consolidation in the European coatings sector is not just being confined to producers of finished coatings but to the manufacturers of raw materials as well, particularly additives.

This was evident at last month's (April) European Coatings Show (ECS) in Nuremberg, Germany, the world biggest international coatings exhibition which had a record attendance of over 30,000 visitors.

A strong presence was displayed at the event by some leading chemical companies which have been expanding into coatings additives and other raw materials.

Also some non-European players in the global coatings raw materials market were

taking greater exhibition space or were participating for the first time as part of a strategy to gain a bigger foothold in a slow growing but large and stable market.

Another feature of the show were signs that producers normally confined to particular segments like pigments or resins were moving into related areas in the European coatings supply chain.

A major impetus behind these changes is the desire among raw materials producers in Europe to become a one-stop source of supplies in certain parts of the European market so that they can gain greater influence over the product development in finished coatings.

New Technologies at European Coatings Show

Among the other drivers have been a need for new technologies in the face of a rising demand for functional coatings, tighter environmental

regulations, the growing switch from solvent to waterborne products in industrial coatings and increased use of biomaterials.

Also there is a greater demand from end-users for higher performance coatings which requires the development of more sophisticated technologies.

As a result coatings producers are having to provide to their customers more tailored products, often with specific functional properties.

"Traditional coatings properties are no longer enough," said Daniel Bruenink, director global marketing, decorative coatings at Evonik Industries, the leading German speciality chemicals producer, now a major player in coatings raw materials, especially additives.

"Our customers are seeking to gain an advantage by imbuing their coatings with additional functionality," he added.

The larger chemical companies are well positioned to meet the needs of these customers because of their R&D capabilities.

Evonik, which has a strong R&D competence, was among the most visible of participants at ECS with a large exhibition stand and a high profile in new product presentations and at the show's conference.

Earlier this year it completed the acquisition of Air Products' Performance Materials division which transformed it into one of the world's leading suppliers of coatings additives with approximately €2 billion (\$2 billion) in sales, equivalent to about 17 percent of the company's total sales.

The ECS was an opportunity for the company's newly formed coatings additives business line to unveil its new portfolio for the coatings and adhesives industry.

"We have here a unit with a technology platform that is unique worldwide, offering solutions for almost any challenge in the formulation of paints and coatings," claimed Claus Rettig, chairman of Evonik's Resource Efficiency segment.

In the coatings area, Evonik is now a global leader in water-based additives, high-performance additives, curing

agents, rheological additives and matting agents.

Among the new products introduced at the ECS was a compatibilizer which stabilises both organic and inorganic pigments in alkyd resin coatings. Evonik also showed new polyetheretherketone (PEEK) powders which reduce wear on industrial components in applications with demanding mechanical, thermal and chemical requirements.

Another innovation was an easy-to-disperse silica product which during the production of coatings ensures shorter processing and cleaning times and less waste.

Among other multinational chemical companies which produce coatings raw materials and were prominent in the show were Dow Chemical, BASF, Clariant, Solvay, Lubrizol, Arkema and Lanxess.

Dow emphasised materials for adding functionalities to architectural coatings, such as low odor, ease of cleaning and improvements to air quality through near-zero emissions of volatile organic compounds (VOCs).

"We are seeing real demand for high-performance masonry coatings with specific attributes that vary with local conditions and individual market demands," said Ulrich Nauber of Dow Coating Materials. "This means that it is important to be able to offer formulators a menu of options."

Arkema also highlighted a trend toward smart coatings in the construction sector, where, according to Claire Reynier, of Arkema Coating Resins, "energy efficiency and healthy buildings are the challenges for tomorrow."

Among the non-European additives producers making their first appearance at the ECS was Songwon Industrial Group of South Korea which is the world's second largest manufacturer of polymer stabilisers behind BASF.

The company introduced at the show a range of antioxidants, UV stabilizers and hindered amine light stabilizers (HALS).

"As a global company it is important for us to be present in the European coatings market," said Rosanna Telesca, leader, market centre

coatings at Songwon International AG, Frauenfeld, Germany. "Europe is a trend center in new technologies. Once a new technology is developed here it will soon be exported to Asia and elsewhere in the world."

A number of leading international chemical companies, like BASF, Clariant and Lanxess gave prominence to their pigments and dispersions portfolios, but also highlighted materials and additives in other areas. Clariant even launched a bioproduct – a sugar-based VOC-free neutralizing agent.

Merck KGaA, Darmstadt, Germany, a leader in special effects pigments, introduced a number of other products resulting from a move into materials for functional coatings.

Among these were polysilazanes, a new class of coating binder based on a silicon polymer technology now proprietary to Merck following the \$2.5 billion acquisition two years ago of AZ Electronic Materials, a UK-listed company making high-purity speciality chemicals for the electronics market.

The takeover was aimed at using AZ's electronic chemicals to expand Merck's speciality chemicals division.

"Because of its focus on electronic chemicals AZ did not see the tremendous prospects in this polymer which after curing becomes a highly durable, resistant and transparent ceramic-type material," explained Oliver Piening, director global marketing technical functions at Merck.

Merck believes that with its high level of thermal, corrosion and scratch resistance, high hardness, hydrophobicity and applicability in low to medium thicknesses it has a great potential as a binder in transportation, architectural and industrial coatings.

"At the moment it is only being made in a small plant in India," Piening said. "We are discussing the building of a new plant possibly in Germany or the U.S."

A major expansion in polysilazanes production capacity would be a big diversification for Merck in its coatings business but is illustrative of the new horizons being explored by Europe's raw materials producers. **CW**

Pharmaceutical Coatings to Increase as Kenya's Health Sector Grows

Kenya's health industry is expected to expand faster than the country's overall economic growth in coming years, triggering a healthy increase in the pharmaceutical industry and the associated manufacturing plant coating processes and equipment.



by Shem Oirere
Africa Correspondent

Kenya's health industry is expected to expand faster than the country's overall economic growth in coming years, triggering a healthy increase in the pharmaceutical industry and the associated manufacturing plant coating processes and equipment.

Pharmaceutical companies hold a substantial share of the worldwide coatings industry through their coating of tablets, capsules and other solid dosage forms of medicine that continue to record increased consumption globally.

The coating, which comes in the form of a sugar coating, film coating or microencapsulation, is necessary to protect the drug from the effects of stomach acids and also to cushion stomach linings from the product's reactive

agents, according to experts. The coating comes either as a sugar or polymeric to cover or mask the drug's taste, odor and also control how it is dissolved and assimilated in the body.

Therefore, the anticipated expansion of the Kenya pharmaceutical industry, with more than 35 licensed drug manufacturers, is expected to fuel the use of coating solutions as both the international and local industries in the country expand their operations. Their expansion is also likely to result in increased investment in hardware and software especially for automated coating systems.

Analysts and market researchers support Kenya's pharmaceutical industry growth prediction on the back of "rising investor confidence, increasing disposable incomes, good economic projections and several marketing initiatives by top brands."

Global market researcher Euromonitor International said in 2016, Kenya's health

industry “witnessed numerous re-brandings, mergers and acquisitions to enhance corporate sales and consumer loyalty.”

BMI Research also said the East Africa country’s pharmaceutical industry is seen as an attractive destination by drug manufacturers because of its “favorable growth outlook, driven by its evolving disease burden and expanding healthcare coverage.”

Demand for pharmaceutical products is expected to rise substantially in coming years mainly because of “mounting overall population growth, expanding health cover by insurance firms, improving general public healthcare provisions, media awareness, partnerships with global firms, and projections of a strong gross domestic product performance of over 6 percent,” according to Euromonitor International.

Leading international pharmaceutical companies such as Glaxo Smithkline, Merck & Co, Novartis and Pfizer have a presence in the Kenyan market, which is the largest in East and Central Africa. Local firms such as Beta Healthcare are also scaling up their operations to take advantage of the increasing demand for pharmaceutical products with previous estimates putting the pharmaceutical and consumer health market at \$160 million/year.

“Though GlaxoSmithKline East Africa Ltd maintained a lead in consumer health in Kenya on grounds of its strong brands such as Panadol, other local firms, such as Cosmos Ltd and Dawa Ltd, intensified their marketing and promotional activities as well as maximizing positioning on low prices and intensive infrastructural investments, in order to augment their annual sales during 2016,” said Euromonitor.

The market researcher cited the recent opening up of a manufacturing plant by Dawa Ltd in Thika town, 50 kilometers from the capital Nairobi to increase its production. The Nairobi-based company operates in 10 African countries and manufactures more than 230 pharmaceutical products.

Other drug manufacturers such as Astra-Zeneca, Merck KGaA & Astellas are said to have long-term health plans

targeting ailments such as hypertension, clinical diabetes and obstetric fistula in Kenya.

The emergence of Kenya as a top investment destination for international and drug makers in East Africa is also linked to what business lobby agency Business Sweden said is “an increasing

pharmaceutical manufacturing industry that will supply the national, regional and international markets with medicines.

“Access to affordable, high-quality and efficacious health care products, particularly those used in the treatment of priority communicable and non-communicable diseases, such as HIV/AIDS, Malaria,

“The anticipated expansion of the Kenya pharmaceutical industry, with more than 35 licensed drug manufacturers, is expected to fuel the use of coating solutions as both the international and local industries in the country expand their operations. Their expansion is also likely to result in increased investment in hardware and software especially for automated coating systems.”

trend in communicable and non-communicable diseases coupled with insufficient provision of vital health products such as vaccines and medicines.”

In addition, the government has continued to fine-tune its regulatory framework to make it more suitable for pharmaceutical product manufacturers.

In 2016, the Finance ministry announced import tax exemptions for heating, ventilation and air conditioners for the pharmaceutical industry to “encourage compliance with good manufacturing practices as dictated by the World Health Organization.

