

Plastics News

PROCESSOR OF THE YEAR 2019

Processor of the Year finalists

Plastics News Report

Detroit — Four companies — all of them custom injection molders — have been named finalists for *Plastics News*' Processor of the Year Award: Diversified Plastics Inc., Intertech Plastics Inc., MMI Engineered Solutions Inc. and PTI Solutions Inc.

Intertech was a finalist last year.

Although all four finalists are injection molders, they are a diverse group.

Diversified Plastics runs a headquarters plant in Brooklyn Park, Minn., a suburb of Minneapolis, and one in Vista, Calif. Intertech has two factories in Denver — one dedicated to clean room and white room production, the other for industrial. MMI operates three plants: at its headquarters in Saline, Mich., in Warren, Mich., and Monterrey, Mexico. PTI is in Macomb, Mich.

Candidates for Processor of the Year are judged based on seven criteria: financial performance, quality, customer relations, employee relations, environmental performance, industry/public service and technological innovation. Judges are members of the *Plastics News* editorial staff.

Last year's Processor of the Year was MTD Micro Molding of Charlton, Mass., which injection molds micro medical parts, including parts that get implanted

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PROCESSOR OF THE YEAR 2019 FINALISTS:

Diversified Plastics Inc.

Intertech Plastics Inc.

MMI Engineered Solutions Inc.

PTI Solutions Inc.

Pelican-Confluence deal creates paddle sports giant

By Frank Esposito
Plastics News Staff

In a big paddle sports deal, Pelican International Inc. has acquired most of the assets of Confluence Outdoor for an undisclosed price.

Officials with Laval, Quebec-based thermoformer Pelican said in a Dec. 16 news release that after acquiring the assets of Greenville, S.C.-based Confluence Outdoor, Pelican "now offers the most comprehensive assortment of paddle sports equipment in the industry, from premium brands to more accessible and reliable products."

"The combination of the two businesses will produce by far the largest and most comprehensive group in the paddle sports space," Antoine Elie, Pelican co-founder,

said in the release. "This paddle sports powerhouse will offer, under the best brands, a complete line-up of products spanning all paddle sports categories, catering to the needs of all types of consumers."

Confluence Outdoor makes kayaks, canoes, surf and standup paddleboards, as well as paddle sports accessories ranging from touring and recreational to high-performance fishing and whitewater products.

Pelican's products include kayaks, standup paddleboards, canoes, pedal boats and fishing boats. The firm's plant in Laval recycles more than 99 percent of the excess material produced in its manufacturing processes.

The combined firm will employ more than 800 at three North American manufacturing sites, officials added. The deal "is the optimal union of two industry leaders poised to drive

innovation and serve consumers better than ever before," Confluence Outdoor Vice President of Marketing Todd King added.

Confluence Outdoor ranked as North America's 13th-largest rotational molder in the most recent *Plastics News* ranking, with annual sales estimated at \$45 million. The firm had been owned since 2014 by private equity firm J.H. Whitney Capital Partners LLP of New Canaan, Conn.

Pelican ranked as North America's 31st-largest thermoformer in the most recent *PN* industry ranking, with annual sales estimated at \$75 million. In addition to Laval, the firm operates a second Quebec production site in Salaberry-de-Valleyfield.

'The combination of the two businesses will produce by far the largest and most comprehensive group in the paddle sports space.'

Antoine Elie
Pelican International Inc.



Confluence Outdoor makes kayaks, canoes, surf and standup paddleboards, as well as paddle sports accessories. Confluence Outdoor photo

Tariffs return on China-made injection molds

By Bill Bregar and Steve Toloken
Plastics News Staff

The U.S. government's reinstatement of 25 percent tariffs on injection molds from China will help U.S. tool shops compete by raising costs on one of their key international competitors but may hurt some plastics processors as they face higher prices for their molds.

That dual-edged impact emerged from interviews with executives and experts as they assess the U.S. government's decision to allow the mold tariffs to snap back into place Dec. 28, following a lobbying campaign by the mold building industry.

The Office of U.S. Trade Representative Robert Lighthizer appeared swayed by that effort, when it allowed a one-year exemption it had previously granted in December 2018 to expire, as 2019 wound down.

In a Dec. 23 news release, the American Mold Builders Association praised USTR for bringing the tariffs back and said it would help the smaller downstream manufacturers like their members better deal with pressure from China.

Tooling expert and consultant Laurie Harbour, as well, said the decision would help U.S. mold makers compete, although she said it could hurt plastics processors.

Even with the tariffs, she said American toolmakers will still face tough challenges.

"It's definitely not a silver bullet that solves the problem, but it certainly contributes to making this closer to a level playing field," said Harbour, who is president and CEO of Harbour Results in Southfield, Mich. "It's not a complete level playing field, but it certainly moves it closer and it gives the U.S.-based shops a better opportunity to compete."

In November, Harbour Results predict-

ed that 50-75 mold and die shops in North America will close in the next five years, the result of declining spending on tooling from the auto sector.

The USTR decision comes after a lobbying campaign in recent months by the American Mold Builders Association.

"This is an important victory for AMBA, its members and all small downstream manufacturers who have felt the pressure from China for years," Kym Conis, executive director of Indianapolis-based AMBA, said in a statement. "The Trump administration is doing what others have not — standing up to China. It heard our members loud and clear — the U.S. mold building industry has the capacity and expertise to fill any orders placed."

The tariffs were originally put in place in July 2018, in the first round of President

See **Tariffs**, Page 22

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NEWSCLIPS

Deck maker Azek planning IPO

Chicago — Azek Co., a major manufacturer of decking and related products, is planning an initial public offering.

The Chicago-based company, legally named CPG Newco LLC, will use the proceeds to redeem its outstanding 8 percent senior notes that are due in 2021 and for general corporate purposes.

"Azek has not yet determined the offering price and the number of shares to be offered," the company said in a Jan. 6 news release. The timing and other terms of the proposed IPO remain subject to market and other conditions, the company said.

Azek CEO Jesse Singh could not be reached for comment.

Azek's building products brands include TimberTech, Azek, Vycom and Scranton Products. In 2018, the company bought Versatex Holdings LLC, a maker of trim products including molding, corner boards, beaded profiles and soffit. Last year Azek opened a recycling facility in Wilmington, Ohio, to supply polyethylene for its TimberTech-brand composite decking.

Azek bought TimberTech from Crane Group in 2012.

Plastics News ranks Azek as North America's seventh-largest company in the most recent ranking of pipe, profile and tubing extruders, with estimated sales of \$515 million — all from profiles.

Raven opens East Coast factory

Sioux Falls, S.D. — Film and sheet manufacturer Raven Industries Inc. is expanding to the U.S. Eastern seaboard, opening a facility in Waynesboro, Va.

The Nasdaq-listed company announced Jan. 2 that it is setting up the factory to custom fabricate and warehouse products on the East Coast.

The Sioux Falls-based company said the Virginia plant will grow its engineered films division and a new unit launched in October, Raven Composites. The plant will start with five employees and expand based on demand.

"Having a presence on the East Coast will allow us to respond more efficiently to the needs of our customers," Anthony Schmidt, vice president and general manager of Raven Engineered Films, said in a statement.

The company's film and sheet unit has seven factories around the U.S., employing 496, with estimated 2019 fiscal year sales of \$227 million, according to a *Plastics News* estimate.

China exempts several plastics from tariffs

Washington — China announced Dec. 19 it removed tariffs on U.S. exports of several specific grades of plastic after Beijing and Washington announced the first phase of a trade deal.

The announcement included metallocene high density polyethylene, a linear low density PE grade and a copolymer of impact-grade polypropylene, according to the chemical news service ICIS.

The exemptions took effect Dec. 26 and last for one year. The development came in a brief announcement from China's Customs Tariffs Commission of the State Council.

Kelly Cui from Wood Mackenzie told Reuters that the exemptions could see China buying more HDPE and LLDPE from the United States, reversing tariff trade flows that had shifted U.S. exports to Latin America and Europe.

Germany's Hesta emerges from bankruptcy

Schwäbisch Gmünd, Germany — Hesta Blasformtechnik GmbH & Co. KG is back in business as a "new Hesta" under a new management board, following the company's bankruptcy in August.

German law firm Menold Bezler announced Nov. 29 that it had successfully transferred Hesta's business operations to a consortium led by former partner Gerald Weber.

Weber, who is listed as a shareholder on Hesta's website, was the former head of operations for Airbus GmbH. He left that role in 2011.

Hesta's bankruptcy was triggered by an order slump in the spring and summer of 2019, according to the law firm. Bankruptcy administrator Jochen Sedlitz, a partner and lawyer at Menold Bezler, said a "vast majority" of the jobs were saved.

Hesta makes extrusion blow molding machines for consumer packaging and automotive components. The company is based in Schwäbisch Gmünd.

PHA maker Bio-On declares bankruptcy

Bologna, Italy — Beleaguered Italian bioplastics company Bio-On SpA has announced bankruptcy following a Dec. 20 court decision in Bologna.

The court also ordered the temporary continuation of business to avoid dissolution of the firm, Bio-On said in a statement.

Based in Bologna, Bio-On is commercializing polyhydroxyalkanoate resins, a biodegradable polyester made by bacterial fermentation.

New limits from China on recycled pellets pose 'real threat'

By **Steve Toloken**
Plastics News Staff

A new Chinese policy that could significantly tighten standards and cut imports of recycled resin pellets to China is causing uncertainty in the market and may force Chinese manufacturers to switch to domestic or virgin materials, according to a Chinese recycling association.

Steve Wong, executive president of the Beijing-based China Scrap Plastic Association, said in a recent market update that the new policy, which takes effect in April, is "clouding the market" and could be difficult to comply with.

"A real threat felt by the industry is how soon the directive will

become a mandatory rule that requires strict compliance," Wong said. "It has been suggested that the requirements may switch the import of recycled pellets to domestic recycled pellets and prime materials."

China's 2018 National Sword policy that sharply limited imports of scrap plastic and paper caused some Chinese recycling companies to switch business models.

Instead of making recycled pellets or flake in China from imported materials, they've invested in factories in other countries, including Southeast Asia and the United States, to make plastic scrap into pellets and export those pellets to China.

But the new policy suggests

more hurdles for firms following that path, said Wong, who is also CEO of Hong Kong-based Fukutomi Recycling Ltd. and a member of the plastics committee of the Brussels-based trade association the Bureau of International Recycling.

"The new standard requires that all recycled pellets under the same shipment must have a consistent melt-flow index, impact strength, elongation at break and others of less than 3-5 percent quality differences," Wong said. "This will not be easy to comply with."

In the Dec. 20 statement from CSPA, he said recycled resin prices have also been taking a hit, as overcapacity in the virgin See **China**, Page 21

Molder, toolmaker DRS gets new life under Big Shoulders Capital

By **Bill Bregar**
Plastics News Staff

Northbrook, Ill., financial firm Big Shoulders Capital has purchased the assets of DRS Industries Inc., a tool maker and custom injection molder in Holland, Ohio, that specializes in short-run production and prototyping using aluminum molds, saving 35 jobs.

The owners now are Big Shoulders Capital and DRS President Craig Simon, who had been the tooling manager. Terms were not disclosed.

The 35-person DRS has manufactured parts for Ford Motor Co., Honeywell International Inc. and Vitamix. The company molded custom grilles for the 50th anniversary Mustang and the Camaro SS. DRS also works with Tesla — and Simon said the company has worked on four different autonomous vehicles.

Automotive accounts for about 20 percent of the company's busi-

ness. Other markets include aerospace, consumer products, construction and lighting.

The expertise of DRS in building hard-to-manufacture products means the company has built molds in Ohio and shipped them to China for use in molding parts assembled there. Diverse molds and products made by DRS include aircraft interiors, roofing parts, consumer self-defense items, handcuff holders for police, "self-healing" interior parts and headlights.

Simon said DRS is one of the few toolmakers that exclusively produce aluminum injection molds, instead of the traditional steel.

"Aluminum's thermal conductivity properties provide straighter parts, allowing us to build thicker parts and reduce warpage," he said.

DRW runs nine injection molding machines with clamping forces from 95-730 tons and more than a dozen machining centers for making molds.

DRS went into receivership in May 2019, with its prior lender, Simon said. Big Shoulders invested in the company, which has a skilled, loyal workforce, including younger mold makers, he said.

Alex Mazer, vice president of Big Shoulders, said the company has unique capabilities.

"We also see the opportunity for some synergies between DRS and our other portfolio companies and will actively look for bolt-on businesses, particularly amidst the automotive slowdown," Mazer said.

Simon acknowledged that there could be other acquisitions, but he said the immediate goal is to continue a turnaround begun in 2019, when the company was profitable.

"The biggest thing is getting back on a good basis of prototype and low-volume production, and then we'll see where it grows from there," he said.

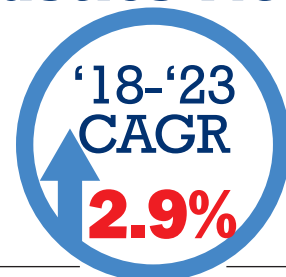
With the new infusion of capital, "we're ready to take off," Simon said.

Plastics News **FYI**

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LaunchLogic technology is being rolled out at a time New Berlin Plastics is seeing year-over-year growth serving the power sport, automotive, consumer goods, industrial, electrical and other markets.

New Berlin Plastics Inc. photos

New Berlin Plastics hones product launch process

By Catherine Kavanaugh
Plastics News Staff

Injection molder New Berlin Plastics Inc. has updated its approach to product launches with proprietary software to improve communication and collaboration between its engineers and customers.

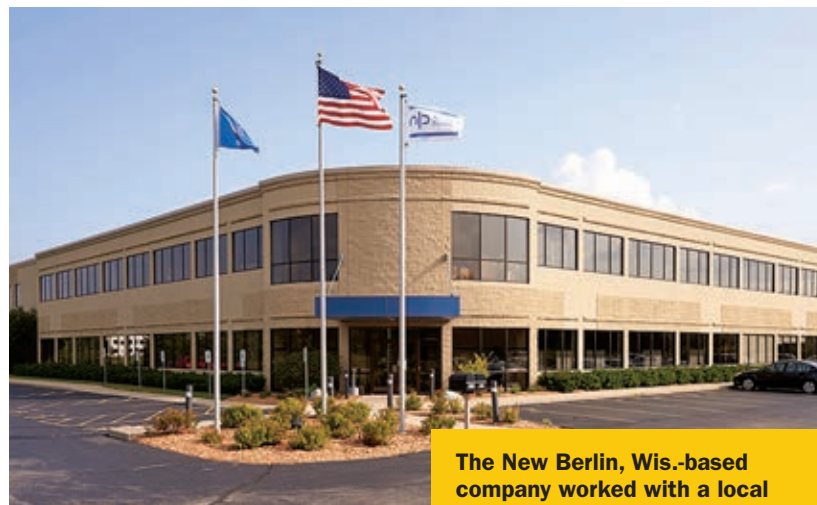
Founded in 1975, the New Berlin, Wis.-based company worked with a local software firm to put its concept for streamlining and optimizing product launches into code. Called LaunchLogic, the program manages actions required of project participants and alerts them to tasks not completed.

The new technology is being rolled out at a time New Berlin Plastics is seeing year-over-year growth serving the power sport, automotive, consumer goods, industrial, electrical and other markets.

“In order to accommodate this growth, we need to become the best we can at project launches,” New Berlin Plastics President James Schneberger said.

The molder typically has 80-120 programs running through launch, be it new tools, transferred tools, engineering changes or continuous improvement projects, Schneberger said in a phone interview.

“LaunchLogic is an accelerator that improves communication, agility, and responsiveness regarding our project launches,” he said.



The New Berlin, Wis.-based company worked with a local software firm to put its concept for streamlining and optimizing product launches into code.

The program improves communication by creating a single document that contains all the relevant information and updates associated with a project launch, Schneberger explained. The document is delivered weekly to all project stakeholders. Customers can choose the day the updates are sent and the distribution list of who gets the information.

Schneberger said LaunchLogic allows the launch team to be more agile by automating the compilation and distribution of update reports rather than tasking a project engineer with manually producing the documents for every project they are managing.

vided that information, we’re going up the chain of command to make sure we have what we need to make our project a success,” Schneberger said.

LaunchLogic was in the development and testing phase for the last year, he added. New Berlin Plastics found a local software firm to work with through the Wisconsin Management Extension Partnership.

The software has been used on more than 100 customer projects already and Schneberger said 98 percent of them launched on time.

“Having all internal stakeholders participate in this manner allows for transparency of to-dos, concerns and visibility to program tracking by all,” he explained.

The software represents a “fairly significant” investment for the company following a lot of work behind the scenes, according to Schneberger.

“The bigger investment has been developing the skills and processes internally related to our launch team that really forms the foundation this software is built on,” Schneberger said. “LaunchLogic is an accelerator for the process we have already developed. Becoming great at project launches isn’t about software; it’s about culture.”

The second generation of LaunchLogic is in development, and it will give customers a portal to view their project status in real time any time.

“This allows our engineers to focus on moving projects forward instead of writing reports,” Schneberger said, noting that product launches usually take an average of 18-20 weeks depending on a variety of factors.

