Honda Canada Plant Tour – 26th January, 2017

6900 Industrial Pkwy, Alliston Ontario, Plant 1

Time: 12:45 pm to 2:00 pm

Sorry – This event is sold out

With 4000 employees the Honda Alliston plant is Canada’s first Japanese OEM assembly plant. This state of the art facility manufactures the Honda Civic in Plant 1, and the Civic and CR-V in Plant two.

NOTE: You will be asked to show government issued photo ID when checking in at the Plant 1 Security. Safety glasses and headsets will be provided. All tour guests must wear long pants, closed toe and closed heel shoes. Open toe or open back shoes and shorts are not allowed in the plant.

How to Combat Common Molding Challenges and Create Quality Parts
16 February 2017

As hard as we try to produce zero scrap and mold the perfect part with every shot, it’s nearly impossible and extremely difficult to do without the proper tools—defects are bound to pop up eventually. In this presentation, Dan will cover the biggest molding challenges in the industry and how to address them, how to plan for success up front while building a process, and the differences between Decoupled II and Decoupled III molding techniques. Attendees will leave with concrete examples of how to improve their processes and their part quality.

Dan Clark, National Sales Manager at RJG, Inc.

Dan Clark has over 20 years of injection molding experience, including material handling, operations, shipping and receiving, set-up, and process engineering. He found his passion for training when he became involved in training personnel in robust processing techniques. Dan joined RJG in 2008 as a Consultant/Trainer. His responsibilities included teaching RJG Systematic courses, Decoupled Workshops, and Master Molder Certification courses. He progressed into managing the Midwest region where he assisted companies in implementing training and technology to improve their product throughput by lowering scrap, cycle times, and labor (to name a few things). Dan recently took on the role of National Sales Manager, where he can implement what he has learned across the United States and Canada.

*This will be a Lunch and Learn event, details to be announced.
Looking Forward to 2017!

This is the time of year to look back and celebrate our successes and look forward to more in the New Year. SPE Ontario is excited looking forward to 2017. Our industry is facing numerous challenges and with our experience, knowledge and hard work we will overcome them to protect and grow our industry in North America.

Networking is becoming even more important than ever. We have many technologies that keep us from real human contact, and SPE Ontario will be there to provide opportunities to meet and learn for all our members. In late January we will visit the Honda Plant in Alliston. Unfortunately the tour is already sold out, but don’t worry, we will have a lunch and learn on February 16 with Dan Clark of RJG entitled ‘How to Combat Common Molding Challenges and Create Quality Parts’, a surprise activity in early spring and of course our very popular golf tournament in June.

We will keep all of you informed of our activities… stay tuned! Visit our website www.4spe.org

On behalf of the SPE Ontario board of directors... we want to wish you a very Happy Holiday Season... may 2017 be a year to celebrate!

Looking forward to seeing you in the New Year!

Renee Morin,
President SPE Ontario
We are pleased to announce a new partnership with Excellence in Manufacturing Consortium (EMC) and its Canadian Manufacturing Network to provide resources to local manufacturers and the benefits of real time access to regional Labour Market Intelligence!

ManufacturingGPS is a fully searchable, online Labour Market Intelligence (LMI) system – tracking key workforce trends and occupational intelligence, providing critical information needed to help grow productivity and build competitiveness, including:

- Compensation Rates
- Skills Needs/Shortages
- Productivity Cluster Info
- HR Surveys and LMI Data
- Capabilities Resources
- Benchmarking by Sector, Region etc.

Excellence in Manufacturing Consortium (EMC) through its Canadian Manufacturing Network, funded by the Government of Canada’s Sectoral Initiatives Program, is seeking manufacturing employer’s input to implement ManufacturingGPS.

The GPS survey should take approximately 20-30 minutes and will help to collect and analyze labour market information and HR benchmarks such as compensation levels, turnover rates, skills levels and much more!

Please register below and a GPS survey agent will contact you directly

Start Accessing ManufacturingGPS

If your company would like to be considered as one of the participating organizations, please contact info@manufacturinggps.ca for more details or Click here to view ManufacturingGPS video!

Thank you for your participation!

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Recent developments in pigments are redefining the role these materials play in plastics well beyond that of appearance. The latest versions of these additives increasingly address such needs as process efficiency, waste reduction, sustainability and regulatory compliance.

Some colorants and pigments are even touted as essential components of “green” building design, for the synergies they provide in the reduction of energy use and thus the carbon footprint of structures ranging from single-family houses to apartment buildings and office towers.