The growth of the pharmaceutical industry in Kenya is likely to get a major boost from the implementation of the East Africa Community’s Regional Pharmaceutical Manufacturing Plan of Action for the EAC, which spells out how the country in partnership with Tanzania, Uganda, Rwanda and Burundi can develop an efficient and effective

Tuberculosis, Diabetes, Cardiovascular Diseases, Chronic Respiratory Diseases and Cancers and various Neglected Tropical Diseases is of high national priority in each of the EAC Partner States,” said Richard Sezibera, former secretary general of EAC, a regional six-member intergovernmental organization.

The plan of action, which is estimated to cost \$45 million raised from the six EAC member States, development partners and the pharmaceutical industry, hopes to promote competitive and efficient pharmaceutical production within East Africa and also facilitate increased investment in pharmaceutical production within the region according to Sezibera.

Many analysts believe Kenya’s pharmaceutical segment is on a rebound and the growth is expected to support the industry’s coatings use not only in terms of the product itself but also the equipment used in the coating of pharmaceutical products. **CW**

Coatings Industry Grew Fast Under New Market Pressure in 2016

According to a report from the China National Coatings Industry Association, China's total coatings output will for the first time surpass 20 million tons in 2017.



by Arnold Wang
China Columnist

According to a report released by the China National Coatings Industry Association, the entire coatings industry produced approximately 19 million tons coatings in 2016 and grew by 7.2 percent over 2015. It is also estimated that China's total coatings output will for the first time surpass 20 million tons in 2017. Entrepreneurship spirit and continuous innovations enable Chinese coatings companies to embrace the fierce market competition and actively meet the challenges brought about by new regulations and government policies unprecedented in the past. As a result of this, many Chinese coatings companies, especially large companies, achieved positive financial results in 2016.

Government policies press coatings companies with necessary support

Chinese local governments are upgrading their environment regulations continuously. For example, starting on May 1st, the Shenzhen government will apply the second phase of their hazardous materials limitation regulation, meaning solvent-based coatings and adhesives will be banned for use in home furniture products in Shenzhen. This will have a huge impact to the home furniture industry in Shenzhen, a city which has many facilities of home furniture producers. Meanwhile, the Shenzhen government also provides financial support to the companies who will renovate their production line from using solvent-based coatings to using waterborne and UV coatings. The government financial support could be up to 40 percent of the production line's total renovation cost.

Adaptation capabilities decide whether a coatings company succeeds or fails when facing competition

Regulation pressure puts small or medium companies in a more risky situation than large companies because large companies have more means to change production lines and get into new market segment whereas small- and medium-sized companies do not. Market pressure does not come from regulation alone. The fact that the prices of coatings raw materials were much higher in 2016 than they were in 2015 also put more pressure on these companies because of their weaker negotiation power. So either these companies can adapt fast or win a niche market, or they cannot survive in this era of new competition. And large coatings companies in China seem to adapt to this market environment pretty well and many of them achieved positive economic return in 2016.

Shanghai Kinlita Chemical Co., Ltd's revenue for 2016 is 790 million yuan, increased by 12.5 percent over 2015, and their profit was 75 million yuan, increased by 13.34 percent over 2015. Approximately 70 percent of Kinlita's revenue came from its cathode electrophoretic coatings business and another 30 percent of the company's revenue was generated by its primer coatings business. Of course, the prosperity of the automotive industry might be the major reason behind Kinlita's good performance. According to the statistics of the China Association of Automobile Manufacturers, China produced 28.1 million vehicles, an increase of 14.5 percent over 2015, and sold 28.02 million vehicles, an increase of 13.7 percent over 2015. Twenty four million passenger vehicles were produced in 2016, an increase of 15.5 percent over 2015. Automotive, real estate property and house refurbishing markets led to the entire coatings market's quick growth in 2016, offsetting the negative impacts from some industrial sectors such as ship building.

SKSHU, one of the largest architecture and wood coatings companies which

just went public in 2016, increased their sales to 1,221 million yuan in the first three quarters of 2016, an increase of 30.67 percent over the same period of 2015. Their profit increased to 52 million yuan at the same time, an increase of 14.25 percent over the same period of 2015. SKSHU invested approximately 300 million yuan to build a new production base in Chengdu, Sichuan province. Right now their first phase, which has a capacity of 200 thousand tons per year, has been put into operation and is focused on the production of emulsion paint and wood coatings. In addition the second phase of the production base is under planning and will focus on the production of coil coatings, mastic adhesives, etc.

Domestic market becomes more and more important for wood coatings producers.

According to a report from the China National Furniture Association, 78.94 percent of their members' products were sold in the domestic market in 2016, a ratio increase from 74.3 percent in 2011. The prosperity of the domestic real estate market led to the growth of domestic home furniture market. The demand for home furniture, especially high-end home furniture, has been growing in recent years. Dongguan Yangchen, a company previously focused on developing foreign markets, launched their own brand in 2008 in the domestic market. The brand's revenue reached 3 billion yuan and its domestic sales for the first time surpassed its overseas sales in 2016.

After six years' of straight growth, home furniture export decreased in 2016 by 9.38 percent compared with 2015. Vietnam and India posed big threats to China, especially for the American market; 34.06 percent of the home furniture exported overseas went to America, slightly increased by 0.09 percent. Tailor-made home furniture also took away the market share of imported products in some markets, and this trend is especially obvious in Germany.

International coatings players will compete with domestic coatings companies in the future

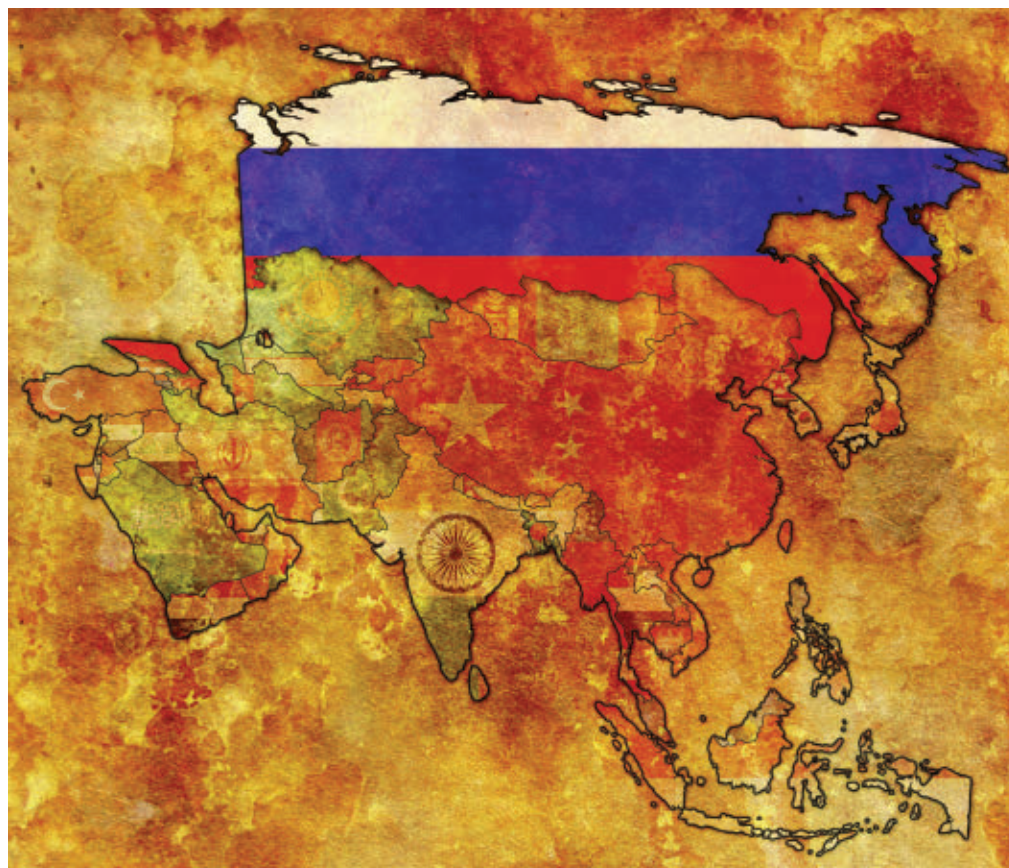
As some small- and mid-sized companies retreat from the market, large coatings companies are ramping up their capacities, a strategy that is also being utilized by some international players.

In February Sherwin-Williams started construction of a 79 thousand tons per year coatings facility in Nantong, Jiangsu province. The facility, planned to be operational in 2018, will have a total investment of 650 million yuan and produce 76 thousand liquid coatings and 30 thousand powder coatings when completed construction. In addition, PPG announced on March 1st that the company has completed construction of their new high functional coatings production line in their Wuhu plant, located in Anhui province. In addition, PPG also plans to invest \$75 million to build new high coatings and PVC sealants capacities in Zhang Jiagang, Jiangsu province. The first phase of the project will have a capacity of 45 thousand tons of high functional coatings and five thousand adhesives and the second phase will put another 100 thousand tons of high functional coatings capacity to the plant.

Axalta and Nippon are also increasing their capacities in China. With large domestic and international companies both expanding their footsteps in China, the market competition will inevitably happen between them, head on sometime in the future. International brands are well known and their technologies are proven in the long term in Western countries. But domestic brands have more advantages on forging close relationships with domestic company customers and quickly initiate marketing campaigns to tap into the fast changing needs of domestic consumers. So the ultimate success will largely depend on a well designed strategy which will put together all the appropriate brands, customer services and technologies in the right place of the market. In another word positioning the product in the right market segment. **CW**

Russia's Industry for Water-Dispersible Paints is on the Recovery Track

The volume of production of water-dispersible paints in Russia will steadily grow in the coming years – reaching 604,500 metric tons by 2020.



by Vladislav Vorotnikov
Russia Correspondent

The volume of production of water-dispersible paints in Russia will steadily grow in the coming years adding nearly 1.5 percent per year or 9.4 percent in total in the period from 2016 till 2020, reaching the figure of 604,500 metric tons by that time, the basic industry forecast from Julia Kislova, the senior expert of Russia's Coatings Producers Association CentrLak has showed.

She indicated that the industry was under heavy pressure due to the country's economic crisis and the fall in the volume of building works over the past few years, so sales went down from the peak of 555,200 metric tons in 2013 to 525,100 metric tons in 2015.