The software encourages all participants to respond in a timely manner about the project’s schedule, scope and challenges by escalating unresolved prompts.

“If we need information from a customer in order to move a project forward and we aren’t being pro-

Italy's OMG may build thermoforming machines in US

By Audrey LaForest
Plastics News Staff

Turin, Italy-based OMG srl sees big potential for thermoforming in the United States, and the company is making strategic moves to position itself for the growth.

As part of the effort, the Italian machinery manufacturer is considering plans to build machines at its facility in Arlington, Texas.

Luciano Garcia, U.S. sales manager at OMG Thermoforming Inc., the parent company's U.S. subsidiary, said the goal would be to start building machines here — about eight machines per year — in 2021. But that depends on demand, he explained.

“Once we have bigger demand, and we start growing a little bit more, we will plan to start building machines in the U.S. and have them ready in the U.S.,” Garcia said in a phone interview with *Plastics News*. “Instead of shipping them from Italy, previously, they will be created here in the U.S. specifically.”

OMG, which has been selling machines in the U.S. since 2000, is a newcomer to the region in terms of the company's physical presence. It only established a brick-and-mortar site in 2018, though the company has already grown into a larger leased space in Arlington.

Now, OMG occupies 15,000 square feet there, which means more room for inventory, spare parts and the potential to start building machines, Garcia said.

“We wanted to make sure that we have all the bases covered and the U.S., to be honest, it's a market that's growing way, way faster than we thought it was,” he explained. “There's a huge market share that's available, and we're trying to get in.”

But with the volatile nature of the business and regional headwinds, especially in politics as the U.S. readies itself for a pres-

idential election in November, Garcia said OMG's decision to build machines here depends on how well the company does this year.

“With the political arena that we're in and everything, for us, it's important to make sure that we play our cards right,” he explained. “We are a firm believer that if we're able to build machines here, first of all, it will be faster for the customer ... but it also creates a [safety] net, and if you need something, you can get it.”

The Arlington facility was initially established to store and retrofit thermoforming machines for delivery to customers and to stock spare parts. It also houses operations for sales and distribution.

“Our goal was to start the facility, be able to support — from a local perspective — the current customers that we have and also expand the business with the potential of creating the machines here in the U.S. in the future,” he said.

The company employs two people in Arlington, with plans to add a technical support person “soon,” Garcia said. The machinery maker already has two technical support employees — one in Massachusetts and the other in Canada — as well as additional support from the headquarters in Italy.

Garcia said OMG tries to have at least one to three technicians available at all times, offering 24-hour support to customers.

“My philosophy is that once a customer buys [a machine], we are with you from the moment you start talking to us to the moment the machine runs out of life,” Garcia said. “We try to really make sure that the customer is satisfied throughout the process and all the way up to the end of the life of the machine.”

OMG makes several kinds of thermoforming machines, including thin- and heavy-gauge

models, among others.

On the U.S. sales team, Garcia is joined by Matthew Broesche, assistant U.S. sales manager, and Pietro Caiani, vice president of North American sales. The company is hosting an open house Feb. 18-20 at the Arlington facility, where it will have a machine running live demonstrations.

“We're very excited to have the opportunity that is lying ahead,” Garcia said. “Obviously, we need to make sure that we are keeping with the trends, keeping with the new technology. ... We are really trying to stay one step ahead.”



OMG Thermoforming makes several kinds of thermoforming machines, including thin-gauge and heavy-gauge models, among others. OMG Thermoforming Inc. photos



OMG Thermoforming occupies a 15,000-square-foot space in Arlington, Texas. The facility stocks spare parts and houses additional sales and distribution operations.



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Resolution for 2020: Improve the image of plastics

Imagine you have \$10 billion to spend on a new resin plant that will create more than 1,000 good jobs. But key community leaders make it clear that your project is not welcome.

Or you have a few million bucks to build a compounding factory in a small town in Ireland. You have family ties there, and you want to help the local economy with 40 new jobs. But residents use all their political clout to stop the project.

Those aren't imaginary scenarios. They happened to plastics companies in 2019. Negative public opinion about plastic was so widespread that some communities turned down, or at least fought to stop, investments by plastics companies that promised good jobs.

If your company doesn't make plastic straws or grocery bags, you might think you're immune to the ill effects of the single-use plastic debate. But negative public opinion is starting to cause real harm to the industry.

In 2019, when machinery companies reported slumping sales, they didn't just blame the economy. They cited the war on plastic, too.

The plastics industry has responded. More than 40 companies now support the Alliance to End Plastic Waste. More than 400 organizations have signed the Ellen MacArthur Foundation's New Plastics Economy Global Commitment.

On top of that, brand owners have announced plans to pursue a circular economy strategy for plastics. In most cases, that means making sure all their plastic packaging is recyclable, in addition to boosting their use of recycled plastic.

If these efforts are successful, the plastics industry will look a lot different 10 years from now. We'll see an industry with a better public image. We'll see an industry enjoying sustainable growth.

If they're not successful ... well, I think the industry will look a lot different then, too. And it won't be pretty. The status quo isn't an option.



Editorial agenda

We've published our editorial agenda in the first issue of *Plastics News* every year since 2001, and we've been consistent in saying that safety must be every company's top priority. That includes keeping workers safe and making products that consumers can use with confidence.

Our agenda is the foundation for our weekly opinion columns, and it offers a blueprint for a prosperous and sustainable plastics industry. With the start of a new year, *Plastics News* updates and restates its editorial agenda:

- The industry needs to do more to highlight the benefits of plastics. We need to do more to encourage recycling. Americans, with the encouragement of the industry, have become too comfortable in their habit of throwing away used plastics. Now that bad habit has gone global.
- Profitability and sustainability are not mutually exclusive concepts; true sustainability will result in long-term health for the plastics industry.
- Consumers, regulators and legislators have a responsibility to

deal with plastics-related issues without bias. Bans and taxes that encourage replacing plastic products with less sustainable alternatives must be discouraged.

- Fairness and honesty should be key parts of business relationships. Would your mother be proud of the way you do business? If not, you'd better reevaluate your efforts.

- For too long, plastics have suffered from an image problem. The industry must combat misinformation by highlighting the benefits of plastics.

- Sustainability is a priority. Companies should consider sustainability when making decisions about resource utilization, including material selection and energy use.

- Recycling must be encouraged. The industry should support state and national bottle bills since bottle-deposit programs have proved effective in collecting a clean, valuable recycling stream.

- Companies and their leaders should take an active role in their communities and in trade groups. Local officials need to be aware of the plastics industry's size and importance, so they know that plastics are a significant employer and contributor to the local, national

and global economies.

- The industry should speak with a unified voice. This requires cooperation at all levels of the leading trade associations, as well as international and regional groups and with business, consumer and environmental organizations.

- The free market is the best mechanism for raising the standard of living, encouraging democracy and rewarding hard work. Free trade encourages efficiency and inspires stability around the world. Government tax policies should motivate entrepreneurs and investors, help industry compete globally and strive for fairness.

- All sectors of the plastics industry must recruit and retain talented workers. That means paying a fair wage and offering attractive benefits. Having a well-trained and flexible workforce is a competitive advantage, so employers should support education and training. Employers also should embrace diversity in their workforces, including opportunities for women.

Loepp is editor of Plastics News and author of the Plastics Blog. Follow him on Twitter @donloepp.



Loepp

PERSPECTIVE

As politicians parse plastics bans, it's time for industry to get proactive

STEVE TOLOKEN is an assistant managing editor for *Plastics News*.

2020 is shaping up to be an even more eventful year for debates around plastic waste and plastic pollution than 2019 was. And that's saying a lot, considering that 2019 opened with plastic bag bans in

two states, California and Hawaii, but will close out with six more.

The pace of plastics packaging legislation continued, even as 2019 wound down. New York Gov. Andrew Cuomo, for example, proposed on Dec. 17 that his state add a polystyrene foam food packaging ban. New York already has a bag ban.

In January, California's legislature is expected to take up huge packaging bills that nearly passed last year, and other states will also keep debating plastics and packaging laws. More than 200 bills related to plastics pollution were introduced in 34 states in 2019, according to the National Caucus of Environmental Legislators.

On the federal level, Congress, with several legislative proposals of its own and the formation Dec. 10 of the Congressional Plastics Solutions Task Force, will keep elevating the issue.

How to pay?

Underlying all of it, I think, will be

the question of how to pay for the recycling infrastructure that industry, environmental groups and governments all say is needed.

I can see 2020 putting the plastics industry under more pressure to agree to some viable, long-term revenue sources to fund infrastructure upgrades.

For example, a California plan floated by the American Chemistry Council's plastics division would raise \$100 million from a three-tenths of a cent fee on take-out food packaging of all material types, not just plastic. ACC suggested it is open to that fee in other states and federally.

California voters may also decide on a plastics packaging referendum

in November that would put a fee of up to a penny on plastic and some paper packaging, raising an estimated \$1 billion a year.

Right now the plastics industry's answer in Washington is the RECOVER Act, a bill that would commit \$500 million of federal tax money over five years to matching grants to help local governments and organizations build out recycling infrastructure.

But with estimates of the real need in the billions of dollars, that doesn't look like enough.

I think the industry as a whole, including other plastics trade groups, should consider getting behind national versions of what the ACC is

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Plastic Omnium CEO: Plastics have a bright future

By Peter Sigal

Automotive News Europe

Laurent Favre has stepped into the CEO job at Plastic Omnium as the first nonmember of the Burelle family to hold the job and at a time the company is looking at ways to control costs in an auto industry that is not expected to see growth for the next few years.

Plastic Omnium told investors Jan. 7 that it expects “no rebound” in the global automotive market in the next three years, and the company will need to manage its cost structure to ensure profitable operations but will post higher earnings and sales for 2019, but a lower operating margin.

Sales would be about 9 billion euros (\$10 billion), up from 8.2 billion euros, Plastic Omnium said.

“With no expected rebound in the worldwide automotive market over the next three years, this will firstly require the proactive management of our cost structure and the strengthening of our balance sheet,” Favre said in a news release.

Global auto production will fall by 2 percent in 2020 and remain stable in 2021-22, the company said.

Plastic Omnium will focus on reducing debt and will cap investments at 6 percent of revenue, the company said.

Short-term cash flow had been hurt by issues with a new factory in Greer, S.C., the supplier said. The difficulties at the factory led Plastic Omnium to cut its 2019 outlook to 6 percent.

Plastic Omnium supplies blow molded fuel tanks and injection molded functional exterior parts, such as grilles and front-end modules through its HBPO joint venture.

In North America, its Plastic Omnium Auto Exteriors LLC group is No. 16 in *Plastics News*' most recent ranking of injection molders with an estimated \$425 million in sales. Its fuel tank business, Plastic Omnium Auto Inergy Division ranks No. 6 among North American blow molders in *PN* data, with \$1.4 billion in sales.

Favre, 48, who started in his post on Jan. 1, was most recently CEO of the automotive division at Benteler, which makes structural parts. He has also held management posts at ThyssenKrupp and ZF in his 23-year automotive career. Favre spoke to *Automotive News Europe* Correspondent Peter Sigal about his vision for the supplier.

Q: What is your first task at Plastic Omnium?

Favre: It's about continuing the successful growth of the company. Plastic Omnium had 1.5 billion euros (\$1.8 billion) in revenue in 2001, when Laurent Burelle took over the CEO position, and in 2019 we'll be at more than 9 billion euros (\$10 billion), which is a fantastic story. The automotive industry is facing many major changes like never before, but I'm convinced that they are great opportunities for Plastic Omnium — because we have a very healthy balance sheet and because we are a market leader in all our businesses. We have

a global footprint with more than 130 factories; we have more than 20 R&D centers around the world. Our base is a perfect fit with the automotive industry.

Q: Do you have a vision for the company in five years, or even longer term?

Favre: One of the characteristics of Plastic Omnium is that we are long-term driven, mainly because we have a very stable and solid shareholder structure. I believe that the future of mobility is clean and connected, and that's where we want to play a major role. We think we're still able to gain market share, but the next step will be to increase content per car. That means integrating functions and working with customers in more and more complex assemblies.

Q: What's an example of integrated components?

Favre: Today Plastic Omnium is producing products; tomorrow we want to produce functions. That means integrating radar, lidar or lighting, for example, into our exterior systems. We are doing that in our cooperation with Hella for bumpers and with Brose for doors. That's really the transformation we are working on, from a product supplier to a function supplier.

Q: Plastic Omnium has three main units — Clean Energy, Intelligent Exteriors and Modules. How do you see them developing?

Favre: In exteriors, in addition to integrating functions, we're focusing on lightweighting and aerodynamics, which helps customers improve their CO2 emissions and increase range for electric cars. In clean energy, we have solutions for hybrid technology, such as fuel tanks for plug-in hybrids that are very complex. We've also been investing in hydrogen fuel cell technology. In front-end modules, we're the leader with our HBPO joint venture (with Hella), and

we're developing new modules to increase the content per car, for example to add cockpits or DC-to-DC converters for hybrid cars.

Q: What is different about your tanks for plug-in hybrids?

Favre: You need to think about deformation when the car is running on pure electric power, so the tanks have internal reinforcements. It's also about acoustics, because you need to prevent the slosh noise from the gasoline. All the additional technologies we bring into this PHEV tank creates higher content for Plastic Omnium.

Q: How do you see your fuel cell order book developing?

Favre: We take a longer view of the market for fuel cells. We have invested about 200 million euros (\$222.6 million) in hydrogen technologies since 2016, we have R&D centers in Europe and China, and we have many strategic partnerships and a dedicated business unit for new energies. We are coming from tanks, where we're the market leader for combustion engines. We already have an order from a German manufacturer to develop a 350-bar tank and we are the first player to have a 700-bar certified pressurized tank. Tanks



Above: Plastic Omnium supplies blow molded fuel tanks and injection molded functional exterior parts, such as grilles and front-end modules through its HBPO joint venture.

Right: Plastic Omnium has developed carbon fiber tanks for hydrogen storage needed on fuel cell cars. Plastic Omnium photos



are only the first steps, because we see a market for 2 million vehicles by 2030. So our long-term target is to be able to supply the complete system.

We think that hydrogen will be one of the major clean mobility solutions. It will probably be combined with batteries, in a kind of hybrid system. Wider use will start with buses and trucks, then with fleets, but it will be mainstream in the long term.

Q: Other companies are working to deliver a complete fuel cell system, too. What are Plastic Omnium's advantages?

Favre: First of all, it's good to see others entering the market. It demonstrates that we are on the right path and that the technology has a future. Where we can differentiate is that we've started ahead of many others; we already have the tank technology, an important step in terms of safety. We have also partnerships and have invested recently in AP Ventures, a venture capital fund dedicated to hydrogen.

Q: Plastic Omnium has a big China business. Have you had to adjust to the slowing market there?

Favre: We continue to grow in China, and in 2019 it was the country where we outperformed the market the most. In the first nine months of 2019, the market was down 13 percent, but we grew by 4 percent. We don't see a recovery in 2020 but our growth will still be solid. We have 26 factories in China and we've launched a R&D center in Wuhan, focusing on hydrogen; we are covering all the main clusters; and we have a balanced portfolio between global and domestic automakers.

Q: How do you see the European market?

Favre: The European market is

facing two main challenges: First, it's saturated, so volume growth opportunities are limited. Second, because of CO2 targets and local pollution regulations, all the engine options are available but consumers are a bit lost in this complexity. For those reasons, we think the market will decline in 2020. We're adapting our cost structure, but we'll continue to grow by increasing content per vehicle thanks to our innovations.

Q: Will you be affected by Brexit?

Favre: We have factories in the United Kingdom and Jaguar Land Rover is one of our major customers, but we produce in the U.K. for their U.K. factories and in Slovakia for the factory there, so we're not dependent on what's happening with Brexit. One of our strengths is that we produce where the customers are, so we can balance risks that way.

Q: The idea of sustainability is becoming more important. As a company that uses plastics, are you working on those issues?

Favre: We produce systems with functions integrated. So actually, plastics is only 9 percent of our total purchase. On the other hand, delivering plastic components like bumpers and tailgates is a huge contribution for automakers to lower emissions. These parts are lighter than equivalent steel parts. We have also been decisive in the area of corporate and social responsibility, and part of it is reducing CO2 emissions not

only in how we produce but also in our complete supply chain.

Q: Are you researching biomass plastics and other renewable alternatives?

Favre: Yes, but a big part of what we do produce we can recycle, almost 90 percent, including scrap. It's a balance we need to find, because we need to make sure a renewable material has the same kind of properties in terms of resistance and elasticity as traditional plastics. We also have to consider processes and costs.

Q: Regarding lightweighting, is there any way you can quantify some of the gains?

Favre: If you take a bumper or tailgate made of steel, you will save 30 percent using plastic. Think of a simple equation: When you're able to reduce the weight of the car 10 kilograms, you can save one gram of CO2. We think we can extend that from the bumper to the tailgate and then to the door to the roof. It's also a question of aerodynamics and design, because you can form plastic into shapes that you can't do with metal.

