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Catalytic converter thefts skyrocket

by MAURA KELLER
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A rash of catalytic converter thefts have been widely reported across the country in recent months. The driving force? Catalytic converters contain a significant amount of very valuable precious metals. Some of these metals, like platinum, are currently comparable in price to gold as a commodity. Because of the rare metals that are inside of them, catalytic converters can be worth from several hundred to several thousands of dollars. According to the Institute of Scrap Recycling Industries (ISRI), thieves target all types of vehicles and a single stolen catalytic converter can garner anywhere from \$50 up to \$875, depending on its type and precious metals content.

State Farm recently put together a report on catalytic converter thefts from an insurance perspective. According to State Farm claims data, in the 12 month period comprised by the second half of 2020 and the first half of 2021 (from July 2020 to June 2021), the theft of catalytic converters grew close to 293 percent nationwide, in terms of number of claims filed, compared to the 12 months prior.

During the most recent 12 month period, there were more than 18,000 of these parts stolen and reported by State Farm customers, compared to the slightly above 4,500 in the previous 12 month period. Catalytic converters are part of the exhaust system and help reduce the contaminants emitted by it.

Cliff Hope, senior account manager at PMR Inc., said that in his opinion there are two main factors driving catalytic converter thefts. First, rising precious metal prices make these cores considerably more valuable as a recycled item. For example, only three years ago the average recycled value of a converter was \$50 to \$60 dollars. Whereas in recent months the average value was more than \$300 per unit.

"The second factor that has driven thefts is easily accessible online information that offers guides to the recycled value of converters," Hope said. "While companies like



Replacing the stolen parts is expensive, ranging between \$2,000 to \$2,500 for each catalytic converter.

PHOTO BY BALONCICI | DREAMSTIME

ourselves only offer such information to properly vetted suppliers, other less reputable sources have profited by selling information about converters to anyone willing to pay monthly fees for access."

PMR is a privately owned catalytic converter processor and has been in business for 25 years. The company offers its suppliers a full range of services as they relate to recycling catalytic converters. PMR is

able to sell those precious metals in future markets for suppliers.

HomeTowne Auto Repair & Tire in Woodbridge, Virginia, has received a number of cars that had their catalytic converters stolen. HomeTowne Auto Repair & Tire co-owner ST Billingsley said because they are made with expensive metals – platinum, palladium and rhodium – these parts are targeted by thieves, who tend

PMR only work with legitimate recyclers who are sourcing material from end-of-life vehicles and cars/light trucks bought at auction for parts.

"While converter theft is an issue, the numbers of stolen units don't make up even a fraction of the millions of converters recycled annually in North America and the rest of the world," Hope said. "The real impact that converter theft is having on some recyclers depends on state and municipal laws and regulations being developed and implemented surrounding the sale of scrap converters."

As Hope explained, for now there is quite a patchwork of regulations that in some states/counties have severely restricted the sale of converters to recyclers from the general public.

"While this is a politically expedient solution, all it really does is drive the sale of converters to illegitimate buyers or has the general public traveling to states or counties that don't have the same restrictions," Hope said. "Once again this type of consequence has limited impact on the overall converter recycling industry."

Hope advised that recyclers that are running legitimate businesses should be recording information from people selling them converters and asking for the vehicle registrations that the converters have come from to prove proper ownership. Or sellers

See CONVERTERS, Page A4



The number of stolen converters is an issue, but they are only equal to a tiny fraction of the millions recycled annually.

one of the last stops for converters to be recycled.

"Auto recyclers, and metal yards that dismantle end-of-life cars and light-duty trucks are able to send material to us for recycling by means of toll refining," Hope said. Services include processing converters to the point of pre-smelting assay – which includes precise evaluation of the precious metal content in a given shipment/lot of converters and are

to steal from multiple cars in commuter lots.

"It has become a bit difficult for auto repair shops to recycle catalytic converters, because we need to start keeping documentation about where a catalytic converter is coming from," Billingsley said.

The impact of these increased converter thefts are not significant to the recycling industry as a whole. As Hope pointed out, companies like

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EPA awards \$3 million to small businesses for waste and recycling technologies

The U.S. Environmental Protection Agency (EPA) announced \$3,599,571 in funding for nine small businesses to further develop and commercialize technologies to protect the environment and public health. The funded technologies are focused on addressing issues including PFAS destruction, ethylene oxide monitoring, water reuse, and sustainable construction materials.

“I commend our nation’s small businesses for being at the forefront of addressing these environmental problems,” said Wayne Cascio, acting principal deputy assistant administrator in EPA’s Office of Research and Development. “This funding will allow these small businesses to take the next steps in developing their technologies and bringing them to the marketplace.”

These nine small businesses are receiving Phase II funding of up to \$400,000 from EPA’s Small Business Innovation Research (SBIR) program. These companies were previously awarded a Phase I contract of \$100,000 to develop innovative environmental technologies and are now receiving a Phase II award to further advance and commercialize the technology. This year’s SBIR Phase II recipients include:

- Aquagga, Inc. (Tacoma, Washington) - For a hydrothermal alkaline treatment process for destroying PFAS in contaminated groundwater.
- Hyperion Analytical LLC (Rancho Cucamonga, California) - For a

fully automated analytical system for measurement of N-nitrosamines to support water reuse applications.

- Nikira Labs (Mountain View, California) - For a sensitive, real time, and highly selective ethylene oxide analyzer for next generation environmental monitoring.

- OLIN (Philadelphia, Pennsylvania) - For a process that repurposes waste-stream glass into soil suitable for horticultural and green infrastructure projects.

- PKS Consulting, Inc. (Anchorage, Alaska) - For a mobile plastic ocean waste recycler that produces recycled plastic lumber products from locally collected plastic ocean waste.

- Pure Blue Tech Inc. (Seattle, Washington) - For anti-fouling membranes integrated with polyvinylidene fluoride transducers to promote efficient water reuse.

- Quick-Med Technologies, Inc. (Gainesville, Florida) - For long-term disinfectant coatings to kill viruses and bacteria on high-touch surfaces.

- Triangle Environmental Health Initiative, LLC (Durham, North Carolina) - For a zero-waste system to maximize chemical energy potential in wastewater and produce three valuable reuse output streams.

- Verdant Structural Engineers (Berkeley, California) - For straw structural insulated panel alternatives for homes and buildings to improve energy efficiency and reduce embodied carbon impacts.

Sims sells majority stake in Sims Municipal Recycling

Sims Ltd. has agreed to sell a majority stake in a company that processes and markets much of the waste produced in the city of New York.

Sims said it will sell a 50.46 percent interest in Sims Municipal Recycling of New York, LLC to an investor group that includes funds managed by Closed Loop Partners for \$45.4 million. It expects the deal to close in the third quarter of the 2022 fiscal year.

Sims Municipal Recycling operates four recycling facilities, mostly in the New York-New Jersey metro region. It processed 660,000 metric tons of municipal curbside waste in the 2021 fiscal year.

“This transaction demonstrates Sims’s leadership and commitment to

innovate quickly – and at scale – and to maximize opportunities within the circular economy,” said Alistair Field, Sims’s chief executive and managing director.




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Converters

Continued from Page 1

should have a work order from a mechanic stating the converter was removed from their car. PMR offers recyclers electronic means of identification that can assist with confirming make and manufacturer of a scrap converter while keeping a photo record that can be adapted to responsible sourcing practices.