Although, the country's Economy Ministry promises the revival of the Russian economy

starting from this year with the growth in the building, woodworking and metal industries. CentrLak believes that this optimism could not be fully justified, so in the pessimistic scenario of the forecast with the negative factors still in place, the domestic market will reach the volume of 554,700 metric tons only by 2020.

Still, there is a possibility of faster recovery of the country's economy, Kislova suggested, adding that this will encourage domestic and international companies to expand and modernize production capacities. In this case, the industry's output has the real chance to grow to a record-breaking height of 652,500 metric tons by 2020 and this is the optimistic version of the forecast.

The common industry challenges

In 2016 CentrLak reported that the coating industry was in heavy depression as the domestic

plants were loaded on average by only 40 percent. The commissioning of several huge plants by international companies last year promised to bring this figure even lower in 2017, also taking down the average profitability of the business. On water-dispersible paints side the picture also was not quite bright, as several large manufacturers reported financial difficulties last year.

In particular in 2016 Rostov Coatings Plant, which was one of the largest manufacturers on the Russian South, went bankrupt. The facility had declared production capacity of 30,000 metric tons of water-dispersible paints, but it seems that plant never actually reached this figure due to the low demand. In August 2016 Russia's state-owned bank Sberbank, who was the main lender of the plant, put its property for sale and the future of the facility now remains unclear.

Vladimir Fatuvaev, the chief technology expert of coating manufacturer Industry LKM, suggested that over the past year the main challenge of the domestic plants was the high dependence on imported acrylic and acrylic styrene latex for production of water-dispersible paints, but in past years the domestic demand on these products has been almost fully met with the new chemical facilities commissioned in St. Petersburg, Vladimir and Moscow Oblasts.

It is believed that domestic plants should now feel some relief from these import-replacement initiatives. The strong devaluation of the Russian Ruble in 2014 provoked the hike in prices for imported components, while the potential for the increase of wholesale prices for water-dispersible paints at the domestic market was and in fact still is rather limited. Fatuvaev pointed out that the Russian coating industry in general managed to replace import of a significant number of functional additives, including antiseptics, defoamers and thickeners, as well as TiO_2 .

The potential of export growth

Centrlak Association doesn't disclose any forecast on possible export growth. According to the data of the Russian



The demand for paint should be driven by the revival of the building industry in Russia.



LKM Group cited high dependence on imported acrylic and acrylic styrene latex for the production of water-dispersible paints as a challenge for domestic plants.

Federal Customs Service the country's plants were not exported large quantities of water-dispersible paints in past years, as in 2013-2016 the average volume was amounted to nearly 25,000-30,000 metric tons per year. Roughly 80 percent of foreign sales still accounts for the countries of the post Soviet Union space and in 2014 export supplies of Russian plants were negatively affected by the trade conflict with Ukraine.

Still, several manufacturers have recently revealed some export plans. In particular, Bitex-Siberia, one of the largest producers of coatings in this part of the country established some export supplies of water-dispersible paints to Kazakhstan and Mongolia and eyes further development of export. Andrey Slisarenko, the

plant's owner, explained that at the moment the competition at the domestic market is growing, making export supplies more attractive.

Slisarenko also suggested that at the foreign market there is a steadily growing demand for water-dispersible paints, because this type of coating is environmentally-friendly and economical. In Russia there is no such trend observed yet, but Bitex-Siberia in general is ready to develop in this direction, he said, not revealing any certain targets on the increase of export supplies in coming years.

According to Sergey Petrov, the spokesperson of Russia distributor Chemical Goods, export of water-dispersible paints from the most part of the country is not actually feasible, because of the harsh

climate. He explains that these products could not be transported in the common trucks at low temperatures for obvious reasons. In general, logistics spends hamper the possible development of export suppliers and the attempts of domestic plants to enter some foreign markets as the result so far failed.

Petrov explained that in his opinion there are very few companies in Russia now that actually can compete at the foreign markets with international companies in terms of price/quality ratio. He noted that the large markets of Europe or China already have quite strong producers of water-dispersible paints, so there is no room left here for Russian manufacturers. At the same time, some potential could be observed in Central Asia, but the local market is small and can not provide high demand for Russian products.

Industry reorganization is required

At the same time Kislova indicated that the strong growth in demand for water-dispersible paints in fact is not possible without re-organization of production facilities. In particular, she said, to protect equipment against corrosion the plant must replace details that come into contact with water to the elements made of stainless steel or plastic. This certainly will require additional investments and not every entity is ready to bring it in amid harsh market conjuncture.

Kislova also pointed out the considerable prejudice against the use

water-dispersible paints among Russian industrial consumers. She explained that these customers are accustomed to the use of organodiluted coatings, have strong ties with suppliers of these products and well-established technological process of painting. They also have the urgent need to minimize the cost of the used raw materials. All in all, due to the presence of these factors experts do not forecast the real strong rise in demand for water-dispersible paints in Russia in coming years.

In addition, there are some natural factors hampering the growth for water-dispersible paints, Kislova said. She specified that the cold season occupied most times of the year in Russia and this is the reason why most industrial customers are using organodiluted coatings. This concerns not only the use, but also the transportation of paints. Spends on logistics of water-dispersible paints in winter time become much higher, putting the additional financial burden on the customers.

Finally, Kislova admits that Russian water-dispersible paints basically still have poor quality and this is partly associated with the poor quality of the used materials. On the one hand, the low purchasing power of the population forces manufacturers to produce coatings in the first place in the economy segment and the quality of these products leaves a lot to be desired. On the other hand, the price of imported materials is high, while quality of Russian materials is low,

so there is not a lot of place for maneuver for the market participants.

No real alternative for water-dispersible paints

The forecast of Centrlak in general has quite an optimistic nature, as Kislova pointed out that the stable growth in the industry was only delayed with the recent economy crisis. In the middle- and long-term prospects Russia's government eyes enhancing of the country's ecology legislation and the industrial producers are evolving the advantages of this type of coatings. All in all, this makes further growth of demand inevitable, so the situation at the Russian coating market in the future most likely will become in line with the global picture and the share of water-dispersible paints will significantly grow compared to the current rates.



According to Russia's Coatings Producers Association, the country's water-dispersible paint in general has poor quality.

Already now Centrlak observes the growing interest in water-dispersible paints from the cannery industry, automotive and auto repair industry. This type of coatings already occupies huge share in the segment of industrial floor coatings, furniture industry and metal industry. In this areas the projected rise of the production performance should also spur the demand for water-dispersible paints within the coming few years. Obviously, the optimistic scenario has all chances to come true if there are no new shocks to the Russian economy, as the continuing geopolitical tensions now add some uncertainty to all forecasts. **CW**



Russia has a huge range of paint and coatings.



Aerospace Coatings Market

A growing aerospace market demands both increased performance and improved aesthetics.

Catherine Diamond, *Associate Editor*

The aerospace coatings market is currently valued at \$1.42 billion and, according to recent estimates, is expected to grow at a CAGR of 6.9 percent through 2022 to \$1.98 billion. In its global forecast, Markets and Markets found that among end-users, the commercial aviation segment is leading the market in terms of market shares and is projected to grow at the highest CAGR.

“The advent of chromo-free technologies, introduction of cost-saving products, and emerging middle class are the factors driving the growth of the aerospace coatings market. Innovations in terms of applications of aerospace coatings are expected to fuel the growth of the aerospace coatings market during the forecast period,” researchers said.

Among resin types, the polyurethanes segment is leading the aerospace coatings market and is expected to grow the most through at least 2022, researchers found. According to the report, polyurethane resin types are preferred over other coatings as they offer resistance to abrasion, staining, and chemicals. As is required of aerospace coatings, they have very a high degree of resistance to the corrosive effects of the sun’s UV rays.

The liquid coating-based technology segment of the aerospace coatings market is projected to grow at the highest CAGR during the forecast period.

“The growth of this segment of the market can be attributed to various properties, such as superior coverage on inside corners and hard to reach places and smooth and uniform finish,

among others offered by liquid coating-based technology,” the report stated.

Researchers also found that the exterior application segment is leading the aerospace coatings market, which is due to increased use of aerospace coatings to coat exterior parts of aircraft to protect their surface from deterioration, erosion, and cracking.

In terms of regional growth, as in many other markets, the Asia-Pacific region has exhibited and will continue to yield year-over-year growth. Researchers determined that the growth of the Asia-Pacific aerospace coatings market can be attributed to the rising demand for aerospace coatings from emerging economies of the Asia-Pacific region, which include India, China, South Korea, Vietnam, and Singapore, among others.

“Moreover, factors such as the improving standard of living and rising per capita income of the countries of the Asia-Pacific region are also fueling the growth of the Asia-Pacific aerospace coatings market,” researchers said.

Mergers as opportunities

A major source of growth for the aerospace coatings market is airline mergers. As companies join forces, depending on the terms of the merger, either one or both fleets will have to undergo rebranding and repainting.

According to Andreas Ossenkopf, director, Head of Aviation at Mankiewicz Hamburg, these fleets require being repainted outside regular refurbishment cycles. “When it is necessary to design a completely new livery for the merged airline, Mankiewicz is often involved in the creative process and supports the decision-makers during its development. This also frequently presents an opportunity to modernise the livery,” he said.

Daniel Bencun, global platform director, Aerospace Coatings, PPG, said that overall the airline sector is still fragmented in some areas of the world, even if in recent years there has been more consolidation in certain regions.

“Once grouped in larger conglomerates, some traditional carriers diversify their segments and launch new companies that cover new segments such as low cost. Newly launched airlines also need new colors and to have their new fleet repainted,” Bencun said. “This brings opportunities to work closely with our customers on new colors or even new liveries. In the past, we have supported several customers in their rebranding projects by helping them select either new colors that are in line with their new image or by introducing new technologies in order to better protect their assets.”