Q: In the future, if we have autonomous vehicles and many fewer accidents, we might not need so much steel in a vehicle?

Favre: Plastics is the only material that is 100 percent transparent to radar waves. The autonomous car, full of radar, lidar and sensors, will be made of plastic parts with connectivity integrated. That indicates that plastic has a bright future.

NUMBERS THAT MATTER

WITH BILL WOOD



'Numbers That Matter' by Bill Wood appears in *Plastics News* twice monthly. It takes a close look at data and trends to help plastics company managers forecast next quarter and next year.

Sticking to the baseline: Extremely average growth on the horizon

I have recently become fascinated by the mysterious blue tent on the sidelines of NFL games. If you watch football, you probably know this newfangled tent is where players who are suspected of having a concussion are taken to have the NFL's concussion protocol administered. For those of you not familiar with this process, I will offer an oversimplified explanation.

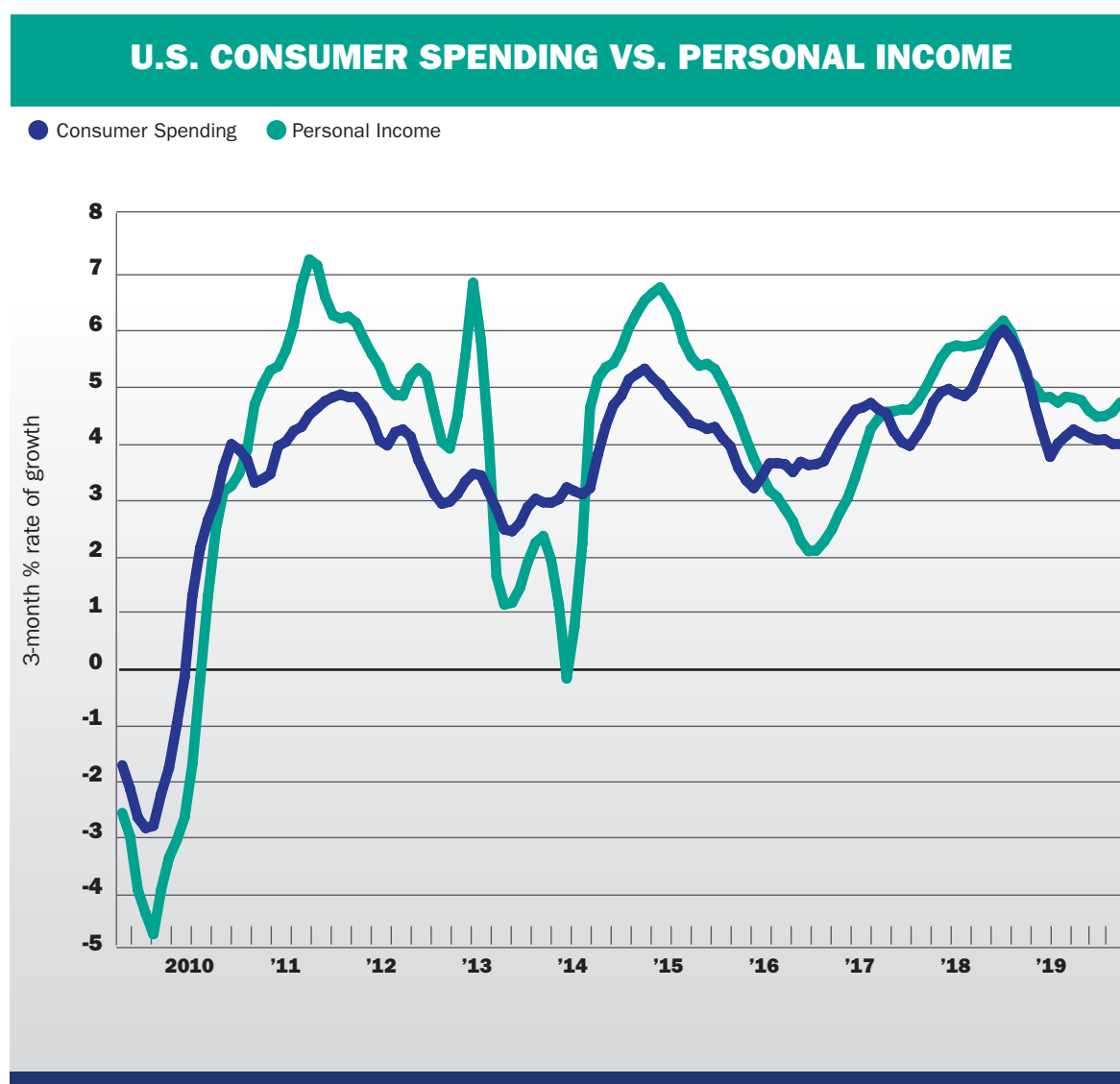
The player goes into a dark room (or tent) and is given a test on a computer designed to measure his cognitive abilities at that moment. Concussions measurably impair one's cognitive abilities in the short term, so a player cannot return to action until the speed and accuracy of his answers on this test return to "baseline" status. In order to establish a baseline, every player has to take a similar test before the season starts.

The reason for my fascination with the concussion protocol is that this process is starting to remind me of the way I have started to analyze and forecast the performance of the U.S. economy and the plastics industry. During the past decade, we have certainly established a baseline for the vital economic and manufacturing sector indicators. And now when something happens that might cause either a slowdown or an acceleration in the economy, I have started to look to see how much the indicators are deviating from this baseline.

For the past few months, I have touted the notion that the overall performances of both the U.S. economy and the plastics industry in 2020 will mainly depend on the behavior of the American consumer. This is not a revolutionary idea. Consumers account for roughly 70 percent of total U.S. GDP, and they also purchase most of the plastics products manufactured in this country.

Two of the most important trends that illuminate and anticipate U.S. consumer behavior are the rates of growth in the monthly data series measuring consumer spending and personal income. At the present time, both of these series are performing absolutely, incredibly, magnificently ... steady. For the past year, they have been pinned right on their long-term baselines.

On the chart, I show the three-month rate of change graphs derived from these data series since the end of the Great Re-



When I combine the consistent 10-year performances in this data with the extremely average performance from last year, I derive a forecast for the U.S. economy and the plastics industry in 2020 that comes in right around the baseline ... again.

cession in 2009. Keep in mind this chart measures the rate of growth in these data, not the actual levels. So if the curve is above the zero-line, then the three-month growth rate in the data is positive when compared with the same three-month period of the previous year.

According to the chart, the growth rate for total consumer spending has stayed close to the 4 percent line for the past 10 years. From a historical per-

spective, this pattern is unusual because it is relatively flat rather than cyclical. Growth jumped up to the 6 percent level in 2018, due primarily to the tax cuts implemented that year, but then settled back to the 4 percent line for all of 2019. It is interesting to note that the 10-year average growth rate is exactly 4 percent. That's what you call a solid baseline.

The pattern in the data for personal income was a little

more volatile during the past decade, but here again the baseline was pretty stable by historical standards. The 10-year average for growth in this series is 4.4 percent, and it averaged just a bit higher than that in 2019.

I find it particularly gratifying that the long-term average rate in income is moderately higher than the average growth in spending. We all want to make more money, and many of us also would like to spend more, but it is important for the long-term health of the economy that we collectively stay within our means. That is the best way to prevent severe recessions.

You should note these data series are not adjusted for inflation. If you estimate that inflation was a bit below 2 percent for the past 10 years and then factor this into the data, you come up with spending growth of just above 2 percent and income growth of roughly 2.5 percent. These figures correspond nicely with the 10-year average

We have recently experienced some events that some predicted would give us the economic equivalent of a concussion. These include the impeachment of the president, tariffs on imports of Chinese goods and, just in the past few days, the killing of a major Iranian military leader.

in real GDP growth in the U.S. of just about 2 percent.

When I combine the consistent 10-year performances in this data with the extremely average performance from last year, I derive a forecast for the U.S. economy and the plastics industry in 2020 that comes in right around the baseline ... again. Income growth has started to creep up, and I hope this continues. But the inflation data is also starting to drift upward, so at the moment I am not forecasting much change in the overall growth rate for real spending.

It is impossible to predict what it will take to push these graphs away from their baselines. We have recently experienced some events that some predicted would give us the economic equivalent of a concussion. These include the impeachment of the president, tariffs on imports of Chinese goods and, just in the past few days, the killing of a major Iranian military leader.

But so far, I have yet to see any meaningful decline in the baseline performance. There is always a lag in the data, so it is still possible the combination of these or some other events may pull the data down this year. But we must also remember that not all surprises are bad. There is also the chance some currently unknown event just over the horizon will push this data higher. For instance, who predicted the stock market would gain 30 percent last year?

As industry ramps up Operation Clean Sweep, critics push for more

By Steve Toloken
Plastics News Staff

‘We need the federal government to finally regulate plastic pollution, and this includes zero discharge of plastic and strong enforcement.’

Washington — The plastics industry unveiled changes Dec. 13 to strengthen its voluntary Operation Clean Sweep program to reduce pellet pollution from its factories, but environmental groups monitoring the issue questioned industry self-regulation and called for a tough zero discharge standard.

The American Chemistry Council and the Plastics Industry Association, which jointly administer OCS, said they were strengthening the program by requiring companies to report “unrecovered releases” greater than 0.5 liters or 0.5 kilograms. That information will be aggregated and reported publicly annually.

“Companies that make plastics are deeply committed to continuous improvement in all aspects of their operations, and we’re making it a priority to enhance the rigor and transparency of our pellet stewardship program,” Steve Russell, vice president of ACC’s plastics division, said.

But environmental and investor groups that have filed lawsuits and shareholder resolutions over pellet pollution said the changes fall short.

They argue that a \$50 million federal court settlement against Formosa Plastics Corp. USA this year for pellet pollution

in Texas means industry can’t self-regulate and that stronger enforcement is needed. The federal judge in that case ruled that Formosa was a “serial offender.”

“While today’s announcement is fine, it is voluntary and doesn’t come close to what is going to be required to ensure plastics companies stop discharging plastic into waterways across the country,” said Julie Teel Simmonds, a lawyer with the Center for Biological Diversity.

“The recent Formosa lawsuit shows that plastics companies aren’t going to self-regulate, and the state agencies often do no better,” she said.

Her group, which is active in pellet pollution action nationally, called for the mandatory zero discharge standard that Formosa agreed to in the court settlement, which was finalized Dec. 3, to become an industry standard.

“We need the federal government to finally regulate plastic pollution, and this includes zero discharge of plastic and strong enforcement,” said Diane Wil-

Diane Wilson
San Antonio Bay Estuarine Waterkeeper

son, a plaintiff in the lawsuit and a member of the San Antonio Bay Estuarine Waterkeeper group.

Beyond regulations, the Formosa settlement shows that companies face financial risk over pellet pollution, according to socially responsible investment firm As You Sow.

“The recent \$50 million settlement by Formosa Plastics for pellet spills demonstrates the financial risks to companies and their investors from poor handling practices and the need for individual corporate accountability,” said Conrad MacKerron, senior vice president.

As You Sow brought shareholder resolutions in 2019 against ExxonMobil Chemical Co., Chevron Phillips Chemical Co. and Dow Inc. To settle those complaints, the companies agreed to individually disclose pellet spill information.

MacKerron said the OCS policy should also be for individual company disclosure, rather than industry aggregated reporting.

He said his group plans to bring more pellet pollution



Plastic pellets and material pooling in the water near a Formosa Plastics Corp. plant in Texas, where members of the San Antonio Bay Estuarine Waterkeeper meet for their monitoring.

Plastics News photo by Steve Toloken

shareholder resolutions in 2020. Industry officials, however, said the changes to OCS were a good step forward.

Russell said ACC plastics division companies have committed by 2020 to implement the OCS Blue standard, a more stringent set of OCS practices industry adopted two years ago, and are on track to do so. The original OCS program started in 1991.

Companies that participate in the OCS Blue program agree to conduct regular training, audits

and inspections, implement prevention and management procedures and report some information to the trade association.

The new standard for reporting unrecovered releases applies to OCS Blue participants, the industry groups said.

“Our members are part of the solution when it comes to eradicating plastic waste in our oceans and waterways,” Tony Radoszewski, president and CEO of the Plastics Industry Association, said in a statement.

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PolyOne to buy Clariant Masterbatches in \$1.45B deal

By **Shahrzad Pourriahi**
Plastics News Europe

PolyOne Corp. has struck a deal with Clariant AG to buy its masterbatches business for \$1.45 billion.

The agreement, announced Dec. 19, follows months of speculation and failed discussions between Clariant and Sabic.

Set for completion in the third quarter of 2020, the transaction values the Clariant business at \$1.56 billion, representing

roughly 11.1 times the annual earnings before interest, taxes, depreciation and amortization (EBITDA).

"It's a perfect match and one that aligns with the world's megatrends," PolyOne CEO, President and Chairman Robert Patterson said in a conference call. He also termed the acquisition "truly transformational," adding that the combination will make PolyOne a \$4 billion business that will be "truly global."

The deal includes the sale of

Clariant's global masterbatches business, with \$1.1 billion in annual sales, and a separate agreement to sell the masterbatches business in India for \$60 million. Clariant referred to the value of the sale at nearly \$1.6 billion in its news release. Patterson said the difference between the two companies' numbers is due to accounting differences based on how each firm lists leases.

Avon Lake, Ohio-based PolyOne was formed in 2000 and will



Clariant's masterbatches business offers color and additive concentrates and performance solutions for plastics. Clariant AG photo

mark its 20th anniversary in 2020, Patterson said. It posted 2018 sales of \$2.9 billion.

With the Clariant operations, it will add 46 manufacturing operations and technology centers in 29 countries and about 3,600 employees. They will be added to PolyOne's Color, Additives and Inks segment.

The closing of both transactions is subject to all customary closing conditions and regulatory approvals.

Patterson noted that PolyOne will continue to seek out additional acquisitions to fill openings in its composites operations.



Patterson

The divestment fits within the strategy launched by Clariant in 2015 to streamline the company's portfolio and concentrate on the three core business areas of Care Chemicals, Catalysis and Natural Resources.

As part of that strategy, Clariant sold its health packaging unit to New York-based private equity firm Arsenal Capital Partners for 280 million euros (\$312 million) earlier in the year.

"This announcement is a significant milestone on our path to focusing on businesses with above-market growth, higher profitability and stronger cash generation," Clariant Chairman Hariolf Kottmann said in a news release.

The company also expects to divest its noncore pigments business in 2020 as it builds "the new, more focused" Clariant by 2021, Kottmann added.

In July, negotiations between Clariant and Saudi Basic Industries Corp. (Sabic) fell apart as the two sides failed to reach agreement over the creation of a "a new stand-alone specialties business," which combined Clariant's additive and masterbatch business with parts of Sabic's engineering resins business.

At the time, the companies said plans for the joint venture had been shelved due to "current market conditions" and could be picked up at a later stage with a different scope.

According to Clariant, the proceeds from the divestment of noncore activities will be used to invest in innovations and technological applications within the core business areas.

Clariant's masterbatches business offers color and additive concentrates and performance solutions for plastics. In the financial year 2018, ended September 2019, the unit generated sales of around \$1.15 billion.

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P&G's Imflux heads to school

By Bill Bregar
Plastics News Staff

Shawnee State University's Plastics Engineering Technology program is one of five colleges to receive an Imflux system for training.

Imflux photo



Students at Shawnee State University's Plastics Engineering Technology program are getting exposure to the Imflux low-pressure injection molding process, thanks to a system the company installed on a 100-ton Milacron Roboshot injection press at the Portsmouth, Ohio, school's Advanced Technology Center.

Imflux is a business of Procter & Gamble Co., developed to mold using constant, low pressure and slow filling. It's the opposite to conventional high-pressure, fast-fill injection molding.

Larry "Skip" Miller, a professor in the department of engineering technology, said the Imflux donation — which includes instruction — will help Shawnee State give its plastics students a well-rounded education.

"They're giving us the opportunity to not only teach scientific molding but also the Imflux technique that is totally different," he said.

P&G, the consumer products giant, founded Imflux in 2013. Imflux runs out of its own facility in Hamilton, Ohio, a suburb of Cincinnati. Shawnee State is in Portsmouth, about 125 miles away along the Ohio River.

The university began offering a two-year associate degree in plastics technology in 1971. It expanded to a four-year bachelor's degree in 1989.

Shawnee State has placed five graduates at Imflux, and that connection is paying dividends for the school. Rick Pollard, a Shawnee State graduate, served as the lead educator for the Shawnee project. Imflux process engineers Miranda Metzung and Justin Meyer, also alumni of the

plastics program, installed the system and are doing the training for both students and faculty.

Shawnee State has about 100 students in its plastics program. The school held a Plastics Day on Dec. 6 that drew 180 people from the community, Miller said.

Jodi Hammock, Imflux's director of human resources, education and customer experience, said the leaders of the technology company decided in mid-2019 to spread the message to universities.

"As we were talking about our strategy and how to you get the

industry talking about the [system], we thought, what better way to do it than to reach the students who are going to be using it in their careers?" Hammock said.