“If someone is not able to prove ownership of the vehicle a converter came from or does not participate in legitimate automotive recycling, the units should not be purchased and the authorities notified of any suspicious activity,” Hope said.

Nearly 20 years ago, Brad Rudover, partner at Scrap University and president of CARI’s British Columbia chapter for 10 years, co-wrote a catalytic converter guide to explain the various grades and value so recyclers could remove them from vehicles instead of sending them through the shredder.

“Due to the high value materials, including platinum, palladium, and rhodium that are present in the catalyst biscuit, converters range in high scrap values, making them an easy money maker for thieves,” Rudover said. “Converter theft is just another blemish on our industry. Recyclers should stop buying them individually and only recover them from scrap vehicles with identifiable VIN. The recycling industry should take the initiative to make them a banned item to help reduce/eliminate theft.”

From the standpoint of legislation, until there is a nationally standardized practice, Hope said the patchwork of laws and regulations will not be overly effective in combating converter theft.

“Thieves looking to sell stolen material will either sell to illegitimate buyers or travel to states and counties that have fewer or no restrictions for the sale,” Hope said. “Once again, from our point of view we will not process material from individuals that do not have a registered business. Our suppliers must sign terms that outline responsible sourcing practices and prove they have a place of business that is following recycling laws and guidelines.”

Restrictions aside, there will always be a need for the rare earth metals that are being reclaimed from catalytic converter recycling. And as Hope explained, recycling is one of the best ways to reduce carbon emissions and climate change and is considered an essential service.

“To that end and as consistent scrap legislation is introduced and enforced, converter thefts will be better managed over time,” Hope said. “We are offering resources to our suppliers that comply with state laws, assist in identifying converter types and only work with legitimate recyclers that are committed to the communities they serve.”

ISRI recommends that those within the recycling industry that are affected by catalytic converter metals recycling become familiar with laws governing catalytic converters in the states where they operate. “At the very least, when someone offers a catalytic converter for sale, conduct a reasonably diligent inquiry, based upon the seller, type and quantity of metal offered for sale, and other circumstances surrounding the transaction, to determine whether the person selling or delivering the metal has a legal right to do so,” ISRI advised.

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WASTE

Solid waste collection worker fatalities continued to decrease in 2020

The U.S. Department of Labor’s Bureau of Labor Statistics (BLS) released the 2020 National Census of Fatal Occupational Injuries. It indicates that refuse and recyclable materials collection remains the 6th deadliest occupation in the U.S., though the number continues to decline. The workplace fatality rate for this group fell to 33.1 in 2020 from 35.2 in 2019.

“SWANA is very pleased BLS has confirmed SWANA’s data showing a decline in collection worker fatalities in 2020. This continues a trend that started in 2019 and has accelerated this year,” observed David Biderman, SWANA’s executive director and chief executive officer. “Our Safety Ambassadors program, Hauler Safety Outreach initiatives, and other safety activities appear to be paying dividends, and we expanded our safety offerings in 2021

by adding a very successful weekly safety newsletter. The goal is to reduce worker fatalities and get waste collection employees out of the top 10 list,” stated Biderman.

Biderman added SWANA will continue working with its members and industry partners to improve the solid waste industry’s safety performance and provide educational resources and leadership on this important industry issue.

Solid waste collection saw a reduction in workplace fatalities in 2020, with 38 collection employee deaths. This continues a downward trend from 57 in 2018 and 43 in 2019.

Fatalities at material recovery facilities increased slightly from 3 in 2019 to 4 in 2020. Solid waste landfills saw 6 fatalities in 2020, while BLS recorded none in the previous year. According to data collected by SWANA, however, at

least 2 landfill workers were killed on the job in 2019. Regardless, this portion of the industry saw a steady decline over the previous five years.

Notably, the BLS fatality census does not report any illness-related information, including COVID-19. Fatal workplace illnesses not caused by an injury are not within the scope of this report.

“It is positive to hear our industry remains out of the top five deadliest occupations in the U.S.,” said Amberlyn Melton Liles, superintendent of environmental services for The City of Oxford, Mississippi, and safety ambassador for the SWANA Magnolia Chapter. “In every industry, accidents will happen. The solid waste industry must continue to promote employee and public safety diligently to move out of the top ten deadliest occupations in the U.S.

NWRA supports DEI with staff for waste industry

The National Waste & Recycling Association (NWRA) hired Ece Cetin as manager of industry DEI, education, and database.

In addition to developing NWRA’s DEI program, Cetin will work on NWRA’s education program and maintain the database.

Originally hailing from Istanbul, Turkey, Cetin earned her bachelor’s degree in American Culture and Literature and her master’s degree in Strategic Communication Management. She got her start as an English instructor at some of the most respected universities. She went on to manage education projects and marketing for a company in Europe before moving to the U.S.. Since 2016, she has planned and executed events, created marketing campaigns and designed education programs in the Washington, D.C., area.

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AUTOMOTIVE

General managers named at eight Adesa locations

Adesa, a business unit of global wholesale used vehicle digital marketplace operator KAR Auction Services, Inc. d/b/a KAR Global, announced new general managers at eight locations.

Michele Arguijo at Adesa Austin, Amy Coley at Adesa Washington, D.C., Sheldon Jones at Adesa Little Rock, Arkansas, Derek Kline at Adesa Pennsylvania, Sean O’Connell at Adesa Colorado Springs, Colorado, Lisa O’Neil at Adesa Atlanta, Georgia, Rod Thompson at Adesa Tampa, Florida and Alfie White at Adesa Birmingham, Alabama.

With Adesa Austin for more than 13 years, Arguijo has held various management positions across fleet and dealer sales, overseeing both departments in 2017. With more than 25 years of industry experience, Arguijo began her career at a local mechanic shop as a service writer and book-keeper, and then joined DriveTime Used Cars where she was promoted to recon shop manager.

Coley has worked in the automotive industry for more than 16 years. Prior to working as the assistant GM at Adesa Washington, D.C., Coley got her start working in repairs – managing everything from collision repairs to full express repair centers. She brings a strong customer service background and digital focus.

Jones brings more than 12 years of management experience to Adesa Little Rock, ranging from the auto to financial industries. He managed three Adesa salvage auctions prior to their spin-off.

Kline has been with Adesa Pennsylvania for almost four years and most recently held the commercial accounts manager position. Prior to joining Adesa, Kline held various positions in the automotive industry.

With more than 25 years of auction and remarketing experience, O’Connell brings a veteran presence to Adesa Colorado Springs. He was the assistant GM at the AutoNation auction in Atlanta for the last four years.

O’Neil has held numerous positions throughout her 18 years with Adesa. Most recently, she served as the general manager of Adesa Tampa.

Thompson brings 25 years of experience in the automotive industry to Adesa Tampa. A veteran in the industry, he has done everything from owning a motorsport dealership to leading Adesa Tulsa.

Part of the Adesa family for more than 32 years, White started in the detail shop and over time grew his experience and responsibilities – from manager of the fleet lease and commercial department to assistant general manager and operations manager of Adesa Birmingham in 2012.