Providing a consistent, fresh look for brands is a top priority after a merger. However, as Julie Voisin, global product manager, Sherwin-Williams Aerospace Coatings, points out, most airlines are not removing the aircraft to just get it painted, but are waiting for their normal maintenance cycle. The cost of aircraft re-paints are far more than just the labor and actual prep and paint products, Voisin said. The key element is utilizing aerospace coatings that put aircraft back in the air as quickly as possible.

“For example, those planes are in the air all the time and are the largest part of most commercial fleets. The typical paint



cycle for that single-aisle aircraft is eight days and it's crucial that any paint system meets that time requirement. Our systems at Sherwin-Williams from JCX to also our SKYscapes basecoat clearcoat fit and meet all commercial requirements. Those planes are built to be in the air as much as possible to generate maximum revenues. We are prepared to meet that commercial paint cycle with technical support and quality one-application products,” she said.

Growing demand

Demand for aerospace coatings is driven by several factors. Chief among them, Bencun said, is the level of new builds, which depends a lot of segments.

“Commercial aircraft manufacturers are in the ramp-up phase, and this results in higher demand for coatings. The outlook for coming years is very positive as the number of aircraft increases due to higher industry demand. Regional commercial manufacturers also contribute to higher coatings demand, with new emerging programs expected to contribute positively in the future,” he said.

Coatings demand for the aftermarket remains strong in all regions of the world, Bencun added. “Additionally, the military segment is also seeing a positive trend, despite lower defense budgets, in almost all regions of the world. This growth will come from new programs but also from build rate increases by some specific customers,” he said.

According to Ossenkopf, the global airline industry is experiencing growth at present and so the demand for coatings is expanding along with it.

“As the use of new materials like composites is becoming more widespread, novel and additional solutions are required of coatings, because such surfaces are not as perfect as aluminum,” he said.

Much like products on store shelves, airlines must update their appearance so as to present a differentiated product from their competitors.

“As competition between airlines intensifies, having a unique appearance is of ever greater importance,” he said. “The thing that catches the eye first and foremost when seeing an aircraft is its exterior paint and there is a trend of special liveries and the use of micas and vibrant colors.”

To aid in differentiation, Mankiewicz has developed a BaseCoat/ClearCoat system for exterior painting.

“Where previously it was necessary to use decals, we can now use paint to produce vivid colored liveries and it has outstanding durability compared to decals. For example, working with WestJet we supplied the livery for two Boeing 737s to promote the Disney film Frozen,” Ossenkopf said. “Another example is Brussels Airlines, where we coated four special liveries, the so called Belgian Icons: solely paint was used for this, even for the fine facial features of the depicted artist and for complex, finely detailed structures that were like a bird’s nest. Previously, airlines would be forced to use decals to achieve such effects, but now they can use paint alone. This is only possible due to the excellent drying times of the BaseCoat and the paint’s special fading and blending properties.”

In addition to exterior finishes, the colors and design effects of an aircraft’s cabin create a unique selling proposition, according to Ossenkopf. “This provides us with an ever-broadening range of application for our qualified FST (fire-smoke-toxicity) interior paint,” he said.

According to Voisin there’s been a trend over the last five years or so in the use of more mica and metallic effect pigments.

“In the past you would see small, thin metallics or mica stripes on the side of an aircraft. Recently they slowly started creeping into larger sections of the aircraft. Now you have some aircraft featuring a metallic or mica scheme over the entire livery,” she said.

Voisin noted that this can bring on significant issues for the paint applicators. “We’re fortunate to have an extensive

technical team trained on new solvent blends and related products to help make sure the effect pigments lay down properly in the first place,” she said.

The need for performance

Aerospace coatings – perhaps more than coatings in other markets – need to not only be aesthetically pleasing, but must perform flawlessly under extraordinary conditions.

Durability, as it relates to aerospace coatings specifically, means it “lasts against punishing weather, extreme temperatures, corrosion exposure and aggressive chemical and cleaning materials,” Voisin said. Additionally, she added, customers value a coating that provides a long-lasting, outstanding finish.

“Jet Glo Express is our premium product line, Voisin said. “It’s a single-stage polyurethane topcoat. The wonderful thing about it is that when applied properly it can provide the best image, the best gloss, the best color retention in the market.”

Another performance-related trend is automation, which is already routinely used for the coatings of structural parts and interiors, but is now beginning to be applied for the larger surfaces of exterior coatings as well.

“Environmentally-friendly water-based coatings are high on the agenda and the same goes for application processes that precisely meet customers’ needs. This is made possible by our structural parts filler and primer portfolio that is applicable wet-in-wet. Chrome-free primers for aluminium parts could further

Jetflex Elite from Sherwin-Williams Now Proves 38 New Interior Colors to Aircraft Interiors

Extensive Cabin Coatings System Brings First Class Look throughout Any Aircraft’s Interior Settings

Featuring 38 new colors, new Jet Flex ELITE Polyurethane Enamel from Sherwin-Williams Aerospace Coatings now provides an extensive color palette for interior aircraft cabins.

Unique interior colors like Foggy Forest, Stormy Sea, Steamy Latte, Silvery Moon, Sunset Blush, Coastal Breeze, and even Golden Radiance, provide interior airline designers with a choice from the latest bright whites and neutral colors to warm hue effects – all while still providing an interior aircraft surface with outstanding stain, high abrasion and scratch resistance.

Jet Flex ELITE is an OEM qualified paint system, ideal for commercial and private aircraft interiors. It now features improved appearance and application features, as well as options of either as a single-stage interior product (for colors), or a two-stage system (for whites and light colors).



Designed to offer subtle sophistication and mood enhancement to aircraft interiors, Jet Flex ELITE colors are responsive to LED lighting. These coatings create a subtle glow with highlights and colored shadows not seen with current interior cabin coatings. Color tones have been derived and inspired from Sherwin-Williams’ most popular interior design and architectural color lines.

Using an interior cabin coating like Jet Flex ELITE is a cost-effective way to improve the passenger experience in both

the economy or premium class sections of the aircraft.

Sherwin-Williams Jet Flex ELITE is recommended for interior applications and applies easily to plastic, metal and composite surfaces. Based off Boeing qualified technology (BMS 10-83), it meets the most stringent requirements for stain and abrasion resistance as well as the FAR / JAR 25.853 regulations for burn, smoke and heat release.

Sherwin-Williams Aerospace Coatings provides a variety of premier cabin coatings systems designed to provide a smooth, textured or soft feel finish. It also offers a variety of aerospace primer products specifically designed for aircraft interiors. These primers complement Sherwin-Williams interior aircraft topcoats by assisting with substrate adhesion and hiding profile and surface imperfections.

help by reducing the dry film weight by up to 10 percent,” Ossenkopf said.

Because PPG serves customers all around the world and in all aerospace segments, Bencun said the performance required by its customers is just as diverse. Nevertheless, he said, there are general trends in performance driven by a few key factors.

“Weight savings is a benefit that all our customers are looking for. Our Desothane HD basecoat clearcoat allows companies with complex liveries to save weight on their aircraft. We have seen coatings build reduction up to 20 percent in some circumstances. One other example of weight savings we provide to the industry is our Aerocron electrocoat primer by which structural parts are coated by electrodeposition instead of a traditional spray process. This technology brings uniform film on the part, resulting in up to 75 percent coatings weight savings on highly complex shaped parts,” he said.

Bencun added that both of these new technologies also contribute to one other driver: productivity. For aircraft manufacturers as well as for aftermarket operations, this is a key factor for financial performance. “Therefore, our products are designed to reduce this workshop time and allow our customers either higher ramp-ups or higher rotations of their assets,” he said.

Bencun added that customers in this market are also looking for higher durability of coatings. Even if the repaint cycle doesn’t increase, the requirements in terms of color and gloss retention are higher than in the past. “Our Desothane HD basecoat clearcoat increases this performance and we can see brighter and more colorful aircraft supporting airlines’ brands and image,” he said.

Because customers are also looking for more environmentally friendly solutions, PPG considers regulations such as REACH in all its development efforts.

Finally, Bencun added, there are trends in terms of operational performance. “Our customers require a responsive supply chain with local presence to face current ramp-ups and also the decrease in their cycle times. PPG’s global network of 17 aerospace application support centers allows us to be highly responsive and locally address customer needs,” he said.

New products

Leading aerospace coatings manufacturers are frequently introducing new technologies to the market. What follows is information on these new innovations from select manufacturers, in their own words.

Mankiewicz

Mankiewicz often develops special products to meet its customers’ needs. For example, a highly flexible primer for engine nacelles. Composites on the nacelles are subjected to extreme movements and this causes cracks in conventional, rigid primers and exterior paints. By contrast, Mankiewicz FlexPrimer stretches flexibly under stress and this keeps the surface paint free of cracks.

PPG

PPG’s aerospace business has launched several technologies in recent years and there are more to come. The company’s Desothane HD basecoat clearcoat for external surfaces is highly recognized in the industry. With more than 600 aircrafts painted to date, this product allows customers to paint faster, lighter and brighter.

A second product is PPG’s solar reflective coatings that are offered in either a basecoat clearcoat version or traditional direct top gloss version. This product, based on specific pigment technology, reduces the temperature of the aircraft skin painted in dark colors by up to 20° to 25°F. The main benefit is reduced energy required to cool aircraft.

PPG has also introduced several chrome free primers in recent years. On the external side of the aircraft, the company has launched its Desoprime chrome-free wash primer 7530/7065 to replace its older chromated technologies. Several customers have adopted this technology, which is more user-friendly both from environmental and application standpoints. On the structural side, PPG’s Aerocron electrodeposition coatings have been qualified according to AMS3044 in addition to several other manufacturer specifications in the EMEA and North American regions. On structural parts, PPG also provides Desoprime 7521, a sprayable epoxy primer, also approved according to several manufacturer specifications.

Finally, PPG considers itself “the color expert.” PPG has adopted its Andaro special effect pigments technology, traditionally delivered in a direct topcoat version in its new Desothane HD basecoat clearcoat technology. Several colors are available for this high depth of color technology.