Pollard said when the decision was made to reach out to colleges, he immediately thought of his alma mater in Portsmouth.

Hammock said Imflux is planning to work with five schools offering plastics education.

Imflux automatically adjusts for viscosity changes, allowing the molding of a wider range of

materials, including recycled plastics. Miller said the recycled angle will help another area company, PureCycle Technologies Inc. in Ironton, Ohio.

PureCycle's recycling process was developed and licensed by P&G to convert polypropylene to near-virgin quality. The technology also could handle polyethylene, PureCycle officials have said.

The installation of Imflux continues a renovation and upgrade of the Plastics Manufacturing Lab, located in Shawnee State's Advanced Technology Center. Con-

tributions have come from major companies such as Milacron, KraussMaffei Group, M. Holland Co. and Stanley Electric U.S.

Miller said when plastics firms help universities with equipment, materials and the expertise of their people, it benefits both the business and the students, who will be the plastics industry employees of the future.

"We're encouraging companies to work with universities to get their technology out to the students," Miller said.

Tessy adding injection and clean room space

By Bill Bregar
Plastics News Staff

Tessy Plastics Corp. will invest \$20 million in 2020, much of it to add more clean room space and investing in injection presses at one of its factories in Elbridge, N.Y.

The project includes molding and assembly of a surgical filtration device. The company moved deodorant stick production to another plant to make room for the new medical work.

Tessy will also add 100,000 square feet of warehouse space to the building, known as the South

Plant, for the medical customer, President Roland Beck said in a Dec. 24 telephone interview. That factory currently measures 190,000 square feet, including 69,000 square feet of warehouse space.

Tessy will create 50 additional jobs.

In late 2017, the company relocated the deodorant work from its South Plant to the North Plant, in nearby Baldwinsville, N.Y., to mold, assemble, pack and ship from one location. The move freed up space in the South Plant.

Beck said that Tessy won business from a new medical customer

in 2019 for the single-use product. The finished assembly, made up of seven molded components, is a filtration device that goes on a surgical suction instrument that collects specimens, he said. It filters out polyps and other objects for testing.

He declined to identify the customer. The medical product probably won't go into production until 2021, Beck said.

For the new project, Tessy is adding eight injection molding machines of up to 420 tons of clamping force. Two of them are for molding liquid silicone rubber components.

The investment also includes an automated assembly line for producing 13 million assemblies per year, Beck said.

The customer had originally wanted some parts with another material. But during a design review, research and development engineers from Tessy and the customer determined that they could use LSR. Tessy molded prototype LSR parts, which were tested and approved by the customer.

Tessy also built the prototype LSR molds, Beck said.

Tessy already does LSR molding and has in-house talent in that pro-

cess, he said.

"There will be no purchased components and we'll mold everything," Beck said.

The investment also includes an automated assembly line for producing 13 million parts per year, Beck said.

The Central New York Regional Economic Development Council made the Tessy expansion project one of its 30 priority projects for state funding. The state is providing \$5 million for the expansion.

Tessy, based in Skaneateles, N.Y., has a total of 135,000 square feet of clean room space at its factories.

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Ohio city replacing HDPE pipes early

By Catherine Kavanaugh
Plastics News Staff

The drinking water in Hamilton, Ohio, has taken home top tap honors three times in the last 10 years for its tasteless, clean and pure qualities.

The city of 62,000 won first place for best in the country at the Berkeley Springs International Water Tasting competition in 2009. Judges for the largest water-tasting competition in the world also dubbed Hamilton's water the best in the world in 2010 and 2015.

City officials have attributed the accolades for their municipal water to using chlorine dioxide as a disinfectant going back to 1972.

The powerful chemical compound improves the taste, smell and color of water, and renders inactive pathogen agents like viruses, bacteria and protozoa, according to the U.S. Environmental Protection Agency.

However, chlorine dioxide has also made the high density polyethylene pipes in the water distri-

bution system brittle just 20 years into what city officials expected to be an 80-year service life. Some 21 miles of HDPE pipe that have been cracking and "catastrophically failing" will be replaced at a cost of about \$3.5 million in spring 2020.

"We started to see premature aging and failures in HDPE service lines around 2005 and started to see failure in water mains around 2007. I believe we informed the manufacture of this issue around 2007," John Bui told *Plastics News* in an email.

Bui thinks there was a period where the effect of chlorine dioxide on HDPE pipes wasn't known or publicized, and now some communities that installed them 20-30 years ago are facing failures.

"At least it wasn't known to us in the early 90's, otherwise we wouldn't have used HDPE pipes in our distribution system to save money," Bui said.

The first comprehensive report on the potential failure of PE pipes in disinfected potable water systems was issued in 2010, ac-

ording to the Irving, Texas-based Plastics Pipe Institute Inc.

PPI partnered with Aurora, Ontario-based Jana Laboratories Inc. and several U.S. water utilities to look at the impact of potable water disinfectants of PE pipe.

One Jana finding indicated that there are some 52,000 water systems in the United States, and less than 200, or about 0.4 percent, use chlorine dioxide as a secondary disinfectant.

"The disinfectant ... used most often in North America is chlorine," the report says. "The other primary disinfectants commonly used include chloramines and, to a much lower extent ... chlorine dioxide. Chlorinated water, even at low levels, results in a significantly increased oxidative potential of the water."

Oxidation is a process in which a chemical substance changes because of the addition of oxygen.

Oxidation affects most piping materials to some extent, according to Camille Rubeiz, PPI's senior director of engineering for the municipal and industrial division. For

example, oxidation causes metal piping systems to corrode and tuberculate, he said.

In Hamilton, the pipe failures appear to be "atypical" of HDPE pipe performance in water distribution applications, Rubeiz told *Plastics News* in an email.

"The concentration of chlorine dioxide [a maximum of 0.53 ppm] in Hamilton's water system appears to be significantly more aggressive than in other systems that use chlorine dioxide as a secondary disinfectant [typically less than 0.15 ppm]," Rubeiz said. "Thus, older HDPE materials that are installed in Hamilton's system have had a shorter life than the predicted service life of currently available HDPE piping materials."

Modern HDPE pipes have benefited from advances in resin design, industry research and testing to evaluate compound resistance to oxidative attack, Rubeiz said, adding that these advances "ensure that the service life of HDPE in the vast majority of disinfected water distribution systems will now exceed 100 years."

Although chlorine dioxide is making the HDPE pipes brittle in Hamilton, Bui said it isn't harmful to the people who drink it and it offers several benefits.

"Chlorine dioxide doesn't cause taste and odor like other disinfectants, such as gas chlorine, sodium hypochlorite, or chloramines," Bui said. "It prevents biofilm from forming in the distribution system, and most importantly it prevents the formation of trihalomethanes and haloacetic acids, which are considered carcinogenic."

Bui doesn't find fault with anyone or any group for Hamilton being in the position of needing to replace its HDPE pipes next year.

"We should have done more research before we decided to use HDPE pipes in our distribution system," Bui said. "I can't say whether the Water Production division was involved in the decision-making in using HDPE pipes. Once we realized the problem, we stopped using HDPE pipes. We are now using ductile iron pipes and copper pipes with brass fittings for service lines."

WL Plastics executive to head PPI

By Catherine Kavanaugh
Plastics News Staff

The Plastics Pipe Institute, Inc. has appointed David Fink, the senior vice president of WL Plastics, as its president and executive director, effective at the end of January.

Fink, a veteran of the plastics pipe industry, has held several

positions with the Irving, Texas-based trade group, which represents manufacturers, distributors and other businesses involved with the production and use of plastic pipes and components for a variety of end markets, including municipal water, sewer, storm water, oil patch, telecommunications, conduit, construction and radiant heating.

Fink replaces Tony Radoszewski, who is now president and CEO of the Washington, D.C.-based Plastics Industry Association.

Fink served as chairman of the PPI board of directors from 2017-19 and he currently chairs the PPI statistics committee and co-chairs the newly established PPI safety committee.



Fink

"I am excited to take on my new responsibilities as president of PPI," Fink said in a news release. "I look forward to working with PPI's exceptional staff and serving PPI's

membership to continue developing the association as the

voice of an industry. Through research, education and advocacy, we will work together to further advance the acceptance and use of plastic piping systems throughout North America and around the world."

While at WL Plastics, Fink oversaw sales growth in the polyethylene pipe market segments, including gas gathering and distribution, municipal water distribution, industrial and mining applications, telecommunication conduit, and geothermal.

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KM veteran Caprio named president of Engel Machinery

By Bill Bregar
Plastics News Staff

Paul Caprio, who stepped down as president of Krauss-Maffei Corp. in mid-2019, has resurfaced as president of Engel Machinery Inc. in York, Pa.

Engel announced Jan. 2 that Caprio joined the company. Caprio is managing the sales and service subsidiary of the North American operation of Austria-based injection molding machinery maker Engel Holding GmbH together with current CEO Mark Sankovitch. They will work together for the next two years, as Sankovitch plans retire at the end of 2021, the announcement said.

Sankovitch was named Engel Machinery's president and CEO in 2010. He will continue to have a leading role as CEO of Engel's North American business until he retires, as he previously had planned.

Caprio, 57, said he knew Sankovitch in the close-knit world of plastics machinery, he knew about his retirement plans, and contacted Engel about the position.

Caprio said he is looking forward to working with Sankovitch.

"He and I will work very well together. It's not a competition. It's a partnership," Caprio said. "I



Caprio

think it's going to be a smooth transition."

Christopher Steger, chief sales officer for the global operation, said Caprio will be a good addition to the team.

"He brings extensive experience that will

only add to our successful team," Steger said.

Caprio had worked at Krauss-Maffei for 25 years — the last 10 years as president — before he left the company in Florence, Ky., last June. He and his wife, Teresa, moved to the York area in November, he said in a telephone interview.

"I am excited to be working for Engel, a company that is known for its overall leadership position and cutting-edge technical advancements in the global machinery market," Caprio said.

Steger said the North American operation is in good hands during the transition of top management.

"It is a privilege to have two industry experts like Mark Sankovitch and Paul Caprio work together for two years," Steger said.

Plastic bottle recycling flat: Sign of resilience or failure?

By Steve Toloken
Plastics News Staff

we're creating 30 percent more plastic bottle waste."

'A third difficult year'

The report, from APR and the American Chemistry Council, said that the overall plastic bottle recycling rate fell to 28.9 percent in 2018, down slightly from 29.3 percent in 2017.

For PET bottles, which account for about 63 percent of all plastic bottle recycling, the rate was also 28.9 percent in 2018, down from 29.2 percent.

For high density polyethylene, which accounts for 35 percent of plastic bottle recycling, the rate in 2018 was 30.4 percent, down from 31.1 percent in 2017.

In the United States, 2.85 billion pounds of plastic bottles were collected for recycling in 2018, up from 2.8 billion pounds the year before. Collection of PET was up about 90 million pounds while HDPE dropped 40 million pounds.

The report said the U.S. continues to recycle more bottle waste domestically and export less, a long-term trend it said was pushed along by China's National Sword restrictions on imported plastic waste.

In 2018, about 9.9 percent of bottles were exported, down from more than 40 percent a decade ago and 20 percent in 2016.

Overall, the report said it was a tough environment for bottle recycling, with the industry not keeping pace with growth of plastic bottle packaging on store shelves and being hurt by low prices of virgin plastic.

"The post-consumer plastic bottle recycling industry experienced a third difficult year in 2018 with less growth in pounds collected than in pounds of bottles on store shelves," the report said.

As well, it said low prices for virgin materials made for a tougher economic situation for plastic recycling companies: "As a general matter, the cost of petroleum and petrochemicals favored the economic competitiveness of virgin plastics compared to post-consumer plastic."

Washington — The U.S. plastic bottle recycling rate held steady at 29 percent in 2018, and depending on who you listen to, that was either evidence of industry strength in a tough business or that bottle recycling was falling flat in its attempts to become more sustainable.

Two industry trade groups released the 2018 report on Dec. 18 and argued that while the rate and pounds collected were essentially unchanged, there were positive trends. They pointed to continued expansion of domestic U.S. bottle recycling and growing demand for recycled content plastic because of commitments from large consumer product companies.

"Plastics recycling is a vibrant, resilient industry that continues to remain strong in a challenging environment," said Steve Alexander, president of the Association of Plastic Recyclers in Washington, one of the groups that put out the report.

"Despite the reduction in export markets, demand for quality recycled material remains robust, and many recyclers are investing in updating and expanding our domestic infrastructure to meet that demand," he said.

But the environmental perspective was different, with stagnant or falling recycling rates meaning that the industry is not making measurable progress.

The head of the Container Recycling Institute said increasing use of plastics in bottles and falling recycling rates in recent years mean that the U.S. is increasing the amount of plastic bottle waste it sends to landfills and incinerators.

Culver City, Calif.-based CRI estimated the U.S. trashed about 7.2 billion pounds of plastic bottles in 2018, compared with 5.5 billion pounds landfilled or incinerated in 2000.

"As a result of the increased production levels and the declining recycling rates, we are throwing away more and more plastic bottles each year," said CRI President Susan Collins. "Compared to the year 2000,



In the United States, 2.85 billion pounds of plastic bottles were collected for recycling in 2018, up from 2.8 billion pounds the year before. File photo

Barriers & bottle bills

ACC and APR noted a number of barriers to bottle recycling. The first cited in the report was lack of consumer awareness of the demand for and value of recycled plastic, and it suggested more municipal education campaigns around curbside programs and more opportunities to recycle bottles away from home.

The industry groups also said that efforts to ban single-use packaging are hurting.

"Campaigns to eliminate single-use packaging hurt plastic bottle recycling," the report said. "The campaigns tend to focus on litter, not proper solid waste management, and do not include a holistic life cycle approach to decision-making. In addition, food safety and hygiene afforded by plastic packaging are overlooked."

But environmental critics say the industry report appears to blame consumers for not recycling enough and ignores the higher PET bottle recycling rates from the 10 states that have bottle bills.

"The report summarizes 'barriers to increased plastic bottle recycling,' and says that the culprits are consumers, oil prices, lack of access to recycling, etc.," Collins said.

"However, we all know that we could have an 80 percent recycling rate for PET bottles if we passed a national container deposit law, rather

er than the less than 30 percent recycling rate that the U.S. has had for many years," she said.

"Consumers are generally very disappointed to hear how low the plastic bottle recycling rates are, how low the rates of recycled content are, and even more disappointed when they learn about the industries and companies that oppose the very legislation that would increase recycling rates and recycled content," Collins said.

The U.S. PET recycling rate does lag for Europe, which had a PET bottle recycling rate of 58 percent in 2017, according to the Brussels-based industry group Petcore Europe. That group has a pledge to increase the PET collection rate in Europe to 90 percent by 2025.

U.S. industry officials, however, pointed to the commitments from consumer product brand companies to use more recycled plastic, as a driver for increasing recycling.

"Brand owners have made public commitments to use significantly more recycled content in their products and packages in the months ahead," said Steve Russell, vice president of ACC's plastics division. "And manufacturers across the value chain are creating more circular

business models for using — and reusing — plastics. It is therefore increasingly important to get as much of the right plastics into the recycling bin as possible."

The PET container industry released its own 2018 recycling report on Dec. 16, noting that the PET recycling rate held steady at around 30 percent for the last decade.

The head of the National Association for PET Container Resources said that without substantially higher PET bottle recycling rates, consumer product companies will not be able to get enough material to meet their recycled content commitments.

The U.S. curbside recycling system has a PET bottle recycling rate of about 21 percent, compared with 68 percent for bottle bill states and 73 percent for California's bottle bill system, according to an analysis by longtime PET recycling consultant David Cornell in the August issue of *The Journal of Blow Molding*.

Cornell's analysis said that California, with 12 percent of the U.S. population, accounted for 29 percent of PET bottles collected for recycling in 2017. It said that 55 percent of PET bottles collected nationally came from curbside systems.

PET recycling steady but facing shortfall as demand grows

By Jim Johnson
Plastics News Staff

PET container recycling in the United States continued a years-old trend of essentially holding steady in 2018, according to new statistics.

But that pattern is not going to be enough to satisfy growing demand for recycled PET in the years ahead, according to the head of the National Association for PET Container Resources.

NAPCOR is out with new data that shows PET container recycling was 28.9 percent in 2018 compared with 29.2 percent in 2017.

NAPCOR Executive Director Darrel Collier described the year-over-year numbers as being essentially flat, a trend that's been taking place for the past decade or so when it comes to PET recycling.

While the overall recycling rate

for PET containers has stayed steady, the amount of the material being handled by domestic recyclers continues to rise. U.S. reclaimers purchased 1.67 billion pounds of the material in 2018, up from 1.44 billion pounds in 2017, an increase of 16 percent.

This increase in domestic processing comes as the export market has severely contracted with China's decision to stop importing a wide variety of recycled commodities, including plastics, through a program called National Sword.

About 140 million pounds of used PET, some 8 percent of the total collected, was sold to export markets in 2018. That's the lowest "export fraction" since 2000, NAPCOR reported.

"We are at about a decade of what I'd call essentially the same recycling rate, right at 30 percent.