AR Scrap Metals MarketWatch



Commodity		Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
#1 Bushelings	per gross ton	\$355.00	375.00	389.00	473.00	560.00
#1 Bundles	per gross ton	377.00	369.00	374.00	441.00	570.00
Plate and Structural	per gross ton	356.00	357.00	381.00	415.00	469.00
#1 & 2 Mixed Steel	per gross ton	351.00	348.00	379.00	412.00	425.00
Shredder Bundles (tin)	per gross ton	201.00	210.00	264.00	265.00	284.00
Crushed Auto Bodies	per gross ton	201.00	210.00	264.00	265.00	284.00
Steel Turnings	per gross ton	127.00	132.00	199.00	249.00	285.00
#1 Copper	per pound	3.96	4.09	4.10	3.99	4.10
#2 Copper	per pound	3.83	3.82	3.77	3.78	3.81
Aluminum Cans	per pound	.79	.80	.92	.85	.83
Auto Radiators	per pound	1.93	1.79	2.27	2.36	2.51
Aluminum Core Radiators	per pound	.81	.73	.74	.73	.73
Heater Cores	per pound	1.51	1.51	1.57	1.74	1.85
Stainless Steel	per pound	.82	.79	.85	.90	.98

All prices are expressed in USD. Printed as a reader service only.

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METALS

Novelis to build \$365 million recycling center to support automotive customers

Novelis Inc., a leader in aluminum rolling and recycling, will invest \$365 million to build a highly advanced recycling center for automotive customers in North America. With an annual casting capacity of 240 kt of sheet ingot, they expect the facility to reduce the company's carbon emissions by more than one million tons each year. The new recycling facility will be built adjacent to Novelis' existing automotive finishing plant in Guthrie, Kentucky.

The center will enable Novelis to grow its closed loop recycling programs with more automotive customers in North America. Through closed loop recycling, the company takes back the aluminum remaining after automotive parts are stamped from sheets and remakes it into the same product for new vehicle production. The center will also have the capability to process aluminum from vehicles at the end of their lifecycle. Using recycled aluminum as input material requires only 5 percent of the energy used to make primary aluminum, thus avoiding 95 percent of the carbon emissions associated with production.

"Novelis aims to be the world's leading provider of low-carbon, sustainable aluminum solutions that advance our business, industry and society toward the benefits of a circular economy," said Steve Fisher, president and chief executive officer of Novelis, Inc. "Through this investment, we will continue to increase the amount of recycled content in our products, reducing our CO2 emissions and moving us closer to carbon neutrality."

The new center will be equipped with industry leading processes and capabilities, including advanced shredding and sorting technology, as well as energy efficient innovations to support the company's sustainability goal to reduce energy intensity by 10 percent by 2026. Groundbreaking is scheduled for early 2022, with commissioning expected in 2024.

When fully operational, the expansion will add approximately 140 new jobs in Guthrie. This announcement is on the heels of Novelis' October grand opening of the automotive finishing plant in Guthrie, which currently employs 150 people and will grow to 190 over the next two years.

We could manage to survive without money changers and stockbrokers. We should find it harder to do without miners, steel workers and those who cultivate the land.

—Aneurin Bevan

Steel imports up 44.6 percent

U.S. IMPORTS OF FINISHED STEEL MILL PRODUCTS					
BY COUNTRY OF ORIGIN (Thousands of Net Tons)					
Preliminary	NOV 2021	OCT 2021	2021 (annualized)	2020 (12 months)	% Change 2021 Annual vs. 2020
SOUTH KOREA	232	223	2,782	2,015	38.1%
JAPAN	154	80	1,074	767	40.0%
TURKEY	112	149	1,021	562	81.6%
GERMANY	78	83	882	725	21.7%
TAIWAN	73	72	848	573	48.0%
VIETNAM	180	110	845	314	169.2%
NETHERLANDS	91	54	611	463	32.0%
BRAZIL	45	45	427	504	-15.2%
All Others	1,619	1,540	15,101	10,216	47.8%
TOTAL	2,583	2,356	23,592	16,139	46.2%

Based on preliminary Census Bureau data, the American Iron and Steel Institute (AISI) reported that the U.S. imported a total of 3,120,000 net tons (NT) of steel in November 2021, including 2,583,000 net tons (NT) of finished steel (up 13.9 percent and 9.6 percent, respectively, vs. October final data). Through the first 11 months of 2021, total and finished steel imports are 29,681,000 and 21,626,000 net tons (NT), up 44.6 percent and 46.1 percent, respectively, vs. the same period in 2020. Annualized total and finished steel imports in 2021 would be 32.4 and 23.6 million NT, up 47.1 percent and 46.2 percent, respectively, vs. 2020. Finished steel import market share was an estimated 27 percent in November and is estimated at 22 percent over the first 11 months of 2021.

Key finished steel products with a significant increase in imports in November compared to October are

heavy structural shapes (up 64 percent), sheets and strip all other metallic coatings (up 33 percent), cold rolled sheets (up 32 percent), hot rolled bars (up 29 percent), oil country goods (up 28 percent), sheets and strip galvanized hot dipped (up 27 percent) and tin plate (up 10 percent). Products with a significant year-to-date (YTD) increase vs. the same period in 2020 were hot rolled sheets (up 137 percent), plates in coils (up 109 percent), sheets and strip all other metallic coatings (up 66 percent), oil country goods (up 62 percent), cut lengths plates (up 60 percent), wire rods (up 60 percent), cold rolled sheets (up 41 percent), heavy structural shapes (up 31 percent), hot rolled bars (up 30 percent), sheets and strip hot dipped galvanized (up 29 percent), wire drawn (up 23 percent), reinforcing bars (up 23 percent), mechanical tubing (up 20 percent) and tin plate (up 13 percent).

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The central graphic features the text "ISRI 2022 CONVENTION & EXPOSITION" in a bold, sans-serif font. The "2022" is in a large, red, stylized font. The text is set against a black diamond shape, which is part of a larger, multi-layered geometric design of overlapping triangles and lines in white and grey. The background of the entire poster is a blurred, aerial view of a city skyline, likely Las Vegas, with various buildings and structures visible.