Sherwin-Williams

For aircraft exteriors, the commercial paint cycle is a critical component to the airlines. Sherwin-Williams’ JCX commercial coatings is designed for the airline customer and it is simply kitted so that it’s easy for the applicator to use. It’s designed in a way that is productivity efficient for the commercial airline customer.

Sherwin-Williams has a wide spectrum of colors, textures and looks for the interior of the aircraft. The company’s Jet Flex product line has been used on Boeing aircraft for decades. One of the beautiful features is its stain resistance. Think about how much an aircraft is touched, banged, pulled on, and scraped throughout a day. Jet Flex is designed to last that kind of environment.

Jet Flex Elite offers the customer even more effect-looks. Having a mica in the material gives it a gloss or sheen on the aircraft to achieve an elegant look, ideal in the business class or the first class section of an aircraft.

New for this year is a product line called Jet Suede, designed for the texture of the interior aircraft. The company reports that it feels like suede and has a soft feel to it so it offers the customer a different experience when they’re touching an armrest or different parts of the plane. **CW**

Color Trends and Forecasting

Coatings World recently had the opportunity to interview Dee Schlotter, senior color marketing manager, PPG (makers of PPG PAINTS, OLYMPIC Paints & Stains and GLIDDEN Paints) on the topic of color trends and forecasting.

Kerry Pianoforte, *Editor*

Coatings World: What are the color trends for 2017?

Dee Schlotter: The PPG Paints brand's 2017 Color of the Year is a unique violet hue with a quality that allows it to adapt to surrounding environments and complement a variety of design aesthetics. When paired with dark neutrals, the color unveils gray undertones, but when paired with whites, it reads as a purer purple. Its design appeal is similarly nuanced. Violet Verbena blends perfectly with many different surroundings, like a chameleon. It looks polished yet playful in a child's room, and it is calming enough to be used in hospitals or other spaces that require tranquility.

PPG Paints Violet Verbena is the focal point of PPG's four global color trend stories for 2017, which center on the theme of Pendulum: earth, water, fire and air. For the first time, the PPG Paints brand includes its Color of the Year in all of its trend themes, as the prevalence of this hue allows it to live in every story. The four themes are:

- **HOURLASS:** A classic palette with a contemporary spin, this theme represents the earth element, with consumers finding stability in what they know and gravitating toward designs rooted in historical relevance. The palette incorporates rich, royal hues such as PPG Paints brand colors Burgundy Wine (PPG1053-7), Old Mill Blue (PPG1171-6) and Castle Stone (PPG1128-7), blended with a healthy dose of neutrals such as Pearl (PPG1087-2) and Go To Gray (PPG1004-1), to pair beautifully with wood, marble and stone tile. The lavender hues of Violet Verbena add to the royal nature of these colors, while still blending effortlessly with greens, blues and neutrals.
- **ES/SENCE:** This theme focuses on the element of water, purity and the premise that less is unequivocally more. In a time when many consumers are embracing minimalism,





Violet Verbena named 2017 Color of the Year by PPG Paints.

the colors in this palette evoke a sense of simplicity and relaxation. Watery blues, lush greens and soft blended tones provide a mellow, calming and refreshing mentality. Sea Mist (PPG1227-1), Ancestral (PPG1047-4), Almond Cream (1086-3) and Simply Elegant (PPG1155-3), a few of the colors in the palette, create a soft, calming ambiance and pair beautifully with soothing Violet Verbena.

- **IMPOWER:** Centered on change powered by the fire element, this complex palette incorporates deep tones, light neutrals and everything in between. It celebrates the fact that consumers do not have to define themselves by any specific design personality, but can exist somewhere in between. Consumers drawn to this palette can pair furnishings and colors from various genres and disciplines in a decadent yet easy fusion. Bold colors of the PPG Paints brand such as Azure Tide (PPG1231-6), Cenote (PPG17-02), Red Licorice (PPG1186-7) and Crushed Pineapple (PPG1213-7) pair with muted neutral tones such as Willow Tree (PPG1112-6), Gray Violet (PPG1014-5), Silver Screen (PPG1014-3) and not-quite gray Violet Verbena.
- **BIOCENTRIC:** This design story is representative of air and the idea that we are all connected, and the palette dazzles with space-inspired hues and saturated organics. PPG Paints brand colors Spinach Salad (PPG11-16), Blueberry Muffin (PPG1164-5) and Enchanting Eggplant (PPG13-07) give the palette an organic vibe, while Black Flame (PPG1043-7), Cavalry (PPG1041-7) and Witchcraft (PPG1037-7) offer blue-black mystery to the palette and pair beautifully with Violet Verbena. Incorporating these colors into the home gives the look of contemporary elegance and laid-back charm.

PPG's OLYMPIC brand chose Cloudberry (OL677.3) as its 2017 Color of the Year, a soft violet that allows anyone to escape distractions of the outside world and find satisfaction in solace. Cloudberry appeals to individuals who increasingly find joy in pulling back from advertising, social media, the news cycle and other forms of information "noise" that throw off balance and harmony. The soft violet is serene and calming, helping people focus on family and professional pursuits without distractions from the outside world.

Additionally, PPG's GLIDDEN brand selected Byzantine Blue (50BB 32/117) as its 2017 Color of the Year, which is a playful yet peaceful purple that pairs the best qualities of blue, gray and violet. Byzantine Blue is elegant enough for any homeowner's style, whether traditional, modern or

somewhere in between. This color is perfect for anyone looking to create balance in life and to establish a home base in which to refocus energy.

CW: What are the main influencers of color trends and how do you predict color trends for the future?

Schlotter: PPG recognizes that we influence trends as much as trends influence us, and our forecasts represent and connect to consumer feelings and preferences. PPG's color trends forecast gathers information from a wide variety of sources and societal influences, including runway trends, current consumer attitudes, consumer food preferences, current events, build material trends and many, many more sources. PPG also knows that it's not simply about one color, but rather a combination of trending colors to create an overarching, and all-encompassing color story that resonates with our broad range of customers.

CW: Please provide any other information that you think would be of interest.

Schlotter: PPG's more than 20 global color stylists gathered in February for the 2018 PPG Global Color Forecast meeting, an annual meeting held for the first time in Pittsburgh this year. During the three-day meeting, PPG's color experts came together and discussed societal and regional trends, as well as overarching consumer insights to determine the following year's color forecast, as well as the 2018 Color of the Year. Held for the eighth consecutive year, the annual meeting brings together insights from various regions around the world and from various PPG businesses to create a global forecast that resonates with PPG's customers in these industries. **CW**

Biocides DIRECTORY

Here is a look at the latest offerings from select biocide suppliers. For more information on the products listed, please contact the company directly.

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wjconti@buckman.com; www.buckman.com

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Proxel BZ Plus Preservative

Proxel BZ Plus Preservative is a dual action broad spectrum biocide for the preservation of industrial water-based products against spoilage from microorganisms. This novel formulation is MIT free and offers a powerful antimicrobial effect.

Troy Corporation

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www.troycorp.com

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Polyphase 663 is the leading broad-spectrum dry-film preservative for aqueous systems, offering superior long-lasting protection against fungi and algae at remarkably low cost-in-use. Polyphase 663 is zero-VOC and APE-free, and is ideal for a wide range of applications. **CW**

Lab & Testing Equipment DIRECTORY

Here is a look at the latest offerings from select lab and testing equipment suppliers. For more information on the products listed, please contact the company directly.

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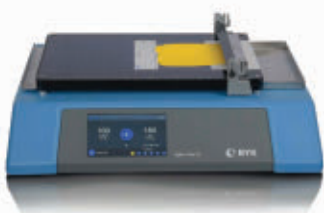


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The NEW byko-visc DS is a stormer type viscometer that has direct digital readout in Krebs Units (KU), centipoise (cP), and grams (g). This viscometer has a fixed rotation speed of 200 rpm and uses a paddle style spindle in accordance to ASTM D562. It also has a universal power supply to fit your global needs.

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Haptic Coatings

A New and Selective 3D Coating Technology

Thomas W. Schmidt and Xing-Sheng Jiang, *Huafeng, Huangshi Ind. Dev. Zone, Putian, China*;
Li Chuan Lillian Tseng, *Graduate Institute of Management, National Taiwan University of
Science and Technology, Taipei, Taiwan*

Abstract

A new and selective additive 3D coating technology was developed and implemented for mass production. Besides attractive visual design opportunities, a strong focus is on the touch experience of final products. Haptic perceptions can be controlled by application of selective multi-layer 3D textures, by the shape and thickness of these 3D textures, and by the coating formulation itself. The coating formulation can be fine-tuned to achieve soft-touch nubuck-like effects, as well as smooth, slippery, sticky effects or rough sandpaper-like effects. In combination with attractive colors such as metallics, color shifting or thermochromic colors and finishes with controlled matte or glossy surfaces, a huge freedom of design is allowed.

Today, haptic coatings are applied on textile substrates for the sporting goods industry. The haptic coatings are very robust and only use safe and environmentally friendly chemistry. They fulfill all mechanical requirements for application on sneakers and sports apparel. In addition, full compliance to the strictest restricted substances list (RSL) and manufacturing restricted substances list (MRSL) can be achieved.

With the selective additive coating approach, highest material efficiency can be achieved. This revolutionary approach to sneaker manufacturing improves the sustainability and the environmental footprint of the supply chain for sports

footwear and garments. Cutting waste does not exist and material is only applied where it is needed. Huafeng, as a T2 supplier, moved into a new business model of component manufacturing with haptic coatings. Component manufacturing allows a lean manufacturing chain, full accountability on quality and more flexibility in the supply chain.