... Of course, that's with a consistently growing market. So there's more being recycled, but there's also more bottles on the shelf. So the numerator and denominator have been going up. So, essentially, we're in a flat recycling rate," Collier said.

NAPCOR, in revealing the new numbers, said increasing the PET recycling rate is imperative to allowing brand owners to meet their stated goals of increasing recycled content in their product containers.

"If we do not move this needle, there is no way these commitments can be met. It has to be addressed or the brand houses are not going to be able to come anywhere close to their commitments," Collier said.

The full 2018 PET Recycling Report can be purchased through a link at www.napcor.com.

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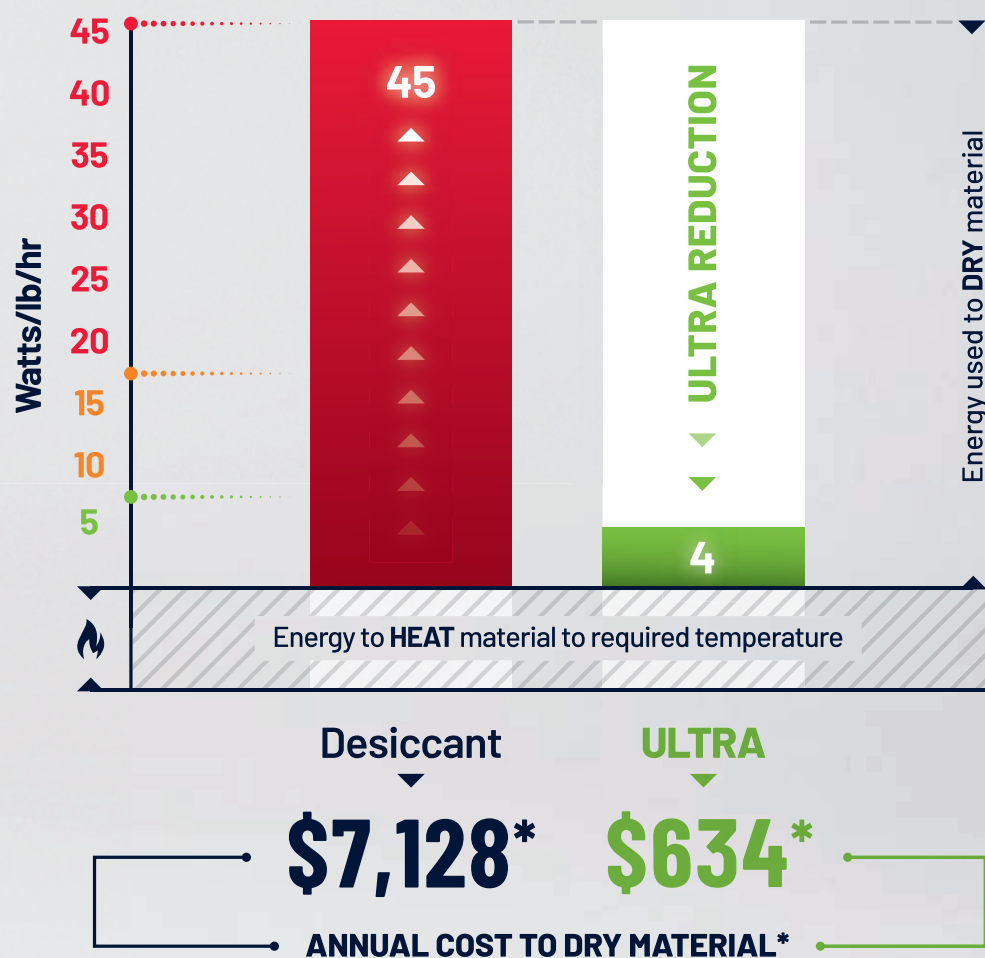
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Diversified Plastics employs about 100 people and runs 31 injection molding machines at its two plants — including a California plant the company gained when it acquired Pacific Plastics Injection Molding in late 2018. Diversified Plastics Inc. photo

Diversified Plastics is owned by employees through an employee stock ownership plan, and company officials say that gives it an advantage.

POY

Continued from Page 1

into the human body.

The 2019 winner will be announced at the upcoming *Plastics News* Executive Forum, scheduled for Feb. 24-26, 2020, in Naples, Fla. Prior to that, *Plastics News* Editor Don Loepp and senior reporter Bill Bregar, who coordinates the annual award, will visit all four finalist companies.

Here is a look at the finalists, in alphabetical order:

Diversified Plastics Inc.

Diversified Plastics employs about 100 people and runs 31 injection molding machines at its two plants — including a California plant the company gained when it acquired Pacific Plastics Injection Molding in late 2018.

Sales totaled \$21 million in 2019, and company officials are projecting 2020 sales of about \$23 million. The fiscal year ends Oct. 31. The company is profitable.

Markets include water filtration and medical devices, plus agricultural and off-highway equipment, controllers and automation equipment, material handling, recreational marine and solar energy.

Diversified Plastics is owned by employees through an employee stock ownership plan, and company officials say that gives it an advantage. The ESOP stock price has jumped 72 percent in last three years and revenue per employee went up 12.4 percent.

James Dow founded Diversified in 1977 with 13 employees. Dow planned to retire in 2011, and he met with potential buyers.

“However, he was concerned that the culture of DPI would dramatically change, and the jobs of the long-term employees would be terminated due to consolidation or relocation,” the company said in its submission for Processor of the Year. So he created the ESOP. In 2015, DPI won the Company of the Year Award for the Minnesota/Dakota Chapter of the ESOP Association.

CEO Kevin Hogan joined the company in 2017 and started a strategic growth initiative, which was more detailed than Diversified Plastics did before. Dow, who remains involved in the company, tasked Hogan with achieving faster, profitable growth. The strategy includes planning for all departments, identifying what sets the company apart, such as in-house tooling and a push into additive manufacturing, and identifying growth markets like medical devices and filtration.

Management set 10-year targets and one- and three-year goals. In 2019, five new customers netted DPI more than a million dollars of new business.

Diversified Plastics scored high marks in the employee relations criteria. The average tenure of employees is an impressive 12 years — and four of the original employees are still working there.

Diversified holds monthly meetings of the employee-owners. Workers said they appreciate the family environment. Dow, the founder, returns each Christmas season as Santa Claus.

As of the end of 2019, the company had gone three years without a lost-time accident.

Technological innovation is another strong area. In early 2019, Diversified Plastics launched a new unit for additive manufacturing, dubbed the Acceleration Station, for full direct manufacturing work, especially for medical. The molder joined the Carbon Production Network and added three Carbon 3D printers. Officials are also seeking other new technologies in additive manufacturing, in plastics and metals.

Hogan thinks additive manufacturing could grow to be one-third of the firm’s business in five years.

Customers contacted by *Plastics News* judges said DPI is a trusted supplier and partner that takes on specialty products and gives expertise in moldability, uniformity, consistency and materials. One main customer has bought parts from the molder since the company’s beginning.

On-time delivery has been 99.3 percent for the past two years.

Diversified Plastics also picked up solid grades for quality, environmental performance and in-

dustry and public service. The company hired a new quality director in the fall of 2018, a 30-year veteran of medical devices. That position had been vacant for several years as executives hunted for the right person, Hogan said. Another medical veteran, with 21 years of experience, was named quality manager.

Product acceptance by customers was 99.4 percent last year.

For the environmental area, DPI has earned the Environmental Green Star Award from the Minnesota Pollution Control Agency. And green production makes good business sense: By adding new robotic automation equipment to a job that was producing way too much scrap at \$4,000 per month, the company cut waste to nearly zero.

Community and public service activities include food and blood drives, volunteering on the board of the Alzheimer’s Foundation, and working with homeless youth and the Down Syndrome Association of Minnesota. Political leaders have visited the factory, including U.S. Sen. Amy Klobuchar, a Democrat running for president.

Diversified Plastics employees

are active in industry activism, too, funding a scholarship and serving on the board of Hennepin Technical College.

Vice President Annette Lund is on the board of the Society of Plastics Engineers’ special interest group for additive manufacturing. She speaks at a local university several times about women getting into technical fields in manufacturing.

Emily DeSimone, channel marketing manager for Carbon Inc., nominated Diversified Plastics for the award. Carbon makes 3D printers and leases them to manufacturers on a subscription model.

Intertech Plastics Inc.

Intertech was founded by Noel Ginsburg as Container Industries in 1980 when he bought the assets of a local molding plant that was closing, to produce pails for the food industry. Now Intertech has become a leader in apprenticeship programs to draw new people to manufacturing.

Ginsburg started the Colorado

Advanced Manufacturing Alliance. He led an apprenticeship program called CareerWise, modeled after apprenticeships in Switzerland, by connecting businesses, educators and high school students to give them on-the-job training. It’s going statewide in Colorado, and other states are taking a look.

He has led state leaders to Switzerland to learn about apprentice programs.

CareerWise Colorado is now in 14 school districts. And it’s not just advanced manufacturing, but also covers education, hospitality, business operations, information technology, financial services and health care.

Ginsburg even ran for Colorado governor in 2018, but he dropped out before the primary election.

And it all started at Intertech, a small molder that now has 130 employees and runs more than 50 injection molding machines with clamping forces from 30-1,500 tons.

Apprentices give Intertech a long-term competitive advantage, President Jim Kepler said.

“Our apprentices have not only allowed us to build a sustainable

‘Our apprentices have not only allowed us to build a sustainable workforce, but accelerate our ability to implement new ideas, processes and automation at a pace that previously wasn’t possible.’

Jim Kepler, Intertech Plastics Inc.



Intertech Plastics Inc. employs 120 people at two plants, each with 27 injection molding presses.

Plastics News photo by Don Loepp

workforce, but accelerate our ability to implement new ideas, processes and automation at a pace that previously wasn't possible," he said.

Kepler said Intertech partners with the local Eaglecrest High School, which has placed three CareerWise apprentices at the molder. But the company draws apprentices from several different high schools. Eight students were working at Intertech in 2019, and Kepler said the company plans to have 11 apprentices this year.

Kepler said Intertech draws talent from the Eaglecrest robotics team, which the company sponsors. The first apprentice, a robotics team member named Kevin King, came in his junior year and built vision system that uses two cameras.

"Today, Kevin is a full-time automation technician and [we] are paying for his engineering degree," he said.

From the beginning, Ginsburg positioned his company to be both a successful business and an avenue to build a solid community. Ginsburg "didn't start company to get rich; it was built to make a life," Intertech officials said in their submission for the award.

Intertech, a finalist last year for the Processor of the Year Award, earned the 2018 *PN* Excellence Award for industry and public service.

Intertech scored high marks in all seven award criteria.

Sales were \$25 million in 2019, with projected 2020 sales of \$28 million. Intertech runs two plants a half-mile apart — one specializing in medical molding and the other custom molding for industrial and consumer products.

But it hasn't been easy. Sales were \$29.4 million in 2015, but Intertech lost money. The largest customer, accounting for about half of sales, was not contributing enough to the bottom line and the molder had little bargaining power to pass on price hikes. They parted ways, and Intertech's sales took a hit. But gross margins increased quickly, and the company has rebuilt sales.

That challenge had promoted a transition that began in 2013. Kepler led the move to make Intertech more diversified and beef up expertise and technology to do tight-tolerance molding. That same year, Intertech bought Image Molding Inc., another Denver molder, to add medical molding.

Today, according to company officials, Intertech is in its strongest financial position ever, with little debt and a capital spending plan. In fact, in 2017 and 2018, the company invested \$4 million to buy four all-electric Toyos and 22 new Wittmann robots, plus auxiliary equipment. Last year, Intertech bought seven more all-electric Toyos, spending another \$2.4 million. And the investment in automation has reduced the percent of direct labor as a percent

of sales.

Employee Relations is by far Intertech's strongest category, according to the judges. The apprentices certainly help — bringing in bright young people eager to make their mark. And all employees benefit from Intertech's core values that include valuing each person and his or her family, promoting education and development and encouraging all employees to volunteer for causes they think are important.

According to Kepler, those values are the key to the company's ongoing success. "In fact, we look for a culture fit when interviewing new hires. It takes priority over skill set," he said.

Jen Lockman, human resources manager, said turnover has been relatively low the last few years, and one-third of Intertech's employees have been with the company for more than nine years.

Intertech uses the 4DX process to help set goals, through WIGS, or "wildly important goals."

For several years, a big one has been to boost an already-strong employee engagement level. Today the company has an 87 percent score for employee engagement, measured through surveys. Lockman said management shares survey results and annual goals with the entire team.

Lockman said in 2018, Intertech more than doubled its training budget to \$74,000 and boosted it to \$96,000 in 2019. The company is adding IQMS' Shop Floor Data module to its custom molding operation, after using it in the medical plant. Shop Floor Data includes paperless training. Each employee logs into the production machine, then answers a set of questions about the specific work center and product.

That is another step in Intertech's goal of zero defects. The company rebranded in 2019 under the theme "part perfect." In other words, perfect quality performance.

Intertech's operations are full of vision systems and automation. Since 2016, defective parts per million has declined nearly 70 percent in the medical plant — mainly, Kepler said, through a Keyence vision system.

Customers told the judges they appreciate the effort to build long-term partnerships.

"We talk to them all the time from an engineering standpoint and discuss things that are happening," said an official at one customer. "We're in constant communications with them."

Another customer praised Intertech for responding quickly to any issues. "We have other molders but we tend to send the new stuff to Intertech because they're equipped to do it," the customer said.

Technological innovation is a strong point, buoyed by the investments in equipment and good use of all those apprentices. The

MMI Engineered Solutions Inc.'s plant in Monterrey, Mexico, is now undergoing a 35,000-square-foot expansion and has a 500-ton press and a 1,500-ton press.

MMI Engineered Solutions Inc. photo



Doug Callahan, president and CEO of MMI Engineered Solutions Inc.

Plastics News photo by Audrey LaForest



goal is to standardize equipment and automation in both the medical and custom molding plants.

One example is what Intertech calls the in-mold labeling of the world's smallest-diameter product: a round, cigar-package-style tube that holds a marijuana joint, which taps into Colorado's booming legal cannabis sector. The company uses a Brink IML side-entry robot on a new 150-ton Toyo, backed up with a Keyence vision system.

The IML cannabis packaging also helped Intertech in the environmental performance criteria for the award. Working with resin companies, Intertech is testing compostable and biodegradable resins for that sector. The label will also be biodegradable.

But Intertech is also making non-marijuana-related investments to help the "green" revolution... pardon the pun. A smart chilling system with variable-speed power is saving \$45,000 a year, with higher throughput. The return on investment is just 1.1 years.

New LED lighting and motion sensors cut about \$60,000 a year for the electric bill. ROI: 14 months. And Intertech is moving to all-electric molding machines in both plants.

Intertech was nominated by Scott Walton, chief operating officer of Harbour Results Inc.

MMI Engineered Solutions Inc.

Saline, Mich.-based MMI has injection molding and blow molding of automotive parts in plants in Saline, Mich., a new factory in Warren, Mich., and in Monterrey, Mexico. MMI also designs and makes molds in-house.

The company injection molds material handling systems for automotive components and automotive and heavy truck parts like fan shrouds and brake ducts, chassis fairing assemblies, cover panel assemblies, A-pillars and air duct assemblies.

These are big parts and they require big molds and large-tonnage injection molding presses.

At its largest operation, the headquarters plant in Saline, MMI runs one blow molding machine and 18 injection molding presses, with clamping forces from 88-2,250 tons. The new 82,000-square-foot Warren plant, which began operations in 2019, has a 1,450-ton press and two large injection molding machines taken from the Saline plant that are being refurbished to go into the Warren facility. The plant in Mexico, now undergoing a 35,000-square-foot expansion, has a 500-ton press and a 1,500-ton press.

Since 2013, MMI has made major investments in equipment and adding production capacity, adding 11 injection molding machines and a blow molder, and new machining centers for the toolmaking department. MMI also has also added central drying and loading systems.

All that investment and expansion activity — plus a move into 3D printing with a Stratasys Fortus production system — means that MMI has a good story to tell for technological innovation.

In its financial performance, MMI's sales have steadily increased, hitting \$42 million in 2019, a 10 percent increase from 2018. For 2020, company officials are projecting sales of \$48 million, as MMI is launching a significant amount of new tooling and new business. MMI is profitable.

In their submission, company leaders say they are committed to adding 111 jobs to its current 146 in Michigan.

Doug Callahan, president, CEO and owner, joined MMI as presi-

dent and chief operating officer in 2012, when sales were about \$11 million. In 2015, he bought the company after growing sales to \$25 million.

MMI made the 2019 Inc. 5000 list of the fastest-growing privately held companies in the United States.

Before buying MMI, Callahan was vice president of engineering at Miniature Precision Components Inc., which won the Processor of the Year Award in 2004. He has an undergraduate degree from Lawrence Technological University in mechanical engineering and a master's degree from Lawrence Tech in global business operations. And Callahan is a lawyer, earning his law degree from the University of Detroit Mercy in 2007.