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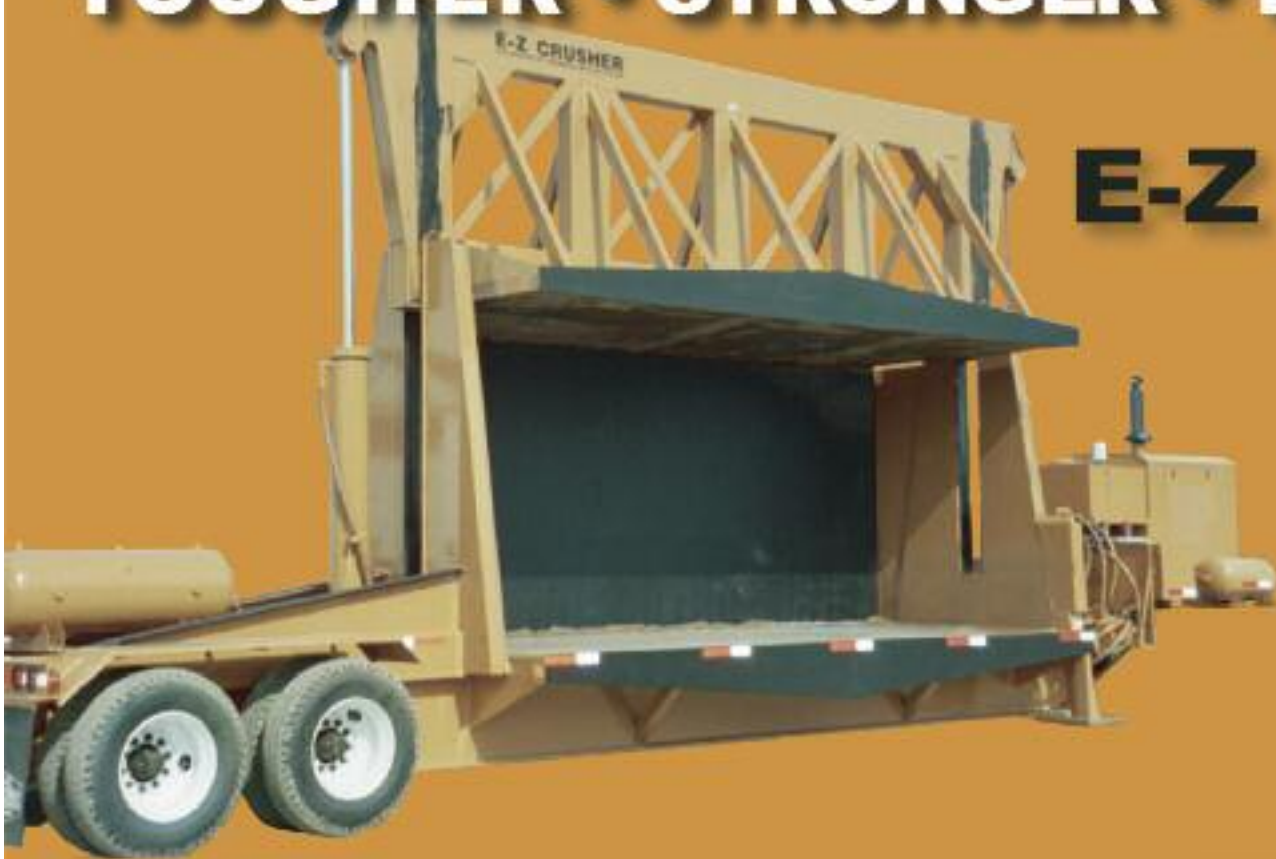
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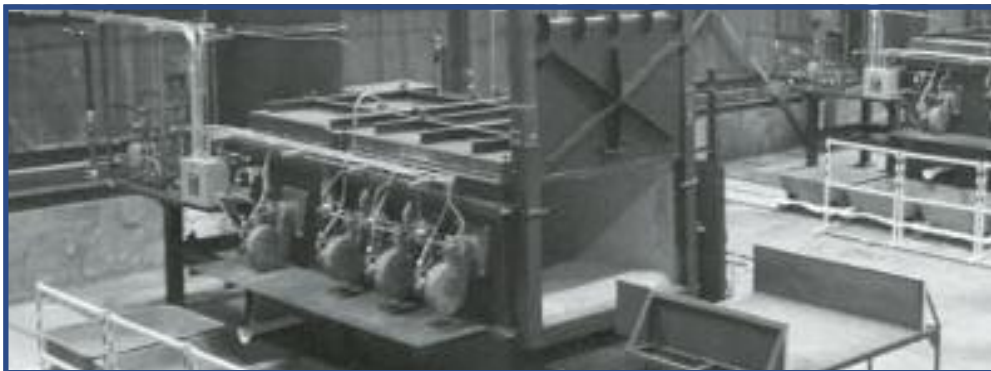
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BUSINESS BRIEFS

Meridian Waste acquires two NC hauling companies

Meridian Waste, an integrated, non-hazardous solid waste services company, announced today it closed on the purchase of Dumpstars, LLC and Discount Dumpsters, LLC. in North Carolina.

The acquired assets from both Dumpstars and Discount Dumpsters include roll off trucks, containers and commercial contracts in Wake, Johnston and Durham counties. In addition to waste and recycling collection, the acquisition of Dumpstars includes portable restrooms, which is a new line of business for Meridian Waste in Raleigh with this purchase.

The terms of the asset purchase agreements remain private. This marks Meridian Waste's third and fourth acquisitions in North Carolina and the nineteenth and twentieth acquisitions since the company transitioned to private stock.

DTG Recycle acquires assets of Roll-off Recyclers

DTG Recycle, a recycler of commercial, industrial, construction and demolition waste in the Pacific Northwest, acquired substantially all assets of Roll-off Recyclers. Roll-off Recyclers, based in Woodinville, Washington, operates a fleet of recycling containers in King and Snohomish counties.

With this latest acquisition, DTG Recycle continues growing its container and trucking divisions, offering customers comprehensive container and transportation services.

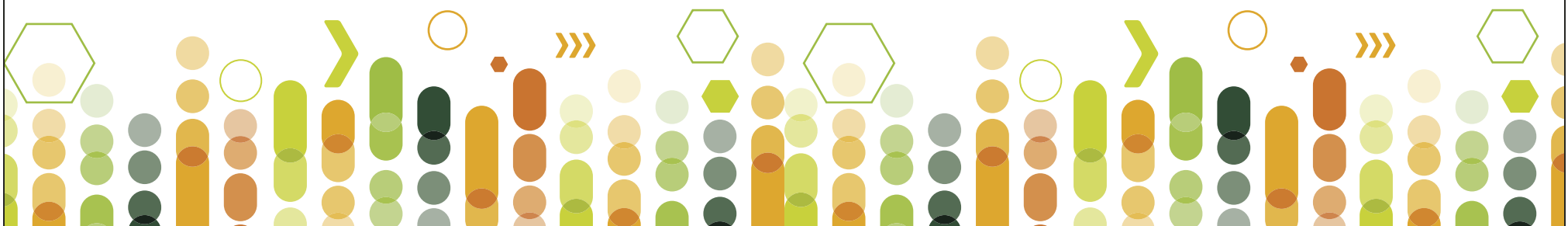
Keter Environmental Services acquires M-PASS

Keter Environmental Services, a full service recycling and waste management company focused on providing first class sustainable recycling and waste programs, today announced the acquisition of M-PASS Environmental, an Atlanta based independent waste management and recycling solutions company. Terms of the transaction were not disclosed.

Founded in 2006, M-PASS has grown from a waste and recycling cost reduction consulting company to a turn-key waste and recycling solutions company that provides comprehensive waste management and recycling services to businesses in Georgia and across the U.S. M-PASS serves customers across a number of industries.

Keter is a provider of recycling and waste services to the real estate investment trust industry and has steadily built a growing presence across several industrial end markets, including food processing, medical device manufacturing, auto assembly, and engineered components. Through its software and digital platform, the company provides real-time recycling and waste reporting.

Last month, the company announced it received a significant investment from TPG Growth, the middle market and growth equity platform of alternative asset firm TPG. With the investment from TPG, Keter continues to execute its growth strategy through a combination of organic growth initiatives and strategic acquisitions like M-PASS.



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BRIEFS

MetalX relocates headquarters to Fort Wayne

■ MetalX has moved its corporate headquarters to Fort Wayne, Indiana, following the completion of BlueScope's acquisition of the scrap company's ferrous business. Company offices had previously been located at the Waterloo, Indiana facility which was one of the two locations acquired by BlueScope as part of the transaction.