Introduction

The traditional manufacturing of athletic footwear is a multi-step labor intensive process. The upper materials of a sneaker are usually composed of many different materials. The purchase of all these separate materials from different suppliers has to be coordinated carefully to meet delivery deadlines and quality expectations. In many cases minimum quantity orders, logistics, and shipment issues complicate the situation. For a TIER-1 shoe factory, this can be a troublesome and hard to control process. In addition, the various materials have to be attached to each other. Traditionally, this is done by stitching operations, and in some cases by hot melt lamination processes. In any case, this creates a lot of manual labor and cost. Most materials are delivered as rolls and need to be cut to size before attachment. This creates cutting loss and cutting waste that is difficult to recycle. Haptic, the new selective additive 3D coating technology, addresses all these above mentioned disadvantages of traditional footwear manufacturing and offers

solutions for better design, more sustainability and less labor cost.¹ Haptic was introduced to the market in early 2015 and since then has shown rapid growth and success.

Haptic Technology and Advantages

Chemistry and Application Technology

Haptic is usually applied on textile substrates based on synthetic fibers. For athletic footwear, polyester or polyester/nylon sandwich mesh is usually the best substrate material. Haptic chemistry is based on high-solids water-based polyurethane dispersions (PUDs).² Curing at room temperature is achieved by mixing isocyanate hardeners into the formulation shortly before application with a pot life of 2 - 4 h. The basic idea of haptic coatings is to apply a very thick 3D coating in specific areas of the substrate while other areas stay uncoated and provide full textile functionality such as breathability and flexibility. High coating thickness can be achieved by high-solid formulations (up to 75% solids), high-viscosity thixotropic base coats, and a multi-layer application similar to digital 3D printing technologies that have created huge attention in the market recently. However, haptic today is not applied by digital means but by screen printing technology. Both manual and automatic screen printing can be used. Special automatic screen printing machines were developed to ensure high precision printing

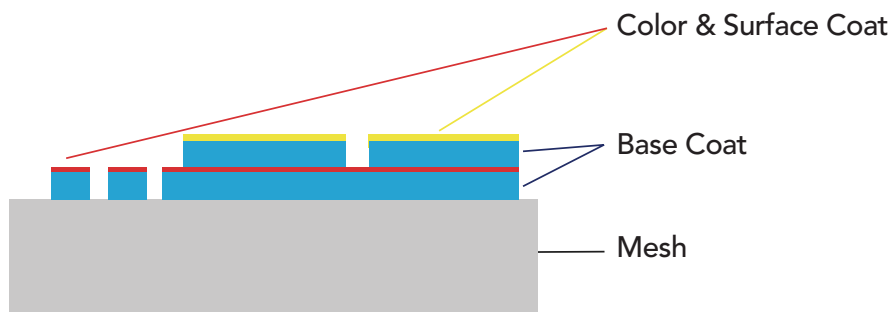


Figure 1. Schematic cross section of a haptic coating system on sandwich mesh.

in a multi-layer approach. Figure 1 shows a typical multi-layer haptic coating consisting of two main coating formulations, i.e., a base coat that provides most of the coating thickness and a top coat that provides color, gloss, and touch perception.

The top/surface coat will not only provide color and gloss but can also be modified for various touch perceptions. Depending on the coating formulation, soft touch, micro texture, rough texture and sandpaper effects can be achieved. By adding more layers of base coat on top of the first color coat, a second level of height can be achieved. Overall design can create uncoated areas and hole-like structures in the basecoat and topcoat, allowing the observers to see through down to the substrate or down to the first color coat. In that way, multi-level and multi-color designs can be achieved, something never seen before on a sneaker.

Quality athletic footwear has many harsh requirements. Shoes face an intensive wear process, and coating and mesh need to be prepared to perform. Haptic coatings are robust due to chemical cross-linking and high coating thickness. In addition, the coatings adhere very well to the synthetic fibers not only because of chemical compatibility but also because of physical penetration into the knitted

structures of the fabrics. Haptic coatings can even fill up small holes in the sandwich mesh to fully cover the substrate without telegraphic effects and provide smooth surfaces. Figure 2 shows a microscopic picture of a cross section.

It can be seen that the base coat layer penetrates deep into the fabric material and physically hooks up to the fiber structure resulting in exceptional strong bonding and durable products.

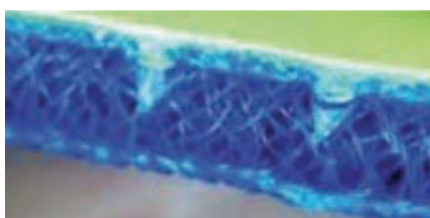


Figure 2. Microscopic cross section of a haptic coating.

Manufacturing Advantages of Haptic 3D Coatings

Along with the highly durable quality of haptic coatings, they offer many advantages during the design and manufacturing process, and allow lean and efficient supply chains. With haptic technology, Huafeng as a typical TIER-2 textile supplier could, for the first time, move into a component supply business model. Instead of rolls of textile material, now ready-to-assemble, upper components are supplied to TIER-1 shoe factories. This business model creates advantages as now Huafeng takes full accountability for quality and delivery, and relaxes the TIER-1 logistics challenge sourcing various materials from various suppliers. For the sports brand, it also becomes easy to manage the supply chains as less TIER-2 suppliers are involved. Most importantly, lead time can be significantly shortened and clear responsibilities for quality are defined (Figure 3).

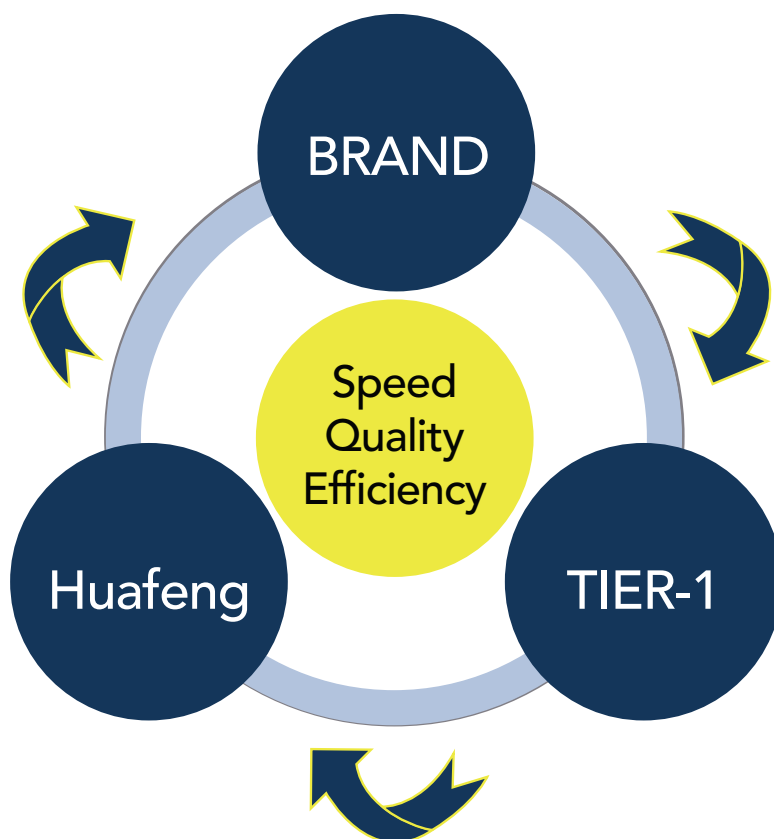


Figure 3. Manufacturing advantages of haptic footwear uppers.

Screen printing technology can be automated quite easily compared to stitching operations. By applying haptic coatings for upper design, there is no need for joining other materials on top of the base mesh by a sewing operation. This results in very efficient and less labor intensive production of footwear uppers.

Sustainability Considerations

Today, sustainability is a must for all new developments in the sporting goods industry. Right from the beginning, haptic coatings were developed with a clear goal of offering the best sustainability along with hard fact manufacturing and cost advantages. Two main features lead to high sustainability: haptic is an additive manufacturing technology, and haptic is fully water-based.

The additive manufacturing approach allows building up coating thickness step-by-step. During that process, the coating material is selectively added at the location where it is needed. There is no cutting

waste for disposal and coating material loss is very low. Material loss basically only appears when colors are changed and screens are cleaned. Therefore, high-end material efficiencies can be achieved.

The fully waterborne chemistry guarantees safe and healthy work places and is in full compliance with the goals of ZDHC, an industrywide campaign to face out toxic chemicals within the textile supply chains.³ Workers enjoy clean and fresh air without inhaling solvents. This is especially important when operating in less developed countries where extraction systems are often not up to requirements. Importantly, there is no fire hazard in the factory and workers do their job in a safe environment.

Conclusions

Haptic coatings offer a great new opportunity for athletic footwear manufacturing. High efficiency at low cost, sustainable chemistry and application processes leads to multiple benefits within

the supply chain. In addition the selective additive 3D coating approach allows creative spectacular designs not seen before in the footwear industry. **CW**

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David Savastano, *Ink World Editor*

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Today, JNS-SmithChem specializes in resins, functional fillers and extenders, color pigments and additives, as well as a complete line of industrial packaging. While its largest market is paint and coatings, the company has grown substantially in the adhesives, plastics, rubber, building products, graphic arts, cosmetics, textiles and paper industries as well.

"We have a comprehensive line of products," noted Michael Smith, co-president of the company along with Alan Newfield. "If you are making a coating, we offer everything, including the can to package it in."

Over the years, the company has grown from its humble New York City roots. In addition to its 100,000 square foot headquarters in Paterson, NJ, they have additional warehousing capabilities in Baltimore, Atlanta, Houston, Akron, OH and Wilmington, MA. Today, JNS-SmithChem's leaders look forward to further expansion in the coming years. Future geographic expansion appears imminent based on the company's century-long formula for success.

Early History

Casper Smith opened Smith Chemical and Color Company, Inc. on John Street in New York City, and continued with the company well into his 80s.

"My career began in 1983, and my grandfather was still coming into the office," Smith said. "He used to say that wherever you see a smokestack, there is a potential customer."

Michael's father Eugene Smith joined the company in the early 1950s, and became president. Michael succeeded his father and became president in 1986.

In 1992, Smith Chemical was purchased by Howard Greenwald and Lansco Colors, and became the Smithchem Division of Lansco Colors.

"We grew the business and had a great relationship," said Don Greenwald, Lansco Colors' CEO and president. "At the right time, we sold it to JNS, and they became our representative in the east. Nobody knows the industry better than Michael, and Bob is a technically accomplished well-liked sales executive and marketing professional. I can't say enough good things about them."