MMI is packed with management talent, including Chief Financial Officer Paul Larson, who has a background at Fortune 500 companies; Jane Clawson-Palfi, the director of operations who has more than 20 years of automotive experience; the quality manager, Wayne Jones, a Lean Six Sigma black belt with more than 30 years of experience in lean manufacturing, quality and process; and Ed Chappel, director of human resources, who has more than 20 years of experience in that field.

MMI was self-nominated for Processor of the Year by Cassie Kilpatrick, its corporate recruiter. That's a new position at the company, signaling the importance of drawing young people to the

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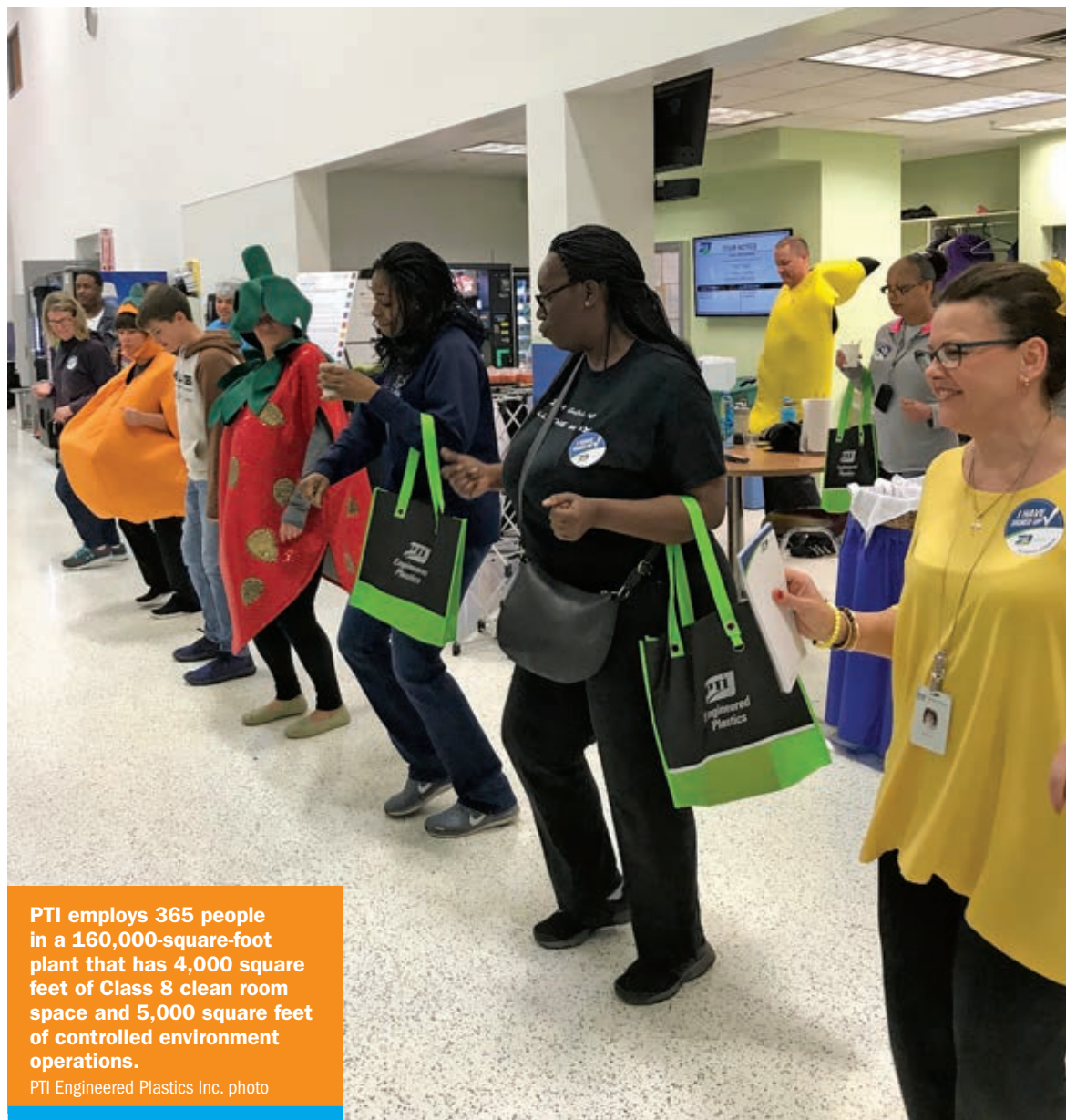


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PTI employs 365 people in a 160,000-square-foot plant that has 4,000 square feet of Class 8 clean room space and 5,000 square feet of controlled environment operations.

PTI Engineered Plastics Inc. photo

POY

Continued from Page 17

industry. She is traveling to colleges and technical schools to boost MMI's internship program. The company had operator interns but expanded in 2019 to include purchasing, engineering, finance, information technology and human resources.

MMI scored the highest marks in the employee relations criteria. Management has worked hard to make MMI an "employer of choice" and develop a career path for advancement. Employees have seven "tracks" in leadership, warehouse and technical track, with several job categories in each track.

New hires have a 30-day onboarding session of training.

MMI spent \$100,000 on training in 2019. The company gives tuition reimbursement. Chappel said one employee, a sales engineer who works in business development, is enrolled in the executive MBA program at Michigan State University.

The MMI submission for the award included a lot of employee success stories. Abdiel Rodriguez became a temporary worker in late 2017. He had recently moved to Michigan from Puerto Rico and was learning English. Rodriguez became a press operator and began asking lots of "how and why" questions and took very detailed notes, studying them at night. He worked his way up through several jobs to become an inventory analyst today.

MMI employees get RJG and Routsis training — often with the help state grants for the compa-

ny. And the Michigan Manufacturing Technology Center helps by providing training for ISO audits, Lean Six Sigma green belts and supervisory skills. MMI has six new green belts and plans to send more people through that process.

The company has expanded its wellness program through a committee of employees that plans events such as a 5K run and "win-by-losing" contests against other companies.

On the benefits side, MMI has a 401(k) match and holds on-site classes for employees on investments, financial planning and goal setting.

The Six Sigma belt holders helped MMI score well in the quality criteria. Last year, the company added a quality lead position to help out the quality manager, an important job given new programs in the pipeline.

Customers include Navistar International Corp., Paccar Inc. and Fiat Chrysler Automotive NV, among others. In 2019, the company shipped more than 6 million parts to 500-plus locations around the world. MMI won the Navistar Black Diamond Award in 2017 because the molder is in the top 2 percent of the Navistar's supplier base.

At one customer, a representative praised MMI for quickly responding to any problems.

"The overall quality of their work is exceptional. They send representatives to their plants to respond to the issues. They send representatives to the plants to review the process prior to the launch of a new product," the official said, adding: "They go beyond the call."

MMI also got good marks from

the judges in the areas of environmental performance and industry and public service. In the environmental criteria, the company has added LED lighting in factories in Saline and Warren, as well as making big steps to improve recycling over the years.

Community service includes volunteer work to combat diabetes and the American Cancer Society. Employees donate their work breaks to pack toiletries for the homeless. MMI last year held its first annual company fundraiser, to support the Huron Valley Humane Society.

The close working relationship with college internships leads MMI's industry involvement efforts.

PTI Engineered
Plastics Inc.

Mark Rathbone, a mold maker, founded a prototyping house in 1984 called Proto-Tech Industries. He changed the name to PTI Engineered Plastics to reflect the company's evolution to a turn-key plastics company with an in-house tool room. In 2010, PTI launched PTI Design, specializing in product innovation and development.

PTI still specializes in molding and assemblies for low-volume, complex parts and doing prototyping at its plant in Macomb.

Initially, the company was an automotive molder, as that sector accounted for 75 percent of business in the mid-1990s. Then management moved to diversify PTI into medical molding, so that medical now accounts for 53 percent of sales. Automotive is 33 percent.

PTI officials said the company was among the first of all U.S. businesses to achieve certification in ISO 13485:2016 for medical quality management systems and IATF 16949:2015 for automotive quality systems.

Other markets include defense/aerospace and commercial.

PTI employs 365 people in a 160,000-square-foot plant that has 4,000 square feet of Class 8 clean room space and 5,000 square feet of controlled environment operations. Both areas offer assembly and packaging services.

The company generated \$50 million in sales during 2018 and runs 54 injection molding machines, in clamping forces up to 750 tons. Sales climbed from \$40 million in 2014 to the mid-\$40 million in 2015 and 2016, then reached \$50 million in each of 2017 and 2018.

PTI is profitable, and executives say they try to serve a diverse mix and customers to achieve steady earnings each year.

Throughout its submission for the Processor of the Year Award, PTI Engineered Plastics did a good job of explaining the company's history and how it evolved over the years. The company provided charts spelling out its measurement of the manufacturing.

In the area of technological innovation, PTI is working toward the interconnected world of Industry 4.0. Last year, the company added 12 Arburg injection molding machines equipped with the ALS host computer system.

Also, 34 of the company's injection presses are eDart-capable, using RJG's in-mold sensors.

PTI also invests in automation, including multiple robots working in tandem on the same work cells. In one example, robots do insert molding, degating and assembly, then run quality checks of every part. And the automation is flexible to run on different parts.

"This allows us to use this automated cell across five product lines with minimal changes," officials wrote in the award report.

PTI has three collaborative robots. One does multiple tasks in the assembly department, such as thermal insertion and push-pin installation. Another is used in molding. The third cobot is in the PTI Technical Academy for training.

The company runs a metrology lab and is adding a color lab for customer use.

Turning to customer relations, PTI said its top 10 customers have been with the molder for more than 20 years. PTI works to gain new customers by exhibiting at a half-dozen trade shows a year.

Contacted by the *Plastics News* judges, customers said PTI is a responsive supplier. Tooling expertise is an important part of their relationship with PTI — providing a fast turnaround and therefore faster time to market.

PTI is always on time with tooling, and gives a detailed progress reports, one customer said.

Another customer also said PTI is an on-time supplier.

A tight hold on quality makes it happen. PTI closely monitors production metrics and benchmarks industry standards.

The customer lot acceptance rate has been consistently over 95 percent. The average number of days of open validations — where the quality engineering area validates new jobs are done right — has fallen dramatically. And the cost of quality, a measure of both internal and external defects, has been cut in half since 2014.

PTI officials said the company was among the first of all U.S. businesses to achieve certification in ISO 13485:2016 for medical quality management systems and IATF 16949:2015 for automotive quality systems. And PTI is now among a very small group certified to MedCred, a process certification audit for medical devices.

The *Detroit Free Press* named PTI one of the top 100 midsize workplaces in 2019 — the sixth time PTI has made that list. That is proof of solid worker relations, since it's based solely on an employee survey. One quarter of all employees have worked there for more than 10 years.

PTI promotes from within and pays for job-related education. Employees get a paid day off to take an annual physical.

The company recently started a program of "stop and notify," where workers can stop production and notify a supervisor of problems. PTI rewards the employee with a gift card and a certificate that is displayed in the plant.

And PTI is active in the community. To help interest young people in manufacturing, in 2014 PTI launched the PTI Technical Academy, a four-week program for Macomb County High School students in grades 10 through 12. They learn about mold making, injection molding and product design. The company sponsors the local robotics team.

PTI is active in Manufacturing Day, local blood drives and Relay 4 Life events.

The company scored very good grades for its environmental performance. Employees joined an effort to clean up the Clinton River, helping to remove 2.7 tons of garbage. Over the last decade, PTI's paper consumption declined by 21 percent year — enough to save an estimated 2,080 trees.

Investing in a closed-loop water system with in-house water treatment means that PTI cut water consumption by 40 percent, or 80,500 gallons. For the last three years, the company has invested about \$60,000 in lighting upgrades, including automatic shutoff.

And even waste oil and lubricants get recycled. By working with the local electric supplier, PTI sends that to a local farm to heat its barns through a 99 percent fuel and waste-efficient furnace.

Peggy Whitaker, PTI's marketing and communication specialist, nominated her company for the award.

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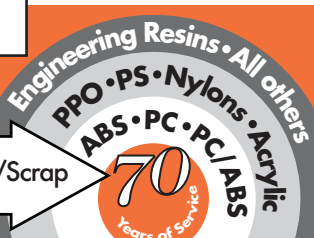
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China

Continued from Page 3

materials sector and reduction in demand from cutbacks in single-use plastics “drives prime materials prices down to ... a historical low.”

“A ripple effect has dragged down the recycled material prices for a considerable amount of time, without any sign of rebound,” Wong said. “Nevertheless, the low price does not attract any buying interest due to a bearish sentiment looming amid the uncertainties raised by the trade war between China and [the] U.S.”

He also said there’s a “severe” overcapacity in the recycling industry in Southeast Asia, as restrictions on imported scrap in those countries, following what China’s government did, are putting the plastics recycling sector in a bind there.

Many Chinese recycling companies initially set up operations in Southeast Asia after Beijing adopted its restrictions.

“Most recyclers in the area have managed to keep their factories running, though at loss-making condition,” Wong said. “However, it seems they may not be able to continue to survive with the calamitous challenges.”

“Only a small portion of these processing facilities have



Steve Wong, executive president of the China Scrap Plastic Association and CEO of Fukutomi Recycling Ltd., speaks with Belinda Ford, director public affairs, communications and sustainability, ASEAN region for Coca-Cola Co., during the United Nations Sea of Solutions event in Bangkok in November 2019. Fukutomi Recycling Ltd. photo

adequate imported scraps to maintain a normal operation, while the rest are not in operation full time due to policy constraints of plastic scraps from imported sources,” he said. “On the other hand, the import cost is quite high.”

He said Thailand, for example, has capped imports and is not likely to increase what it allows in. He estimated there are 25,000 recycling factories in Southeast Asia with production capacity of 7.5 million tons per month.

The difficulties for recycling companies mean that consumer product companies that have pledged to use recycled plastic could face difficulties sourcing enough material, he said.

“The market mismatches have cast doubts on brand owners’ ability to fulfill their commitments on the use of recycled contents for their products given that product making factories have moved to countries where plastic scrap imports are facing policy restrictions,” Wong said.

Formosa wins final approvals for Louisiana materials site

By Frank Esposito
Plastics News Staff

Formosa Plastics Group unit FG LA LLC has received the final Title V operating permits needed from the Louisiana Department of Environmental Quality in order to start building a massive plastics and petrochemical complex in that state.

Officials with FG in Welcome, La., said in a Jan. 7 news release that the \$9.4 billion investment — called the Sunshine Project — is expected to create 1,200 new direct jobs and a peak construction workforce of more than 8,000. Formosa first announced plans for the project in St. James Parish in April 2018.

“FG is pleased to have completed the rigorous environmental permitting process,” Community and Government Relations Director Janile Parks said in the release. “Our team has worked diligently to design a facility that meets state and federal standards that protect the health and safety of our employees, community and the environment.”

“Since our project announcement, FG has been actively involved in the community, including holding an open house, sponsoring local park improvements, supporting local education and providing food boxes to students and senior citizens,” Parks added. “We will continue to invest in

and address real needs ... through projects and initiatives developed with feedback from people who live and work in the local area.”

Officials added that the new complex will have “a significant economic impact” at the state and local levels. According to a study conducted by LSU economist Jim Richardson, the project will generate about \$362 million in taxes for state and local governments during construction, with nearly \$207 million being collected in the St. James area. During operations, the project is expected to generate \$33 million annually in state and local taxes.

Formosa already operates a major petrochemicals and plastics site in Point Comfort, Texas. In November 2019, a Louisiana community group asked a congressional committee to help block FG’s plans in St. James. The call for congressional involvement in the Formosa project came in testimony from Sharon Lavigne, founder of Rise St. James, during a Washington hearing of the House subcommittee on environment and climate change.

Lavigne said Formosa’s plans in St. James would make the site the third-largest emitter of ethylene oxide in the country and that it would double local air pollution. Formosa officials did not testify at the hearing.

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Chinese floor maker invests \$26M in Georgia



Nanjing MGM New Material Co. Ltd. serves the residential and commercial flooring markets.

Nanjing MGM New Material Co. Ltd. photo

and commercial flooring markets with luxury vinyl tile, wood-plastic composite, stone-plastic composites and laminates offered in thousands of colors, patterns and thicknesses. Products are exported globally including to the United States, Canada, Russia, Europe, Southeast Asia, South America and Africa.

Now some of those markets can be served from the Georgia site. Chang Shen, a representative of GreenView Floors, told local officials the Georgia site will primarily work with PVC and stone powder, according to a Nov. 17 story in *The Daily Tribune News*.

State and local officials said Georgia's business climate, skilled workforce and logistics network attracted GreenView Floors to Adairsville.

GreenView is being welcomed to Georgia at a time when the U.S. government has temporarily lifted tariffs on a big category of plastic flooring products import-

ed from China, including luxury vinyl tile (LVT). That decision was announced Nov. 7 by the Office of the U.S. Trade Representative, which granted more than 30 tariff exemptions through Aug. 7, 2020.

The trade office did not say why it removed LVT from China tariffs. Trade officials apparently agreed with arguments that tariffs would hurt U.S. consumers more than they would help domestic manufacturers.