These and other developments stem from ongoing advances in formulation chemistry – some serendipitous – and from enhancements in delivery techniques that promote increasingly precise levels of use and thus, in many colorants and pigments, a finer tailoring of properties.

Designers, compounders and end-users, as a result, can increasingly work with color additives that are not only key to product aesthetics, but to manufacturing productivity and functionality.

Following are representative examples of recent developments in these areas, many of which were on display at the K 2016 trade fair in Düsseldorf, Germany, in late October.

‘YInMn’ = True Blue

Shepherd Color Co. is commercializing a vivid blue pigment that was discovered by researchers at Oregon State University seven years ago. The material, which Shepherd is licensing from the university, is called “YInMn Blue” and will be used in pigments (and coatings) for plastics.

The name derives from its chemical content, which includes yttrium, indium, manganese and oxygen. Unlike many bright blue pigments, the material is extremely stable, probably owing to its accidental discovery after a researcher heated manganese oxide to about 1,200°C (or 2,192°F) to test its electronic properties.

Importantly for its use as a pigment, tests by an Oregon State research team led by chemist Mas Subramanian found that YInMn Blue has high ultraviolet absorbance and high reflectivity in the near-infrared region compared with conventional cobalt blue pigments.

Additionally, according to information from the research team, the pigment has a crystal structure in which the chromophore that produces its intense blue is in a trigonal bipyramidal site, which means that the color can be tuned by adjusting the ratio of indium to magnesium.

This means that in building design the pigment can be used to formulate dark blue roofing that stays cooler in sunlight than conventional blue roofs, thereby creating energy benefits. So-called “cool roofs” that use dark blue colors to reflect solar heat are design features of new and retrofit buildings. They limit the amount of

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heat that is absorbed by roofs and enters structures, thus eliminating the need for excess air conditioning as well as costly roof-deck insulation or attic venting systems.

The optimum color for a cool roof is white, which might not be a problem for commercial buildings, but homeowners prefer darker colors such as blue that resemble the black or dark grey of conventional roofing shingles.

Exposure tests conducted by Shepherd Color show that a standard blue roof generated much more heat than a roof colored with the YInMn Blue pigment – 191°F compared with 168°F. The tests also demonstrated that the total solar reflectance of the pigment was more than three times greater than that of a conventional dark blue pigment.

Most residential roofing shingles are asphalt, but polymer alternatives fabricated from recycled plastics are growing in popularity for their low weight and economy, and could become one of many important markets for the pigment.

Cool-roof design is integral to initiatives in the United States such as Energy Star from the Environmental Protection Agency, the U.S. Green Building Council’s LEED certification program, and California’s Title 24 building code.

**Lead-Free Enhancements**

While the YInMn pigment represents one extreme on the development scale – a new formulation with exceptional properties – most additive enhancements are geared toward incremental advances in pigments and colorants that meet immediate needs.

One example is PV Fast Yellow H4G, an organic yellow pigment from Clariant Corp. that replaces lead chromate-based materials. Lead chromate pigments have been banned from consumer plastics in Europe since 2015, and users elsewhere are under pressure to find nontoxic alternatives, especially for toys, food-contact applications, and other consumer products.

Clariant describes the material as having two to three times greater color strength in polyethylene and PVC as conventional lead chromate yellows, and adds that in combinations with inorganic pigments H4G achieves a close match to the color and opacity of lead chromates.

The material has good opacity, as well as lightfastness and weather resistance. It has high dispersion, and can be used for indoor and outdoor applications with polyolefins, styrenics, thermoplastic elastomers and polyurethanes. The impact of H4G on part warping is minimal, and the pigment is suitable for such applications as crates, caps and closures. The material is also FDA, EU (10/2011) and GB 9685 compliant for food contact in the U.S., Europe and China, respectively.

Clariant, meantime, has set ambitious sustainability goals. The company seeks to improve the value of colorants and pigments in a number of ways: increasing the use of renewable raw materials; resource savings from improved production processes; devising high-process-efficiency formulations; longer product lifecycles; and greater recyclability.

By 2025, Clariant wants to reduce energy consumption and carbon emissions by 30% per metric ton of pigment produced; achieve 35% reductions in greenhouse gas emissions, water consumption and waste; and reduce waste water by 40%.

Wire and cable is a major user of color. One concentrate supplier, the Color Division of Teknor Apex Co.,...
recently received UL certification that a series of 14 new grades for wire and cable and other electronics are halogen-free and acceptable for use in halogen-free compounds.

The pelletized concentrates use ethylene-vinyl acetate (EVA) and PE as carrier resins. The materials can be used with either EVA or polyolefin-based, halogen-free, flame-retardant compounds.