In 2005, Smithchem acquired Jesse S. Young Company, forming Smithchem & Young and expanding its territory from New England and south to Virginia as well as adding new product lines. "That acquisition worked very well. Irv Young was retiring and looking to sell," Smith noted. "A lot of New York-based manufacturing companies were moving south and we decided to follow them. It was a perfect fit, as none of our product lines were in conflict. They brought in additives, resins and other products that strengthened our presence throughout the East Coast."

The major move came in 2009, when JNS Supply Co., led by Jachts and Newfield, acquired the Smithchem & Young Division from Lansco, and formed JNS-SmithChem, LLC.

"Usually there are conflicts of interest, but this was perfect fit, which is so unusual," Newfield added. "We see deals weekly, and see the conflicts that arise, but no one gave up anything. If you want to grow, you have to extend your territory. It has worked out really well for our company."

One sign of a successful distributor is its long-standing relationships with principals. JNS-SmithChem has many whose long-term mutual efforts have continued for decades.

"We have 30 principals, which is very manageable," added Bob Whiteley, JNS-SmithChem's EVP. "We sometimes turn down taking on more principals, as it could reduce our ability to offer quality representation to each of our product lines."

"Some of our long-term relationships with principals such as R.T. Vanderbilt, OMNOVA (formerly Eliokem and Goodyear Chemical) and Mississippi Lime go back more than 50 years," Smith added.

Changes in the Distribution Industry

The chemical industry has undergone a major transformation in recent years. The same is true for chemical distribution and the customer base it services.

"Several regional distributors have been consolidated into larger national suppliers, while many small customers have been absorbed by larger companies or private equity. Yet so many good suppliers understand the importance of relationships with their distributors as a valuable adjunct to their companies," said Newfield.

JNS-SmithChem CEO Darren Jachts said that the ability to provide excellent, customized service is a key differentiator for



Above: From left, CEO Darren Jachts and co-presidents Alan Newfield and Michael Smith are the three leaders at JNS-SmithChem. **Right:** Tanker truck being unloaded at JNS-SmithChem.



the company. As an example, Jachts noted that JNS-SmithChem has one large customer for which they partnered to create special barcode labels.

"JNS-SmithChem is privately owned by owners, with each partner having over 30 years in the industry and each are fully committed to the business," said Jachts. "Being privately owned, we can make decisions quickly and do certain things for our customers that larger companies simply cannot. We have a sister company, Jachts Columbia Can, LLC in the industrial packaging business. Our ability to deliver a comprehensive line of raw materials and containers with prompt shipments via our own fleet of company-owned trucks is of tremendous value."

Improved service is of critical importance to customers.

"Customers expect better and faster service and immediate response on inquiries," Smith noted. "Our sales people have to be accessible at all times."

"Our customers and suppliers depend on us to hold adequate inventories as they strive to reduce their own. Our suppliers have cut back on sales staff and lean on us to handle more and more of their sales and supply chain requirements," Newfield observed.

The Future for JNS-SmithChem

JNS-SmithChem's leaders see a bright future ahead as the company begins its second century of service.

"You have to make moves to grow your business," Newfield noted. "So much is timing. We like where we are now."

"We feel there will always be a need by suppliers for good distributors with close customer relationships and also from customers who are looking for people to help them solve their problems and develop new products," Whiteley said. "That's where distributors provide the most value."

"We consider ourselves experts for each product line that we represent," added Smith. "Adding sales representatives with technical experience will be critical based on the increased demands put on us from our customers and suppliers. We now have a presence in the Midwest with our distribution center in Akron."

"In conclusion, we expect continued growth through territory expansion and prudent acquisition," Smith added. "We can move fast, which is a huge advantage for our company." **CW**

Hempel Appoints New Chief Commercial Officer

Michael Hansen will be part of Hempel's Executive Management Board, reporting directly to Group president and CEO Henrik Andersen.

He joins Hempel from Maersk, where he most recently held the position of vice president and global head of sales in Maersk Line.

Based in Hempel's headquarters in Denmark, Hansen will cooperate with his colleagues across the world and across Hempel's different coating segments: Protective, Marine (including Container and Yacht) and Decorative. He will play a central role in – and take charge of – executing on the commercial part of Hempel's 2020 strategy Journey to Excellence, which has a clear focus on the customer.

Henrik Andersen said of the appointment, "We are pleased that Michael has chosen to join Hempel's management group. His wide experience in the industry, which he has acquired through one of our best global customers, is of great value to Hempel. Hempel will not only benefit from Michael's experience; his ability to run a business is equally important, and we firmly believe that Michael will contribute greatly to creating value for our customers, colleagues and our owner, the Hempel Foundation."

After 19 years in Maersk, Hansen will contribute with great knowledge about the marine industry and global sales processes. This is important to Hempel's Journey to Excellence strategy, which involves working even closer with customers to deliver trusted coating solutions that add real value to their business.



Hansen

Brilliant Group Appoints New Regional Sales Manager

Brilliant Group, Inc. has announced the appointment of Tom Black as regional sales manager, based in New England, covering the Northeast. Black is the company's first direct salesperson in the U.S.

Black has nearly 40 years in the chemical industry, including experience in pigment manufacturing and distribution. He brings a rich history of fluorescent pigment sales, previously with Magruder/Radiant, including 25 years of service as a lab technician, customer service manager, and New England account manager.

Black also spent three years with Sun Chemical as account representative in New England, six years with DN Lukens as technical sales/MIS manager, as well as graphic arts marketing manager; four years with JNS-Smithchem as account manager in New England and two years with Omya as senior sales representative.

Jeff Eaves Appointed General Manager of Circa Sustainable Chemicals UK

Australian biotechnology company Circa Group has appointed Dr. Jeff Eaves as general manager of its subsidiary company, Circa Sustainable Chemicals UK Ltd., effective from June 5, 2017.

Eaves will be joining Circa Group from the University of York, where he was industrial liaison manager, leading a £2.5 million European-funded contract to deliver 60 science-based projects to SMEs.

Specialty Polymers Hires Regional Sales Manager

Specialty Polymers, Inc. has hired Steve Dobson as the company's new regional sales manager. Dobson has been with SPI for more than 10 years as production manager for the East Coast plant. His territory includes the Northeast U.S. and eastern Canada.

Palmer Holland Announces Changes at CEO and President Positions

Palmer Holland has announced that it has named C. Bradley Steven president. Bryn Irvine will assume a new role as CEO. C. Bradley Steven brings many years of experience leading and managing companies as president and vice president. Most recently, he was the president of Willoughby Supply, a distributor of exterior building materials. Previously, he worked for Avery Dennison as vice president and general manager. Steven also serves on the board of a Cleveland-area manufacturing company.

Irvine will move into the new role of Palmer Holland's CEO. His primary focus will be on leveraging his global relationships in support of the company's expansion strategies. He will also be involved in the company's strategic planning and execution as it continues to drive growth.

Katharine Morgan Becomes President of ASTM International

Katharine Morgan has been appointed president of ASTM International, one of the world's largest standards development organizations. Morgan will lead a team that supports thousands of members, customers, partners, and other stakeholders worldwide. She succeeds James A. Thomas, who served in the role for 25 years.

ACTEGA NA Hires Marketing Communications Manager

ACTEGA NA, the North American division of global specialty ink, coatings, and sealants company Altana AG, has added Kristin Tripoli to its NJ-based marketing team. Tripoli will be managing ACTEGA's North American trade show presence as well as developing advertising programs, product launches and website and digital platforms. **CW**

Union Process Simplifies Cryogenic Grinding

Union Process, known globally as a manufacturer of particle size reduction and dispersing equipment, as well as a supplier of grinding media and laboratory services for a broad range of research and industrial applications, has developed a special discharge valve for use with its cryogenic grinding HD-01 Laboratory Attritor.

Emery Li, director of sales for Union Process, stated, “There are numerous advantages to this new grinding tank and discharge valve design. First, there is no longer a need to remove the entire tank to separate the product and grinding media with a screen. The new discharge valve allows for easy sampling or removal of final material when grinding is complete. Secondly, cleaning is made much easier thanks to the discharge valve. Finally, there is an interchangeable bar grid system that allows for the use of different types and sizes of grinding media.”

The same convenience of the discharge valve design offered on Union Process’ popular S1 Lab Attritors is now available on the smaller model HD-01 Attritor. The HD-01 Attritor is available with a wide array of options and accessories to meet whatever your particle size reduction needs are.

Datacolor Launches Handheld Color Matching Solution for Paint Companies

Datacolor has announced the launch of ColorReaderPRO, a professional color matching device. Its introduction will provide paint companies with a comprehensive color selection tool, redefining the ease and efficiency of color matching, according to the company.

ColorReaderPRO is an ultra-portable, Bluetooth connected color selection device that works standalone or connected to the ColorReaderPRO mobile app. ColorReaderPRO provides leading color matching performance,

allowing painters to match a client’s color inspiration to a corresponding paint color in seconds.

“As the market leader in color management solutions for more than 45 years, Datacolor is uniquely qualified to support paint companies’ initiatives to increase brand loyalty and improve color selection efficiency,” said Brian Levey, vice president, Consumer Solutions, Datacolor. “In the tradition of all Datacolor instruments, ColorReaderPRO offers color measurement performance at exceptional value.”

The ColorReaderPRO solution includes:

- **ColorReaderPRO** – Highly accurate color selection device that stores up to 10,000 colors and can be used standalone with the OLED display or with the ColorReader Mobile App.
- **ColorReader Mobile App** – For paint companies that want a turn-key mobile app solution, the ColorReader Mobile App is available for both iPhone and Android phones.
- **ColorReader Software Development Kit (SDK)** – Easily integrate ColorReaderPRO functionality into your existing mobile app with the help of our ColorReader SDK.
- **ColorReader Fleet Management Software** – Easily add, manage and assign authorized fan decks to users and leverage registration information for targeted marketing campaigns.