Pressure for tariffs had come last year from several U.S. LVT manufacturers, including Calhoun, Ga.-based Mohawk Industries Inc. and Mercerville, N.J.-based Congoleum Corp., which argued in government hearings that 25 percent duties on Chinese LVT would boost American manufacturing.

At the time, a Mohawk executive said imports from Asia, mostly from China, made up 55-70 percent of the U.S. LVT market. He told the August 2018 hearing that China exported \$1.7 billion worth of LVT to the United States in 2017.

Perspective

Continued from Page 6

proposing in California — a material-neutral plan that puts small fees on single-use packaging, possibly at the wholesale level, to provide a steady stream of money to support upgrades in waste collection and recycling.

Bringing it home

In my neighborhood, I see the impacts of packaging pollution daily.

There's an urban stream, Four Mile Run, very near where I live outside Washington, D.C., and I see packaging waste of all types in that stream system every day.

A preliminary study of microplastics in Four Mile Run, done by a local conservation group, found levels much higher than in the Chesapeake Bay and comparable to urban streams in Los Angeles.

Getting behind fees and other material-neutral measures that have teeth, like container deposits, would result in less litter and waste and help clean up microplastics in urban waterways like Four Mile Run.

Putting a fee on single-use disposable packaging of all material types would be a financially sustainable step forward that the plastics industry should support.

EPA figures show that the recycling rate for plastic packaging and containers is 13 percent, well below the 50.1 percent average for all material types.

Container deposit legislation would do the same, providing a clear path to raise the U.S. PET bottle recycling rate from under 30 percent now to the European level of 60 percent.

At a time of rising federal budget deficits, and with state and local governments complaining that China's ban on scrap imports is making it harder for local recycling programs, efforts like those would result in real money being available to support recycling upgrades that everyone agrees are needed.

By Catherine Kavanaugh
Plastics News Staff

Nanjing, China-based GreenView Floors International Inc. will invest \$26 million in a manufacturing operation for vinyl and laminate flooring in Adairsville, Ga., creating 238 jobs.

The subsidiary of Nanjing MGM New Material Co. Ltd. (NJ MGM) will renovate a vacant building for its first U.S. manufacturing site.

"With a company mission of being dedicated to a greener environment and values persistent in business integrity, continuous improvement and customer sat-

isfaction, we are eager to hire a world-class team in Adairsville. We are committed to long-term growth and hope to give back to both the community and the state of Georgia," NJ MGM Chairman Jason Liu said in a news release.

NJ MGM is a privately held company that specializes vinyl and laminate flooring for customers including Mannington USA, Hagebau German, Costco and Walmart. The parent company has 1.2 million square feet of manufacturing with 65 production lines and related equipment at its headquarters in Nanjing.

NJ MGM serves the residential

Custom Profile to add manufacturing in South Carolina with \$1.7M investment

By Audrey LaForest
Plastics News Staff

Custom Profile, a plastics profile extrusion company based in Walker, Mich., near Grand Rapids, is expanding in the United States.

The company is establishing additional manufacturing operations in Camden, S.C. The \$1.7 million investment is expected to create 70 new jobs, according to a news release from South Carolina Gov. Henry McMaster.

The Camden facility will make

plastics profile extrusions for the furniture, appliance and marine industries. The site is expected to be online in January 2020.

"We are thrilled with the welcome we have received from the economic development office and our neighboring businesses in Camden," Custom Profile CEO John Boeschstein said in a statement. "We look forward to becoming an active part of the community as we work to serve our current and future local customers."

Custom Profile has two locations in Michigan: its headquar-

ters and manufacturing facility in Walker and an additional manufacturing facility in Grand Rapids. It also has manufacturing operations in Juarez, Mexico.

The company extrudes plastic parts for the appliance, automotive, marine, medical, point-of-purchase and recreational industries, among others, using compounds such as ABS, rigid and flexible PVC, thermoplastic elastomers and polycarbonate.

Custom Profile is ranked No. 66 in *Plastics News'* most recent survey of North American pipe,

profile and tubing extruders, with estimated sales of \$49 million in 2018. The majority — 80 percent — of its sales are in profile extrusion, followed by tubing at 20 percent, according to the ranking. It has 380 employees.

In April, Custom Profile purchased all of its equity from former private equity owners Blackford Capital LLC. The company now operates as a 100 percent employee-owned company through an employee stock ownership plan. Employees in Mexico are not eligible for the ESOP.

Tariffs

Continued from Page 1

Donald Trump's tariffs against China. But they were put on hold for one year starting Dec. 28, 2018, after many injection molders and other manufacturers complained that the tariffs would raise costs for U.S. molders.

Starting in October, however, the mold making industry mounted a vocal effort to bring back the tariffs, with many mold makers also filing comments to USTR urging that the tariffs return.

The USTR has not made a formal statement that the tariffs are back in place, but the agency let the exemption expire and did not include injection molds in a Dec. 18 notification of a handful of products in that July 2018 round of tariffs that would continue to be exempted from the import duties.

AMBA's Conis said mold tariffs became effective again Dec. 28, an interpretation supported by others, including molding companies on the opposite side of the fight from the AMBA. As well, a very lengthy Jan. 1 U.S. government list of Chinese imports subject to tariffs includes the tariff code for injection molds.

Molders fear harm from tariffs

Some U.S. plastic molders, however, disagreed with AMBA and said tariffs would hurt their business and by implication the larger American manufacturers they make plastic products for.

Des Paden, president of Crestwood Industries Inc. in Mundelein, Ill., said Chinese molds reduce their costs and he argued that putting tariffs in place would delay the development of new products for U.S. consumers in the industries Crestwood serves, including health care, automotive, lighting and plumbing.

"If we can save a customer 30-50 percent on \$500,000 of tooling, we believe it is our obligation to do so," Paden said. "As we started building molds overseas, our customers have realized significant savings.

"While I would have preferred to continue to buy molds in the U.S., many domestic producers are using antiquated processes and technology that ultimately drive up costs," Paden said.

Packaging maker Berry Global Inc., which said it's one of the largest producers of plastic goods in the U.S., and automotive molder Forteq North America both told the USTR that American mold shops did not

have enough capacity and argued China's much larger mold shops were more price competitive. Berry said the typical U.S. shop has 40 employees, while Chinese competitors often have hundreds of staff.

But AMBA countered that U.S. mold making capacity utilization stands at 75 percent, meaning that domestic tooling suppliers can meet demand.

Harbour said Chinese toolmakers added a huge amount of capacity as part of state planning to boost the mold making sector, although some companies who opposed the tariffs pushed back on that point, arguing that molds are not a high-tech sector supported by Beijing's Made in China 2025 industrial policies.

Still, Harbour said the U.S. tooling sector has been hit hard by companies moving to Chinese molds, and some shops have closed down. So it's no surprise that U.S. toolmakers did not invest in major capacity expansions, she said.

"What choice did these guys have?" Harbour said. "These guys have been under intense pressure for 20, 30 years. They've invested at the best they can invest under this unfair trade competition."

An executive with one company that had been opposing the tariffs, speaking anonymously because it was still assessing the situation,



Laurie Harbour, president and CEO of Harbour Results Inc.

Plastics News photo by Michael Marcotte

said its lawyers have told it tariffs will return. The executive said the back and forth with the injection mold tariffs and larger trade talks between Washington and Beijing made it difficult to plan.

"The phase one [trade deal with China] is completed, but what is phase two?" the executive said. "It is really difficult to make long-term plans in this area."

One issue for molding companies could be if molds are in China and are not scheduled for delivery until January or later, Harbour said. That could cost U.S. molders money, unless they negotiated that issue beforehand, she said.

As well, some U.S. industry executives suggested Chinese mold shops could try to shift tooling costs to research and development to at least partially work around the tariffs.

Even with a 25 percent tariff, Chinese mold shops could still charge less than U.S. shops on some jobs, according to Harbour.

"When you quote a U.S. shop vs. a China shop, you may still see some China tools cheaper because they will quote based on their utilization of capacity. If utilization is low, they'll quote low to win the work. But U.S.-based mold shops will have a much better chance of winning with these tariffs," Harbour said.

Adac joint venture with Ainstein adds 'brains' to molded auto parts

By Audrey LaForest
Plastics News Staff

Vehicles are changing and getting smarter, as mechatronics, electronics and autonomous functions supersede more traditional mechanical parts and features on the interior and exterior.

For Adac Automotive Inc., a Tier 1 supplier and injection molder based in Cascade Township, Mich., near Grand Rapids, this technology progression affects its biggest product segment in the automotive market: door handles.

"Whether it's door handles or latches, all these things are purely mechanical parts becoming electronically driven with 'brains,'" Adac's Jeff Ackerman, executive vice president of global business development, said in a phone interview with *Plastics News*.

"We recognize that customers are going to start using things like gesture access to open a tailgate or open a liftgate, or open a power-sliding door or a side door. And they need obstacle detection technology, as well, when you have automated doors opening, so they don't hit things — people, objects and so forth," he explained.

These changes to the product area nudged Adac to start looking into current and emerging vehicle technology, such as lidar, that would allow the company to integrate these features into its product DNA.

The company determined radar was the best technology for the task because of its usefulness on the vehicle exterior, especially in varying weather conditions.

"New radar technology has the ability to discern minute detail ... in all weather conditions," Ackerman said of millimeter wave radar, or mmWave radar, specifi-

cally. "It doesn't care about snow. It doesn't care about dirt on the outside of the car."

A genius partnership

On Jan. 2, just days before the start of the CES show in Las Vegas, Adac announced it was teaming up with Ainstein Inc., a Lawrence, Kan.-based startup specializing in smart radar systems and other advanced sensing technologies, to form a 50-50 joint venture that will design, develop and manufacture mmWave radar-based sensing products for the global automotive market.

The joint venture, called Radac Automotive, is expected to be operational by the second quarter of 2020. Appointed leadership of the venture is still under consideration, but the workforce — about 15 employees to start — will include representatives from both Adac and Ainstein, Ackerman said.

As for location, there is a "high likelihood" that operations will be set up in Michigan, he said.

Radac Automotive will operate independently as a Tier 1 supplier of radar technology, products and services to the automotive industry. The joint venture's focus on mmWave radar-based sensing products will be used for applications such as proximity gesture access sensors, vehicle access and entry, parking assistance, object detection, advanced driver assistance systems, in-cabin sensing and vital sign monitoring, and autonomous driving.

"The biggest change for us as a company is that we've got to retain our roots but become much smarter on the software and electronics hardware side," Ackerman said. "For a few years now, we've been running around chasing

electrical engineering talent and bringing them into the company, and really focused on what do we have to do to our products to stay relevant in 10 years? The biggest answer is these parts have to become smart, and we have to become smart with them."

Through the strategic alliance, Ainstein will extend its expertise in radar technology to Adac's reputation as a Tier 1 automotive supplier. At CES, held Jan. 7-10, the two companies demonstrated the first Radac mmWave radar module. The patent-pending technology is designed to offer hands-free vehicle access.

"Ainstein recognizes the potential for our radar technology to be successful in the automotive industry and believes the strategic joint venture with Adac Automotive will streamline the process of bringing intelligent products to market," Andrew Boushie, Ainstein's vice president of strategy and partnerships, said in an emailed response. "This partnership successfully compresses the supply chain by bringing solutions to market that are fully integrated, facilitating the building of smarter vehicles."

Adac has additional partnerships that expand its global reach. This includes an alliance with Germany's Witte Automotive GmbH and Wisconsin's Strattec Security Corp. in Vehicle Access Systems Technology, or VAST Automotive Group, which provides a footprint in Europe, Asia, India and Brazil. In addition, Adac has two facilities in Mexico through another joint venture, Adac Strattec de Mexico LLC.

The company is ranked No. 42 on *Plastics News*' annual ranking of North American injection molders. Adac's injection molding



At CES, held Jan. 7-10 in Las Vegas, Radac Automotive demonstrated its millimeter wave radar module. The patent-pending technology shows how gestures can be used to open a truck tailgate hands-free.

Adac Automotive Inc. photo

sales for 2018 were \$233 million, according to *PN* estimates.

"You see it with even our OEM customers who are massive companies. They're all partnering with people because they need the expertise that is ... too hard to build organically fast enough," Ackerman said of strategic partnerships in the automotive industry. "I think partnerships are one of the answers to get where you want to be and leverage yourself."

With Ainstein's expertise in smart radar systems, Ackerman said it also provides an opportunity for Adac to broaden its prod-

uct focus to other areas of the vehicle beyond door handles, such as parts on the bumper or the liftgate — basically anywhere you can integrate radar.

"You certainly want to hold on to the core things that made you a good company in the first place, but you have to evolve and pay attention to what's going on around you and adapt," he explained. "We're not a tiny company, but in the automotive space, we're not very big. We survive by trying to pay attention and get down the road of where you have to be in five years, not tomorrow."

Biden says plastic bags should be phased out

By Don Loepp
Plastics News Editor

Plastic became an issue in the 2020 U.S. presidential race again Jan. 3, when candidate and former Vice President Joe Biden said plastic bags should be phased out.

The news was prompted by Biden's response to a question at a campaign stop in Iowa, according to media reports. A woman who told Biden she was from Kenya asked how he felt about plastic grocery bags, pointing out that Kenya has banned them "to clean the environment."

"I agree with you, 100 percent. We should not be allowing plastic," Biden said to applause. "What we should do is phasing it out."

Zach Parkinson, a communications official for President Donald Trump's reelection campaign, shared a 23-second video of the exchange on Twitter. Conservative media including the *Washington Examiner* reported on the video.

Tony Radoszewski, president and CEO of the Washington-based Plastics Industry Association, released

a statement saying that phasing out plastic bags was not the answer to environmental problems.

"The process of 'phasing them out,' when it comes to plastics, would be a disaster for our economy and our environment," Radoszewski said in a news release. "We're disappointed that Biden would endorse the idea of a misguided reduction in the use of plastic materials, as bans and taxes aimed at accomplishing these tasks have only driven consumers to use more environmentally harmful and resource-intensive products."

He added that developing countries with a lack of waste management infrastructure may ban materials as a last resort, but "the U.S. has the chance to be a leader in this area, by investing in new recycling technologies that can improve waste management systems at home and abroad — reducing litter and marine debris while creating jobs and helping grow the global economy."

Radoszewski called on Biden to support the Recover Act, a bill



Democratic presidential candidate Joe Biden at a campaign stop. JoeBiden.com photo

that would commit \$500 million of federal tax money over five years to matching grants to help local governments and organizations build out recycling infrastructure.

"This is a historic moment for the global economy and the environment, and the U.S. should take this chance to set an example by showing how every country can convert its waste into a valuable resource," Radoszewski said.

This is not the first time that plastics have popped up during

the 2020 campaign.

In August, Trump spoke at a Shell Chemical polyethylene plant under construction in Pennsylvania where he told workers: "When completed, this facility will transform abundant natural gas — and we have a lot of it — fracked from Pennsylvania wells, which they never would have allowed you to take if I weren't president."

Several Democratic candidates, including Sen. Bernie Sanders and Sen. Elizabeth Warren, favor a ban

'I agree with you, 100 percent. We should not be allowing plastic. What we should do is phasing it out.'

Joe Biden
2020 Democratic
presidential candidate

on fracking, as did candidate Hillary Clinton in 2016.

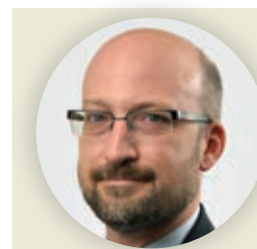
Prior to his speech at the Shell Chemical plant, Trump was asked by reporters about plastic marine debris, and he put the blame on other countries.

"Plastics are fine, but you have to know what to do with them. But other countries are not taking care of their plastic, and they haven't for a long time," Trump said.

In September, plastic straw bans came up during a CNN town hall on climate change. Then-candidate Sen. Kamala Harris called for a ban on plastic straws. Warren was also asked about straws, but she used the question as an opportunity to criticize the "fossil fuel industry," which she said has too much influence in Washington.

POLYMER POINTS

WITH FRANK ESPOSITO



'Polymer Points' by Frank Esposito is a monthly column that looks at the resin industry.

December ends with price drops for PP, PET bottle resin

For North American commodity resins, 2019 came to a close with lower prices in December for polypropylene and PET bottle resin.

Prices for polyethylene, PVC and solid polystyrene were flat for the month, while engineering resins polycarbonate and nylon 6/6 also saw lower prices in late 2019.

North American prices for PP fell an average of 2.5 cents per pound in December, resulting from lower demand and feedstock costs. Prices for the material had slid downward by a combined 5 cents in October and November.