MetalX has entered into a long term lease in the Dupont Office Center on the north side of Fort Wayne. The new address for MetalX will be 9910 Dupont Circle Drive East, Suite 200, Fort Wayne, Indiana 46825.

Ohio company Hydrodec acquired by UK group

■ Hydrodec of North America, an Ohio based naphthenic oil treatment company, has been acquired by a British-based environmental group.

The company, which collects and hydrotreats used transformer and naphthenic oils at its Canton facility in northeast Ohio, has been taken over by UK firm Slicker Recycling Ltd.

The acquisition sees Slicker, which is headquartered near Birmingham in the UK, increasing its global footprint.

Hydrodec received carbon credit approval from the American Carbon Registry in 2016 enabling its product to be sold with a carbon offset and creating an incremental revenue stream.

Hydrotech names Campbell for president

■ John Campbell has been named the new president of Hydrotech, Inc., a company committed to providing reliable fluid power and automation products, solutions and services in the industry. An experienced business leader from the fluid power industry, Campbell will succeed Mike Tonyan. Tonyan will remain as a valued member of the Hydrotech leadership team, assuming a newly created role as chief sales officer.

Campbell brings with him many years of leadership experience and business acumen. His previous role was as president of Clippard Instrument Laboratory, Inc. the pioneer in miniature pneumatics. During that period, he also served on the board of the National Fluid Power Association (NFPA).

CRRA makes multiple staffing changes

■ The California Resource Recovery Association (CRRA) board, announced the promotion of Lauren Molinari to director of administration. Molinari has been an integral part of the organization for almost six years.

Despina M. Kratsoulas has been named director of events. Kratsoulas begins her eighth year with CRRA.

Matt Molinari will act as the communications contractor and assist with messaging membership and maintaining the board's website.

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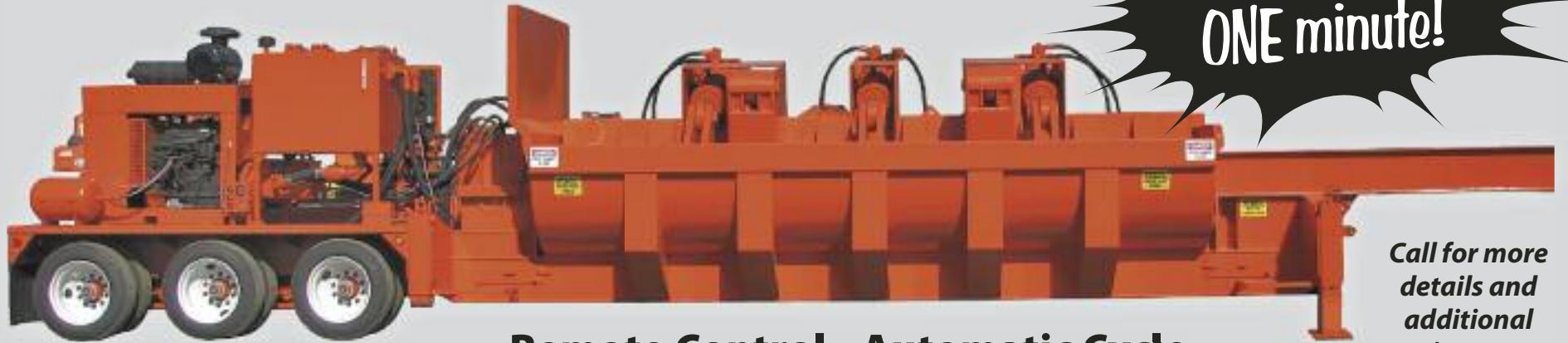


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Plastic recycling facilities deploy robotics

by MAURA KELLER

mkeller@americanrecycler.com

More and more of today's material recovery facilities and recycling plants are turning to robotic technology in their processes and procedures.

Not only do robotics offer a streamlined method of sorting and separating recycled materials, this technology helps focus the economics of the recycling industry to be more sustainable, economic and scalable.

For plastics recycling, the addition of AI and robotics technology is bringing consistency to plastics recycling operations, helping an area of the facility that was always challenging to staff, given the arduous nature of these jobs, run autonomously. For example, AMP Robotics offers its AMP Cortex robotic system, which can reach 80 picks per minute for faster and more precise plastic recovery. The program allows end users to separate plastics, and distinguish between PET, HDPE, LDPE, polypropylene (PP) and polystyrene (PS) at accuracy rates up to 98 percent.

Carling Spelhaug, senior PR and marketing communications manager at AMP Robotics, said this robotics technology is helping plastic reclaimers increase both capture rates and quality in the material they recover. In fact, one of the nation's leading reclaimers, Evergreen, is using AI-guided robotics to separate plastics more precisely by color.

Working with AMP, Evergreen added AI-enabled robotics to its PET bottle sort lines to modernize a critical portion of the company's recycling process. These robots, supplied by AMP Robotics, replaced tedious hand sorting and accelerated the process. The robots are as accurate as they are fast. They pull and sort by color every bottle that runs through the recycling lines.

"With robots, the reclaimer has seen pick rates as high as 120 bottles per minute – an increase of up to 200 percent," Spelhaug said. "The robots are removing up to 90 percent of contamination, on average, across Evergreen's different lines."

Robots can adapt very quickly to changes in the material stream, offering an attractive alternative to time-consuming training with human sorters to absorb changes.

"After installing robots, Evergreen was able to cross-train members of its team and move some to more technical or high-skilled roles within the plant," Spelhaug said. "The industry is adopting this technology at a rapid pace and we're seeing many repeat orders. The results have been compelling enough that Evergreen decided to move forward with six addi-



An AMP robot, guided by artificial intelligence, sorts material on a container line.

PHOTO COURTESY OF AMP ROBOTICS

tional AMP Cortex robots for its recently acquired PET recycling facility in Riverside, California."

David Reid, sales director at the Vem Group, a manufacturer of plastic injection molds, said a significant issue within the realm of plastics recycling is sorting, resulting from consumers who don't pre-sort their products and dump everything in the same waste receptacle as the rest of the garbage. To tackle this underlying issue, robotics was introduced.

"The utilization of a robot sorting plant has several benefits over other methods," Reid said. "First and foremost, robot sorting produces pure and clean fractions; this improves the ultimate treatment of materials – regardless of whether the trash is recycled or used for energy recovery. Robots raise the pace of recycling while improving the quality of the fractions that will be utilized to create new goods. The robotics technology also provides a much clearer image of the garbage gathered while streamlining the recycling plant's activities."

Evolution Of Sorts

Director of recycling at Waste Connections, Dan Kurtz said at Waste Connections, the company's first core value is the safety of their employees. By augmenting their workforce with a fleet of recycling

robots, Waste Connections has made the company a safer place to work.

"Currently, we are deploying robots in primary and secondary – quality control – sorting positions," Kurtz said. "Specifically for plastic sorting, in both primary and secondary sorting positions, we find they perform as good or better than human sorters on pick counts based on average picks per minute. Additionally, while robots need basic routine maintenance, such as cup replacements and cleanings, they never get tired and always show up for work."

Evolution is one of the core advantages of using vision-based detection technology, commonly referenced as the Artificial Intelligence (AI) portion of the recycling robot package. As Kurtz explained, it learns and evolves every day and flexes with new products from manufacturers simply by updating its reference catalogue.