Axalta Coating Systems Introduces New Acquire Quantum EFX Spectrophotometer

Axalta Coating Systems has introduced its fifth-generation spectrophotometer, the Acquire Quantum EFX, which packs innovative technology into a lighter, faster and highly accurate unit that is capable of reading metallic, pearl and effect colors, according to

the company. Combined with Axalta’s ColorNet color formula retrieval software, the Acquire Quantum EFX integrates seamlessly into the Acquire Color System, a color retrieval system for automotive repair designed to improve productivity and efficiency of collision repair body shops.

“Our customers’ business needs drive our innovation,” said Mike Carr, Axalta president-North America. “The Acquire Color system, comprised of the next generation Acquire Quantum EFX and ColorNet is designed for faster and more accurate color retrieval as well as more efficient color match in order to boost shop productivity and profitability.”

The reengineered Acquire Quantum EFX is almost half the size of its predecessor to enable comfortable, one-handed operation and access to hard-to-reach places. Its aperture is smaller by 20 percent for improved accuracy on curved surfaces and it includes a top-mounted touchscreen that is calibrated for high visibility even in bright outdoor light. The unit comes with a “smart cradle” for convenient charging and direct connection to a PC, without the need to plug in or remove cables, which can cause unnecessary wear. The Acquire Quantum EFX is also Wi-Fi enabled, allowing users to transfer data directly to ColorNet.

Axalta’s Acquire Color System also includes its unique online ColorProof application that renders spectrophotometer readings on a user’s computer screen for a full visual comparison of the vehicle and its closest available paint formula. With near specular, face and side tone visualizations and flake and color values, ColorProof gives users precise onscreen color proofing in seconds and practically eliminates the need for physical color chips.

Acquire Quantum EFX is now available through Axalta’s distribution partners. **CW**

SSCT Annual Meeting to be held in Sarasota

April 30 - May 3, 2017

Southern Society for Coatings Technology Annual Meeting
Location: Sarasota, FL
Venue: Sarasota Hyatt Regency
Contact: SSCT, Laura Fosselman
Website: www.ssct.org
Email: ssctorg@gmail.com

May 12 - 14, 2017

China Guangzhou International Floor Fair 2017
Location: Guangzhou, Guangdong, China
Venue: Poly World Trade Center Expo
Contact: Caroline Sun
Phone: 862-029-806-570
Email: CGFFCHINA@gmail.com
Website: www.cgff.net

May 15 - 17, 2017

Eastern Coatings Show
Location: Atlantic City, NJ, USA
Venue: Harrah's Resort
Website: easterncoatingsshow.com

May 16 - 17, 2017

Asia Coatings Congress 2017
Location: Ho Chi Minh City, Vietnam
Venue: Intercontinental Hotel
Contact: Fan Landers
Phone: +44 (0) 1737 855078
Website: www.coatings-group.com

May 24 - 25, 2017

Annual CPCA Conference and AGM
Location: Montreal, QC
Venue: InterContinental Hotel
Website: www.canpaint.com

June 4-9, 2017

North Dakota State University Coatings Short Course
Location: Fargo, ND
Venue: Research 1, NDSU
Contact: Stuart Croll
Email: stuart.croll@ndsu.edu
Website: www.ndsu.edu/cpm/short_courses



June 13 - 15, 2017

Coatings Expo Vietnam 2017
Location: Ho Chi Minh City, Vietnam
Venue: Saigon Exhibition & Convention Center
Contact: Jasmine
Phone: 84-987-353-776
Email: trang.phamtk@veas.com.vn
Website: www.veas.com.vn

June 13 - 14, 2017

East African Coatings Congress
Location: Nairobi, Kenya
Venue: Safari Park Hotel
Website: www.coatings-group.com

June 19 - 21, 2017

RCMA 2017 Summer Meeting & Lobby Day
Location: Washington, DC
Contact: Madeline Jurch
Phone: 202-207-1122

August 24-25, 2017

17th Asia Coatings Markets
Location: Bangkok, Thailand
Phone: 65-6346-9113
Email: huiyan@cmtsp.com.sg
Website: www.cmtevents.com

September 27 - 29, 2017

2017 CEPE Annual Conference and General Assembly
Location: Athens, Greece
Venue: Hilton Hotel Athens
Website: www.european-coatings.com

October 3 - 5, 2017

ABRAFATI 2017

Location: Sao Paulo, Brazil
Venue: Sao Paulo Expo Exhibition & Convention Center
Website: www.abrafati2017.com.br

October 15 - 18, 2017

Western Coatings Symposium 2017 (WCS 2017)
Location: Las Vegas, NV, USA
Website: www.westerncoatings.org

October 16 - 18, 2017

RCMA 2017 Fall Meeting
Location: Dallas, TX
Contact: Madeline Jurch
Phone: 202-207-1122

October 31 - November 2, 2017

2017 Chem Show
Location: New York City, NY
Venue: Javits Center

November 15 - 17, 2017

CHINACOAT 2017
Location: Shanghai, China
Venue: Shanghai New International Expo Centre
Website: www.chinacoat.net

2018

April 15 - 19, 2018

Corrosion 2018
Location: Phoenix, AZ, USA
Venue: Phoenix Convention Center
Phone: 281-228-6263
Website: www.nace.org
Email: calae.mcdermott@nace.org **CW**

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PPG-painted Ford Roadster Wins Ridler Award

A PPG-painted 1933 Ford Roadster, “Renaissance Roadster,” took home the coveted Don Ridler Memorial Award at the 65th Detroit Autorama recently held at Cobo Center in the heart of the Motor City. Owned by Buddy Jordan of San Antonio, Texas, and built by Steve Frisbie and his team at Steve’s Auto Restoration in Portland, Oregon, Renaissance Roadster garnered the first Ridler award for the Frisbie team.

Established in 1963, the Ridler Award – the most prestigious and respected honor in the custom car world – is the highlight of the Detroit Autorama, presented to the most outstanding custom car or truck making its debut appearance at the show.

The talented crew at Steve’s Auto Restoration used aluminum and steel shaped from flat metal stock to give the roadster its winning look. Power was provided courtesy of a modified aluminum big-block V-8 engine from Chevrolet Performance. The original design for the Renaissance Roadster came from a sketch by team member and designer Chris Ito, with additional inspiration from Frisbie and another team member, designer David Brost. Painter Jay Spencer gave the Ford its dazzling candy-apple red and black appearance, spraying an array of PPG refinishing products. These included DELTRON 2000 DBC9700 Basecoat Black, DCU 2021 CONCEPT Urethane Clear, DMD1696 Coarse Silver Dollar Aluminum along with VIBRANCE COLLECTION RADIANCE II DMX214 Red Violet and DMX213 Red (Blue Shade) Dye and CRYSTALLANCE VM4501 silver glass flake.

The Ridler winner is selected from a field of eight finalists collectively known as the Great Eight. Just qualifying for this elite group is a significant achievement, and PPG-painted vehicles were well represented. “After Thought,” a 1930 Ford Model A Coupe owned by Ted and Colleen Hubbard and built by Andy Leach and his team at CAL Automotive Creations in Omaha, Nebraska, was among the finalists. It has an old-school look created by Charley Hutton at Charley Hutton Color Studio in Nampa, Idaho. He gave the car body its “Paleozoic Sea Blue” finish using ENVIROBASE High Performance waterborne basecoat. Accent colors include Pepper Grey on the engine and chassis, “After Thought Gold” on the wheels and Titanium on the blower. GLOBAL REFINISH SYSTEM D8152 Performance + Glamour Clearcoat was used on the body and D8115 Matte Clearcoat on the satin colors.

“Split Ray,” a 1966 Corvette owned by Dennis Johnson and built by Scott Roth and Brian Hartwell at The Auto Shoppe in South Burlington, Vermont, also made the cut. The car, painted by several of the shop’s crew members, owes its custom Shark Skin Grey Metallic finish to a combination of PPG products including AQUABASE Plus waterborne basecoat, NEXA AUTOCOLOR P565-3125 Wet on Wet Sealer Grey, and Deltron DC4000 Velocity Premium Clearcoat.



Ed Sears’ “Gold Standard,” a gleaming 1941 Ford pickup built by Gary Corkell and the team at One Off Rod & Custom in Middletown, Delaware, caught the Great Eight judges’ eyes. Corkell, along with Kevin Bluzzard, used Envirobase High Performance basecoat, ECP15 A-Chromatic Surfacers – Gray, and a custom-color mix “Brown Sugar” with Vibrance Collection Crystallance VM4505 topaz glass flake for the glowing finish.

Also in the Great Eight and sporting a stunning PPG finish was George Poteet’s 1932 Ford, “The GPT,” from Johnson’s Hot Rod Shop in Gadsden, Alabama, a PPG shop since 1995.

An additional Autorama honor, the Lokar/STREET RODDER Driven Award, went to a 1949 Cadillac convertible owned by Tracy Chapman and built by her husband, Harold, and his crew at Customs & Hot Rods of Andice in Georgetown, Texas. Shop foreman Michael Kaiser had expert painter Lance Nelson give the Caddy its lustrous white-and-blue satin finish with Deltron 2000 DBC Basecoat, a special blend of tints and toners and Global Refinish System D8152 Performance + Glamour Clearcoat. All that Cadillac sheet metal was finished in PPG custom white paint, contrasted by a dark blue cloth top. Customs & Hot Rods of Andice also won the PPG Outstanding Paint award with a 1932 Ford finished in Envirobase High Performance basecoat and Global Refinish System D8152 Performance + Glamour Clearcoat and D8117 Semi-Gloss Clearcoat. The car features Vibrance Collection Crystallance colors “Smoking Gun” on the body and “Brown Sugar” on the wheels.

The Don Ridler Memorial Award, commonly called the Ridler Award, is named for the man who made the Detroit Autorama the nation’s premier custom car show. The owner of the winning car receives a cash award and a special embroidered jacket along with the greater prize of the coveted Ridler Award trophy, which represents the ultimate in custom design brilliance. **CW**



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