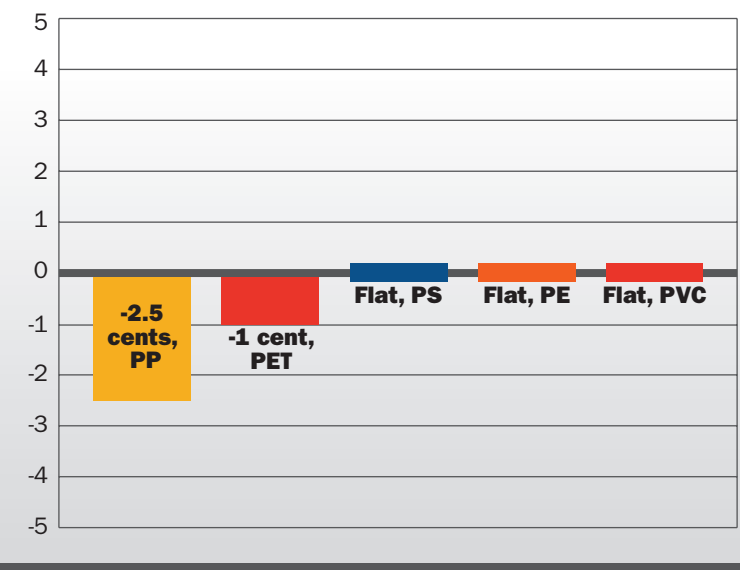
North American PP sales were up less than 2 percent in 2019. Factoring out exports left domestic demand slightly negative for the year. On the PP capacity front, Braskem is adding a little more than 1 billion pounds of annual production in La Porte, Texas, in the second quarter of 2020.

Regional PET prices declined 1 cent per pound in December, owing partly to low seasonal demand. Prices for the material also had fallen 1 cent in November after being flat for the second straight month in October. The domestic PET market remains oversupplied, with bottled water usage attempting to make up for ongoing declines in carbonated soft drink demand.

North American PE prices were flat in December, although some buyers had led a push for

RESIN PRICING

Average pricing changes for December in cents per pound



a 3-cent reduction. Prices for the material had declined an average of 3 cents per pound in November after being flat in October.

Another 1.8 billion pounds of PE capacity is set to come on line this year from Formosa Plastics Corp. USA. That's on top of almost 4.5 billion pounds added from three suppliers in 2019 and a total of more than 8 billion pounds added from four suppliers in 2017-18.

Looking past 2020, additions of more than 2 billion pounds total are slated for 2021-22. That

amount does not include 3.5 billion pounds of capacity from Shell Chemical's massive project outside of Pittsburgh. Company officials have listed "early 2020s" as the start date for commercial production there.

Regional PVC prices were flat in December after declining 1 cent in November. The November PVC price drop was surprising, since the U.S. housing market recorded three of its strongest months of the year in late 2019, according to the Census Bureau. Construction activity accounts for around

In recent interviews with *Plastics News*, market watchers said that supplies for most commodity resins should be more than adequate in 2020. Fluctuations in demand could be a bigger influence on potential price increases or decreases during the year.

60 percent of North American PVC demand, with most of that amount coming from the pipe market.

Most North American PVC makers have announced price increases of 3 cents per pound, effective Jan. 1, market sources told *Plastics News*.

North American solid PS prices were flat in December after falling an average of 3 cents per pound in November.

January prices for the material could be higher, based on higher prices for benzene feedstock, which is used to make styrene monomer. Benzene prices for January settled at \$2.53 per gallon, up almost 10 percent vs. December.

In recent interviews with *Plastics News*, market watchers said that supplies for most commodity resins should be more than adequate in 2020. Fluctuations in demand could be a bigger influence on potential price increases or decreases during the year.

Engineering resins fall

Regional prices for nylon 6/6 were down an average of 10 cents per pound in the final two months of 2019, sources said, with PC resin prices down an average of 5 cents in that same period. Lower demand from automotive and other markets played a role in the price drop.

Nylon 6/6 had been in tight supply for more than a year, but supplies had improved in the second half of 2019, allowing more material to be available, sources added.

In feedstocks used to make commodity plastics, West Texas Intermediate crude oil prices began December at \$55.20 per barrel but had jumped almost 11 percent to \$61.10 by the end of the month. Regional prices for natural gas decreased more than 4 percent in the same comparison from \$2.28 per million British thermal units (Btus) to \$2.18.



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Borealis to take full ownership of Novealis JV

Plastics News Europe

Vienna — Austrian polyolefins manufacturer Borealis AG and joint venture partner Nova Chemicals Corp. have reached an agreement for Borealis to acquire the full ownership of Novealis Holdings LLC.

The financial terms of the deal, announced Jan. 9, have not been disclosed.

Formed in 2018, Novealis is a 50-50 joint venture between affiliates of Borealis and Calgary, Alberta-based Nova Chemicals.

The move comes after Novealis entered into a 50-50 joint venture agreement with Total SA to launch Bayport Polymers LLC in Houston. The Baystar JV is building a polyethylene unit in Bayport, Texas, with an annual capacity of 625,000 metric tons.

Borealis said in a Jan. 9 news release that it expected to close the deal in the first half of 2020. The closing of the acquisition is subject to customary regulatory approvals and other conditions but is not subject to any financing condition.

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RESIN PRICING CHART

Plastics News®

As of January 9

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Prices are in U.S. cents per pound for prime resin, unfilled, natural color, FOB supplier, unless otherwise noted. Prices are generated from interviews with buyers and suppliers. The information provided is based on sources believed to be reliable, but its accuracy or timeliness is not guaranteed and no warranties of any kind are provided. *Plastics News* does not intend to specify the price of the materials listed. For price quotes on specific materials, contact the supplier. *PN* discourages use of this chart as a single-source index for price contracts. *PN* does not buy or sell resins.

Plastics News resin pricing for thermosets, certain engineering thermoplastics and high-temperature thermoplastics are published in the last issue of each month.

Data can be viewed anytime online at www.plasticsnews.com.
Paying *PN* subscribers also can access historical resin pricing data and graphs from our website.

Updates

- An arrow, up or down , indicates a market price change in that direction from the previous week.
- A "P" indicates that a price change for that material is pending.
- A bullet indicates a correction in the published price.

Highlights

- Polypropylene down 2.5 cents.
- PET bottle resin down 1 cent.
- Nylon 6/6 down 10 cents.
- Polycarbonate down 5 cents.

Commodity Thermoplastics

Key: I - Annual volumes greater than 20 million pounds II - Annual volumes of about 2 million to 5 million pounds

Resin/Grade	Volume category	
	I	II
HDPE		
Blow molding:		
Copolymer (HIC)	60-62	64-66
Homopolymer (Dairy)	60-61	62-65
Drums	62-64	65-68
Injection, general-purpose	56-57	59-61
Extrusion:		
Film, HMW	62-64	66-69
Film, MMW	65-66	70-72
Pipe, HMW	70-72	75-78
Pipe, MMW	73-76	77-79
Sheet	58-60	62-64
Rotomolding, powder	—	71-74
LDPE		
Injection:		
General-purpose	—	70-72
Lid resin	68-70	72-74
Extrusion:		
Coating, paper	68-70	—
Film, liner	63-65	66-71
Clarity film	61-63	64-67
LLDPE		
Butene-1 comonomer:		
Injection, general-purpose	—	51-55
Extrusion, liner film	47-50	51-53
HAO comonomer:		
Injection, general-purpose	—	57-59
Lid resin	59-62	65-68
Extrusion, liner film	53-55	57-60
Rotomolding, powder	—	76-81

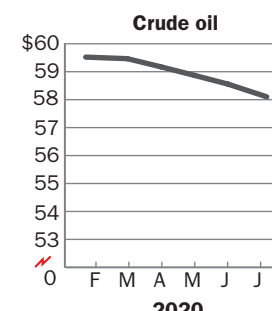
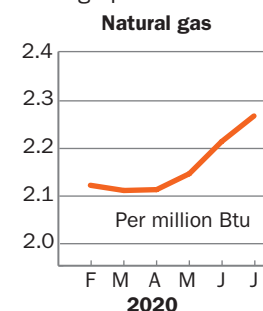
Resin/Grade	Volume category	
	I	II
POLYSTYRENE		
Crystal:		
Injection, general-purpose	99-101	103-107
High-heat	103-107	109-110
High-impact:		
Extrusion	106-108	111-113
Injection	105-107	111-113
High-heat, injection	109-114	115-117
Flame-retardant	139-143	145-149
EPS, cups	108-111	—
Unmodified	102-105	101-110
PVC RESIN		
Suspension resin:		
Injection, general-purpose	86-89	89-91
Pipe grade	84-86	87-90
Dispersion resin:		
Homopolymer, G-P	113-117	119-123
POLYPROPYLENE		
Homopolymer:		
Injection, general-purpose	↓ 58-60	↓ 61-64
Extrusion:		
Fiber	↓ 57-59	↓ 60-62
Film	↓ 58-61	↓ 61-64
Profiles	↓ 61-64	↓ 66-73
Sheet	↓ 60-63	↓ 64-66
Random copolymer:		
Injection	↓ 61-63	↓ 64-66
Film	↓ 63-64	↓ 65-67
Blow molding	↓ 63-64	↓ 66-69
Impact copolymer:		
High-impact	↓ 72-76	↓ 77-80
TPO (in-reactor)	↓ 92-100	↓ 99-103

Resin/Grade	Volume category	
	I	II
ABS		
Injection:		
Medium-impact	120-123	124-125
High-impact	125-126	128-132
Pipe fittings	110-111	114-118
High-heat	146-150	155-160
Flame-retardant	151-155	160-175
Extrusion:		
Pipe, general-purpose	122-124	127-132
Sheet, general-purpose	139-140	142-144
Blends/alloys:		
PC/ABS	—	154-159
Nylon/ABS	—	159-169
ACRYLIC, G-P		
	—	125-130
PET PACKAGING RESINS		
APET	91-93	94-96
Bottle resin	↓ 67.5-69.5	↓ 70.5-72.5
CPET	89-91	—

> Continued on page 26

Gas & oil futures

Average prices in U.S. dollars*



Source: Barchart.com Inc., Chicago

*As of January 9

For pricing information on virgin thermoplastic or thermoset resins, call Frank Esposito at 330-703-7290.

Engineering thermoplastics

Key: I - Annual volumes greater than 1 million pounds
II - Annual volumes of about 300,000 to 500,000 pounds

Resin/Grade	Volume category	
	I	II
ACETAL		
Homopolymer	137-144	148-154
20 percent glass	—	179-194
Copolymer	115-125	130-139
20 percent glass	—	160-175
NYLON		
Type 6	137-147	150-154
Type 6/6	↓ 175-183	↓ 187-198
POLYESTER		
PBT, injection	119-124	129-134
30 percent glass, FR	154-159	164-174
PET, injection	118-123	128-138
30 percent glass, FR	155-165	165-175
POLYCARBONATE		
Blow molding	↓ 173-183	↓ 204-214
Injection, general-purpose	↓ 157-166	↓ 161-186
20 percent glass	↓ 173-183	↓ 204-220
Structural foam	↓ 155-164	↓ 191-208
Flame-retardant	↓ 188-205	↓ 216-226
Extrusion, sheet	↓ 156-165	↓ 168-196
Optical media	↓ 139-148	↓ 149-168
POLYURETHANE		
Ester type, injection	189-206	213-222
Extrusion	216-238	252-270
Ether type	252-265	297-306
TPE		
Polyester	—	325-400
Olefinic (compounded)	80-115	120-135
Styrenic	160-190	220-270

For pricing information on virgin thermoplastic or thermoset resins, call Frank Esposito at 330-703-7290.

Recycled plastics

Resin/Grade	Clean regrind or flake	Pellets
	ABS	
Mixed colors, industrial	45-49	75-79
POLYCARBONATE		
Clear, industrial	86-96	—
Mixed colors, industrial	83-87	91-97
POLYETHYLENE		
HDPE:		
Natural, post-consumer	51-55	74-78
Mixed colors, post-consumer	36-40	44-51
Mixed colors, industrial	33-38	45-49
HMW HDPE film, post-consumer	—	38-42
LLDPE stretch film	—	29-43
LDPE film:		
Clear, post-consumer	—	35-39
Colored, post-consumer	17-21	37-41
PET BOTTLES		
Clear, post-consumer	34-46	56-66
Green, post-consumer	18-26	23-31
POLYPROPYLENE		
Industrial	31-35	45-49
POLYSTYRENE		
Industrial	19-24	54-70
High-heat, crystal, post-consumer	34-40	51-57
PVC		
Clear, industrial	22-28	—

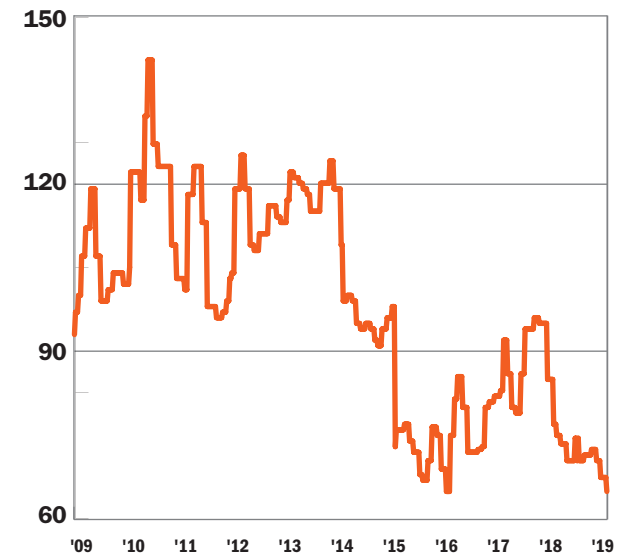
For pricing information on recycled resins, call Frank Esposito at 330-703-7290.

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Historical resin pricing

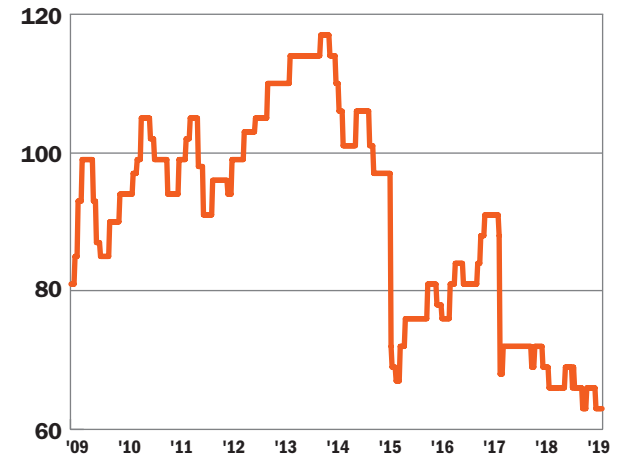
PP, Extrusion Sheet

Large volume average, in cents



HDPE, Extrusion Film HMW

Small volume average, in cents



Source: Plastics News research

Crain launches Sustainable Plastics magazine

Plastics News Report

Detroit — Crain Communications Inc. is launching a new brand to address the emerging recycling and sustainability focus of the global plastics industry.

Sustainable Plastics, a Europe-based sister magazine to *Plastics News*, will provide news that impacts consumer and industrial brands, manufacturers, governments, the plastics industry and more.

“There is no bigger issue today in the plastics industry than recycling and sustainability,” said Group Publisher Brennan Laferty. “It’s a topic that will continue to grow in interest and focus. There’s a need for devoted coverage that we, at Crain, know we can provide.”

“Our track record and reach tells us we are best equipped to



Laird

meet this challenge to the benefit of our readers, advertisers and sponsors.”

Crain veterans Don Loepp and Karen Laird will lead the editorial efforts, while show director and sales

director Matthew Barber will be responsible for the commercial side with digital, print and event opportunities.

Crain’s focus on *Sustainable Plastics* means *Plastics News Europe* and *PRW* magazines will no longer publish. Readers in Europe will receive *Sustainable Plastics* instead, with additional digital reach in the United States.

Sustainable Plastics dovetails with Crain’s Plastics Recycling Show Europe, which is held annually in Amsterdam. Partnered with Plastics Recyclers Europe, the highly successful PRSE gathers recyclers, consumer brands, NGOs and other stakeholders from around the world. The 2019 edition hosted 3,250 delegates and 120 exhibiting companies. The 2020 edition is scheduled for March 25-26.

Keeping in step with the new brand, Crain’s annual Plastics Industry Awards in London, honoring the best in the United Kingdom’s plastics market, will place more emphasis on the circular economy. This year will mark the 20th anniversary of the awards, which hosted more than 600 delegates in 2019.

“Over the past few years, the plastics industry has found itself

‘What we’re seeing is a paradigm shift that is leading to new collaborations and innovation along the entire value chain and bringing fundamental changes to the industry.’

Karen Laird
Sustainable Plastics

squarely in the firing line,” said Laird, the editor of *Sustainable Plastics*. “In response, it has set forward-looking priorities, ambitions and goals to shape the transition towards a circular plastics economy.”

“What we’re seeing is a paradigm shift that is leading to new collaborations and innovation along the entire value chain and bringing fundamental changes to the industry. Aligning our new

title with these developments reflects our role in the ongoing transformation,” Laird said.

Sustainable Plastics’ website will launch Feb. 1, while the first print edition will mail in March.

Sustainable Plastics is the latest magazine in Detroit-based Crain’s Global Polymer Group, which also includes *Plastics News*, *Rubber & Plastics News*, *Tire Business*, *European Rubber Journal* and *Urethanes Technology International*.

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Left to right: Travis Smith, Molding Process Manager ; John Avery, Senior Product & Manufacturing Engineer ; JP Magat, Product & Manufacturing Engineer

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