"Once this is done, it sends updates to the fleet of robots, minimizing product loss. We see the robot AI technology, or the vision-detection system, being integrated into plant operating controls to help detect hazards, contamination and production issues before they become issues for our employees, impact material quality, or damage equipment," Kurtz said. "We

See ROBOTICS, Page B6

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New Jersey governor signs Recycled Content Bill

New Jersey Gov. Phil Murphy has signed into law the Recycled Content Bill (S2515/A4676). The bill will require increasing post-consumer recycled content in a variety of packaging products including plastic containers, plastic beverage containers, plastic and paper bags, plastic trash bags and glass containers.

Environmental advocates across the state applauded S2515/A4676 and thanked the leadership of the Senate prime sponsor, Senate Environment Chair Bob Smith. The bill requires post-consumer recycled content in a variety of packaging products and:

- After two years, rigid plastic containers and bottles will be required to now respectively meet 10 percent and 15 percent post-consumer recycled content and increase that percentage until reaching 50 percent.

- Sets content standards and benchmarks for glass containers, paper and plastic carryout bags, and plastic trash bags.

- Bans plastic packing peanuts.

This bill is essential to support recycling markets so that virgin single-use plastics can be eliminated from the waste stream, keeping them out of landfills, incinerators and off the Jersey Shore.

There are similar laws in other East Coast states including Connecticut, Maryland and Maine. Other states are considering similar legislation and will follow New Jersey's lead as they did with the plastic carryout bag ban. A New Jersey recycled content law will set the standard for recycling across the East Coast.

Corporate promises to use recycled materials aren't enough, according to the environmental groups working to drive support for the bill over the past two years.

Recycling process for food contact applications receives FDA's LNO

The U.S. Food and Drug Administration (FDA) has issued a Letter of No Objection (LNO) for Revolution's proprietary recycling method to produce post-consumer recycled, linear low-density polyethylene (PCR-LLDPE) for food contact applications. PCR produced under Revolution's process can be used at content levels up to 100 percent in the manufacture of food contact articles for all food types under nearly all Conditions of Use as defined by the FDA. This marks a first-of-its-kind milestone for the recycling and consumer packaging industries.

The announcement of Revolution's FDA LNO represents a significant step forward in addressing the increasing global need for flexible film recycling and sustainable consumer packaging. In recent years, consumer awareness and demand for recycled content has risen dramatically as organizations such as the U.S. Plastics Pact have set aggressive targets to achieve as much as 30 percent recycled content in plastic packaging by 2025. Increased demand for recycled content has driven the need for recyclers to meet the quality standards and food contact requirements set by consumer packaging applications. Revolution's

advancements in flexible film recycling holds promise to bridge this gap by providing the widest possible applications to date for the use of LLDPE PCR in flexible films.

Developing a method to meet food contact quality PCR represents the culmination of a long term development project undertaken by the Revolution team. Revolution leveraged its more than 25 years of flexible film recycling experience to develop new proprietary processes, testing methods and quality control measures to meet the stringent requirements specified by the FDA.

Revolution expects additional approvals and advancements based on this first benchmark, paving the way for further innovation in PCR production. The company is currently expanding capacity and ramping up processes to meet market demand. "We are committed to redefining what is possible for flexible film recycling, and the FDA LNO is just the next step in our progress towards even more flexible film solutions that deliver true sustainability to our customers and the consumer packaging industry as a whole," said Revolution chief executive officer Sean Whiteley.

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EQUIPMENT SPOTLIGHT

Shredders

by MARY M. THORNTON

maryt@americanrecycler.com

According to Marketwatch, the Global Waste Paper Recycling market is due to reach a value of \$54,250 million by the end of 2026. A number of sources report that only nine percent of plastic generated is recycled. There is a wide array of equipment available to meet the processing required by the looming growth potential in these markets.

Since the mid-90s, Granutech-Saturn Roto-Grind® single-shaft shredders have provided processing solutions to many within the paper and plastic recycling industries. The firm's industrial product line also includes industrial quad, dual, single shaft shredders, heavy duty single-shaft grinders, nonferrous metal high density balers, rubber powderizers and refiner mills.

Roto-Grind shredders are available in four sizes and all but the M80E are available in either hydraulic or electric options. "As global supply chain issues continue and other countries accept reduced material from the U.S. more recyclables are being shredded and separated for domestic repurposing. We've noticed this especially, within the plastic industry. Each of our Roto-Grind shredders have a horizontal 20 hp ram, which does an exceptional job maintaining the most efficient throughput, as it is metered via the load amperage/pressure in relation to the shredder's motor. The horizontal feed also helps to eliminate excessive bridging of material so you will achieve better throughput. Along with our horizontal ram, we also offer multiple blade sizes and configurations which again, help our customers to better dial in on the perfect machine for their application," explained Jon Maly, national sales manager, cutter division.

Product cutting configurations range from 2 to 4 rows of cutting blades and blade sizes range from 30 to 60mm among the Roto-Grind models. Standard 4 models are M80E 60 hp, M110E 100 hp, M160H 150 hp and M240H 300 hp. In addition to horizontal ram and blade configurations, horsepower and screen options are also offered, to better provide exact customer needs. Depending on the material, screening size and the model



Granutech-Saturn Systems

involved, processing volume can range from 2 tons to over 10 tons per hour, but duty cycle and throughput can also affect such outcomes. "Our Saturn Roto-Grind Shredders are exceptionally user friendly, but as with any shredder used in the paper and plastic industries, contaminants may have adverse effects on individual shaft blades. For this reason, the unit features a special 'bolt-on blade' design, to help minimize down time. If a contaminant accidentally runs through the shredder, causing damage to the blade, the blade can then be easily removed and replaced," Maly stated.

Since 1978, Shred-Tech has been solving shredding, recycling, waste reduction and material handling problems for a large and diverse list of customers. Producing approximately 500 units a year, the company offers two-shaft shredders, four-shaft shredders (screened shred: low volume, slow speed), single shaft shredders (screened shred: high volume, high speed), granulators (granular shred size: low volume, high speed) and

shredding trucks – their biggest seller. Shredding needs change, depending on the application and Shred-Tech employees work to accommodate client requirements, by offering a range of options on every machine.

Each system is configured with the correct knife size, horsepower, number of hooks and feed and discharge rate for the application. Dual shaft shredders are high volume, slow speed shredders that can range from 15 to 1,200 hp and shred anything from light duty e-scrap to heavy duty appliances. Shred-Tech's low volume, slow speed, quad shaft shredders

are designed to process bulk materials, reducing them to a uniform particle size in a single pass, range from 50 to 150 hp and are available in a wide variety of cutting chamber sizes. Regulations are becoming more stringent in terms of shred size. The trend is even more acute among European regulations. Depending on the shredder and application, it is possible to process up to 20 tons of waste per hour, using Shred-Tech's plant-based shredding systems.

"Shred-Tech is a leading provider of environmental shredding technologies, based on sound engineering practices, innovation, quality, and most important, satisfied customers. As more companies seek to reduce their carbon footprint and adopt environ-

See SHREDDERS, Page B5



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Shredders

Continued from Page B4

mentally conscious corporate responsibility policies, the demand for shredding machines has become more prevalent. Shred-Tech is constantly investigating new designs and materials that can improve the performance of its machines

and has the largest global footprint of all specialty shredding equipment manufacturers. By creating profitable uses for waste products, Shred-Tech products facilitate new business opportunities and technologies to improve our quality of life," said Stefin Sobel, processing business manager.