They were developed with customer input. Compliance with halogen-free requirements in compounds is a key requirement for applications in North America, among them public transit, marine and military installations, as well as office buildings and automotive.

Flexible Carbon Black
Regulation and sustainability influenced the recent development of carbon black masterbatches by Cabot Corp. At K 2016, the company showed an expanded range of universal masterbatches for use with a variety of polymers. New to the Plasblak line are UN2015, UN2017 and UN2019. Together with a previous grade, UN2010, the materials are formulated with low levels of impurities to meet European Union food-contact requirements. UN2019, additionally, complies with FDA regulations for U.S. food-contact applications.

The line includes three grades for non-food applications that meet a growing need for greater levels of recyclate in raw materials in Europe and elsewhere. UN2014, UN2016 and UN6289 are described by Cabot as cost-effective masterbatch options.

All of these masterbatches achieve high jetness (or degree of blackness) and tinting strength at low addition rates. The company adds that just one masterbatch grade can be used effectively with a number of engineering resins, among them ABS, polyamide and polyoxymethylene.

Other new or enhanced grades include Black Pearls 630, a specialty carbon black that balances jetness with blue tone, and adds color without a tradeoff in dispersibility. The pelletized grade, which originated from an effort to fine-tune the properties of another carbon black, says George Haines, global segment manager, is primarily for general-purpose moldings of consumer goods, electronic parts and automotive components.

Cabot has certified more than 20 specialty carbon black grades using International Carbon Black Association and other standards. The objective is to show that certified grades comply with an update to the EU’s REACH regulations that further limits the use of polycyclic aromatic hydrocarbons in applications with prolonged or frequent skin contact. This, in addition to its work in demonstrating masterbatch compliance with FDA and EU food-contact rules, means customers can be certain that materials they specify from Cabot “meet performance and regulatory compliance needs,” Haines says.

Cost-Effective Liquids
Liquid pigments are a small proportion of the color additives market, but offer benefits over pellets and powders, says Paul Maguire, president of Riverdale Global.

Chief among these are: greater accuracy in metering; minimal – even no – waste during operations and thus little, if any, waste-disposal concerns; efficient dispersion in compounds; cleaner machine-side operations and storage; no worker exposure to pigments; and cost savings over dry versions.

Riverdale supplies an innovative liquid pigment system called Pump-in-a-Drum (PIAD). Using a peristaltic pump and gravimetric dispensing system designed by sister company Maguire Products, which builds auxiliary processing equipment, the company supplies single pigments in sealed containers that compounders, molders and others connect to compounders, molders and others connect to machines for automatic dispensing.

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Using a single pigment in the dispenser maximizes color strength, brightness and uniformity, Maguire says. The system can, as a result, achieve full color effects at lower letdown rates than with conventional liquid pigments.

When a container is empty, Riverdale replaces it. The company returns used containers to a central or satellite facility and cleans and refills them for reuse with a processor’s exact color formula.

“We mix color in the container using an in-house coloring system,” Maguire explains. “There is no wasted material.” Containers usually come in 5- and 30-gal. sizes. Samples come in 1-gal. containers, and special totes in a 200-gal. size.

Leftover material – typically 1 to 3% of content – is reused, which saves money. The PIAD’s color-delivery tolerance is within 0.1%, which prevents over-coloring and helps reduce costs.

Overall, users can save 20 to 40% on color costs alone compared with conventional liquid pigments.

Maguire says Riverdale is adding satellite facilities to improve turnaround time for pickups and deliveries. Up to 20 are planned in the U.S. Satellites are also slated for Europe and China. In some cases, refilling operations can be set up next door to a customer, or within a plant.

Future developments include addition of a software tracking system, now in beta testing, which provides information about color formulations and how efficiently dispensing systems and pigments are used, along with compliance information and traceability of components. This type of collection is not unusual for gravimetric blenders that meter dry colors, but is “relatively unusual” for liquids, according to Maguire.

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UPCOMING EVENTS

26th January 2017
Honda Canada Plant Tour
6900 Industrial Pkwy, Alliston Ontario, Plant 1
Alliston Ontario
Plant Tour: 12:45 pm to 2:00 pm

16th February 2017
How to Combat Common Molding Challenges and Create Quality Parts
Dan Clark, RJG Inc.
Details to be announced.

8-10th May 2017
Antec
Anaheim California

16-18th May 2017
Plast-Ex
Toronto Congress Centre

2 June 2017
51st Annual Golf Tournament
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The Spectator is sent to over 400 plastics industry professionals, and viewed by over 10,000 people on the SPE Website.

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