WEIMA is a leader in size reduction technologies, including shredding equipment for the paper and plastics industries. Those in the printing industry are investing more in the value of paper scrap. Shredding and baling are the best ways to prepare print waste for pulling the highest yield from mills or recyclers. WEIMA's WLK series shredders are specifically designed for these applications. Machine openings range from 23 to 70" wide, determined by material stream and volume. WEIMA shredders have large hoppers, which enable a "dump and run" process, reducing the need for material handling. Unique features, such as the lift-up screen door and anti-vibration feet, ensure safety, ease of maintenance and durability. "Our machines are designed to withstand the strength of stacked paper while also fitting with features to prevent paper jams and reducing dust emissions. Whether you have large or small quantities of paper, cardboard, sheets, rolls, documents, or labels, we offer a model that matches your requirements," commented Audrey Brewer, North American marketing manager.

WEIMA's robust line of shredders can handle plastic materials including pipe, purge, spruce/runners, film, fibers, bottles, crates/bins, nonwovens and more. The firm's single-shaft



WEIMA America, Inc.

shredders are ideal for shredding scrap prior to granulating or repelletizing. Large hoppers allow for bulk feeding without the need to pre-cut materials. When consistent piece sizes are fed into a granulator, it regulates material flow while eliminating spikes in power. This helps to lower energy costs. WEIMA shredders can be customized to meet the demands of specific applications. With the range of equipment and a variety of rotor types, rotor geometries and cutting tools, machines can handle PE, PP, PVC, PS, PU and PET and other types of plastic too. The V-Rotor is designed for the shredding of hard plastics, while the F-Rotor is for woven and non-woven film and fiber materials. Other optional features include a lift-up door for easy maintenance, multiple knife configurations, custom hoppers, a variety of rotor widths, and more.

"In the paper industry, the abrasiveness of the material wears down knives and machinery that aren't built to withstand such waste. The same is true of plastics, as each type has a different melting point or requirement for effective shredding or reprocessing. Years of know-how allow Weima engineers to help clients choose the best machine to effectively shred the material involved. With paper and plastic manufacturing scrap on the rise, the need for effective size reduction, reintegration, and/or disposal is paramount. Exporting baled scrap isn't an option in most cases, so processing this scrap where it's produced is key to preventing material pile up, which usurps valuable floor space," Brewer concluded.

Repeats Group B.V. to build plastics recycling platform

Repeats Group B.V. (Recycled PE AT Scale) will launch and build a pan-European plastics recycling platform focused on producing high quality recycled low-density polyethylene (LDPE) with a €100 million equity commitment from Ara Partners. Ara Partners is a global private equity firm that specializes in industrial decarbonization investments.

Repeats utilizes a mechanical process to transform post commercial plastic waste into high quality resin suitable for commercial and industrial applications. The company is scaling LDPE recycling capacity throughout Europe to address the shortage of supply compared to the growing demand required to meet industry sustainability and net zero targets, increasing consumer preferences for low-carbon products and stricter regulatory requirements around decarbonization.

Operations will be focused on core European markets characterized by dense population and underserved LDPE recycling capacity. Through a combination of greenfield development, acquisitions and strategic partnerships, Repeats and Ara are committed to building a leading LDPE recycling platform in Europe.

Repeats is led by Greg Rung and a team of LDPE recycling executives who collectively have over 80 years of experience in the plastics recycling industry. Rung was a partner at Oliver Wyman, where he developed growth strategies and implemented integration programs for clients across Europe and emerging markets. The Repeats executive team has successfully built, scaled, and monetized plastic recycling businesses across Western Europe. The team is well versed in the different mechanical and chemical technologies at the forefront of LDPE recycling, and they have strong relationships with European plastic collection agencies, converters and consumer product companies driving growth in the recycled LDPE resin market.

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BROKK INTRODUCES A COMPACT PEDESTAL BOOM SYSTEM

Brokk, a manufacturer of remote-controlled demolition robots, introduces the Brokk Pedestal Boom, a compact, stationary breaker boom system for the mining and aggregates industry.

The new machine offers the power and precision of Brokk's demolition robots to primary breaking tasks that feed mobile crushers, jaw crushers, gyratory crushers and grizzlies. It offers an unrivaled range of motion, pairing Brokk's revolutionary three-part arm system with 360° slewing. It can be operated with either the tethered remote or from a control room and can be maneuvered from 6,500' or more away or longer.

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800-621-7856
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M&J WASTE RECYCLING'S NEW SERIES OF FINE SHREDDERS

The M&J F-Series is the powerful flagship line in M&J Waste Recycling's new fine shredder range targeting today's modern recycler. Created from scratch and equipped with an extra long rotor, it can deliver an impressive 23 ton per hour (90 percent below 50 mm).

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MWS EQUIPMENT LAUNCHES NEW STATIC SCALPER RANGE

Smarter Washing Solutions Specialists, MWS Equipment, announced the latest addition to its product portfolio, the static scalper range, SCLPR 105. The MWS scalping screen is designed to handle a range of products from construction, demolition and industrial waste, heavy quarry outputs to finer soil applications.

The SCLPR range is fully compatible with the MWS product range allowing it to integrate seamlessly into any wet processing plant. It can screen off any oversize or heavy clay bound materials prior to the washing process. This helps improve the wash plant efficiency and increase life of the plant and its wear components.

MWS Equipment
1 McCloskey Road
Keene, Ontario
Canada K9J 0G6
888-588-8056
www.mwswashing.com



UNTHA AMERICA UNVEILS NEW ZR TWO SHAFT SHREDDER

Untha America has revealed a new two shaft shredder – the ZR. After 24 months of rigorous research and development, including prototype trials in Europe, this dual shaft machine promises the lowest lifecycle costing for waste, wood, electronics and metal shredding.

The ZR has been purposefully engineered for multi-shift, continuous pre-shredding, even when handling materials some consider economically unshreddable.

The machine's low speed, high torque drive means it can process severe duty applications with ease. The modular, quick-change cutting table design offers versatility at the core.

Untha Shredding Technology Inc.
1 Lafayette Road
Hampton, NH 03842
603-601-2304
www.untha-america.com

Robotics

■Continued from Page B1

also see AI technology helping us automate many of the plant control activities by identifying problems and opportunities.”

In general, adopting robotics for plastics recycling means the technology will help make the industry safer by taking the employees out of high-risk positions, such as sorting. In addition, it will also help stabilize hard-to-fill plant positions in a very competitive labor market.

“The technology will help the recycling business model become more sustainable by mitigating labor costs and improving quality and productivity,” Kurtz said.

Benefits aside, robotics within the recycling industry come with some challenges, including around the quality of the waste stream.

As Kurtz explained, contaminated recycling streams affect all aspects of plant operations and create unsafe working conditions for all of Waste Connections' employees.

“Too much of any type of non-conforming material in the recycling stream creates additional items to be sorted, damages equipment, increases the cost of processing, and forces MRFs to spend valuable sorting resources – mechanical, robotic, optical, human, etc. – on items that create no value, versus accomplishing our goal to keep valuable, recoverable resources out of the landfill,” Kurtz said.

Future Advancements

AI-guided robotics continue to improve, bringing increasingly greater accuracy, precision and speed to the sorting process and addressing ongoing labor challenges within the industry. As Spelhaug explained, this technology is helping plastic reclaimers and recyclers meet the swelling demand for high-quality recycled feedstock from brands and producers to incorporate into new packaging.

“Businesses that have adopted this technology and incorporated it into

their sorting process are well positioned for the future, as this trend is here to stay,” Spelhaug said.

For example, AMP's AI platform, called AMP Neuron, has created the largest known real-world dataset of recyclable materials for machine learning. This means that AMP can classify more than 100 different characteristics of recycling, including plastic single-stream recycling as well as construction and demolition debris, and e-waste. This combination of scalable accuracy and classification will further help materials recovery facilities (MRFs) optimize their operations.

Kurtz added that the robotic technology being used within the industry will continue to improve over time by becoming faster at detection, and better at capturing and providing accurate, real-time business intelligence.

“Waste Connections has embraced this new and evolving technology, and supports the manufacturers of this technology,” Kurtz said. “We see this technology as transformative to the industry and look forward to seeing its use flourish, but believe it is just one facet of new technology and MRF design that will make future MRFs more efficient and safe. If you are considering using the robots in your plants, have a realistic expectation of their performance. They work well in single layer primary sorting applications, or as quality control after an optical Sorter, and will need daily attention to continue running at peak performance.”

Reid added that advancements in AI technology can further help alter how waste and recycling is screened and sorted. It can be used for several things ranging from detecting dangerous items that might harm equipment to discovering metrics that can enhance working habits.

“This revolutionary technology is not only good for the environment but is also cost-effective,” Reid said. “It is wise to say that advancements in this field will make the plastic waste recycling industry more efficient and eco-friendly.”

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American Recycler is not responsible for non-inclusion of manufacturers and their equipment. Manufacturers are to contact American Recycler to ensure their company is listed in the Equipment Spotlight.

Commitment to increase paper cup recycling signed

A group of prominent paper mills and end markets across North America signed a declaration of acceptance and a commitment to increasing recycling of paper cups, including Essity, GP PRO, Graphic Packaging International, Great Lakes Tissue Company, ND Paper, Pratt Industries, Sustana Fiber and WestRock.

Organizations representing 75 percent of mixed paper demand (by quantity consumed) in the U.S. and Canada are accepting paper cups. Seven companies with 25 paper mills actively accept residential mixed paper bales (ISRI grade 54) with paper cups included, while three companies with five facilities currently accept paper cups when included with aseptic and gable top cartons in carton bales (ISRI grade 52).

"Empty paper cups are recyclable, and they provide high-quality fiber, which can then be recycled into new products like cereal cartons, facial tissue boxes and new paper cups," said Michael Doss, president and chief executive officer of Graphic Packaging International. "Graphic Packaging strongly supports recycling of paper cups and is encouraged by the proactive participation of the industry to collect them and increase the circularity of paper cups."

Paper cups have a coating on the inside (for hot drink cups) or on both sides (for cold drink cups) that provides a liquid barrier to the fiber. Although the coating has long been seen as a reason not to recycle paper cups, several companies have conducted tests and determined that the coating does not present an obstacle to

recycling the cups in their facilities. The mills use pulping systems that separate the coatings from the fiber, recovering the fiber with a 70 percent to 90 percent yield.

"Sustainability is at the forefront of everything we do at Sustana. Our investments in specialized equipment allow us to efficiently recover fiber from single-use coffee cups for re-use in premium applications, and we are pleased to support this recycling initiative. Increasing the viability and acceptance of paper cup recycling is an important step toward building a circular economy in our markets," said Fabian de Armas, chief executive officer of Sustana.

Many of the mill representatives who signed the statement are members of the Foodservice Packaging Institute (FPI), which facilitated much of the testing and the collaborative effort that resulted in the joint declaration. Its membership is made up of companies from throughout the supply chain, including paper mills and other raw materials suppliers, packaging converters and quick-service restaurants. FPI and its members work to align supply chain partners and strengthen end markets, as well as offer grants to help material recovery facilities (MRFs) and communities add paper cups to their residential recycling programs.

To date, FPI's Community Partnership Program has helped 15 recycling programs successfully add paper cups. These programs serve a collective total of approximately four million households and a population of nearly 10 million.

Binghampton Development to accept foam for recycling

Binghampton Development Corporation, a non-profit community development corporation located in Memphis, Tennessee, has received a \$50,000 grant from the Foodservice Packaging Institute's Foam Recycling Coalition to add a foam densifier to its current Center for Hard to Recycle Materials (CHaRM) facility.

Over the last 18 years, the Binghampton Development Corporation has pursued revitalizing the historic Binghampton neighborhood of Memphis through housing and economic development as well as empowerment programs for those in poverty. The organization has cultivated revenue generating programs that focus on employing and educating new skills to neighborhood workers. Their latest endeavor is a development partnership to start recycling hard-to-recycle items that are currently contributing to the blight for many neighborhoods.

New recycling operations will assist in cleaning up neighborhoods for over 350,000 households and bring recycling services to the metro area's

1.3 million residents. The first phase of the recycling program will begin with tire recycling, with future phases including disassembling and recycling old streetlights and recycling mattresses. These programs are expected to provide job training while recycling materials, including aluminum, copper, plastic, glass, steel and soon, foam polystyrene.

Foam Recycling Coalition funding allows the organization to purchase and install a high-capacity densifier unit to better manage foam recycling collection at its facility. The densifier will allow the facility to accept foam materials, such as foodservice packaging, post-consumer foam packaging and padding, and production scrap from local businesses and residents.

The grant is made possible through contributions to the Foam Recycling Coalition, which focuses exclusively on increased recycling of post-consumer foam polystyrene.

Binghampton Development Corporation is the 22nd grant recipient to receive this funding since 2015.

Georgia Mayor pulls support for plastic recycling plant

Last summer, Brightmark announced plans to build the world's largest advanced plastics recycling and renewal plant in Macon-Bibb County, Georgia. In January, however, Macon-Bibb County Mayor Lester Miller has officially withdrawn his support.

Georgia had planned to invest over \$680 million in the new plant that was to be a 5.3 million sq.ft. site.

The plant plans included a state-of-the-art proprietary plastics renewal process that sustainably recycles all plastic waste (Types 1-7) that has reached the end of its useful life. The company said that this includes items that can't be readily recycled (Types 3-7) such as plastic film, flexible packaging, Styrofoam, plastic beverage cups, car seats and children's toys.

The facility would have diverted 400,000 tons of plastic waste each year from landfills and incinerators and convert it into 64 million gallons of ultra-low sulfur diesel fuel and 20 million gallons of wax.

Mayor Miller, in a letter addressed to Robby Fountain, chairman of the Macon-Bibb County Industrial Authority, wrote, "We cannot ignore the long term safety concerns of this unproven process that have been raised in the last several weeks." He stated, "If it costs you more energy, more waste, more pollution to get there, it's simply not worth it for us."

The Industrial Authority has been discussing signing off on \$500 million in revenue bonds for Brightmark to

start the project in 2023.

The mayor's decision could be viewed as a win for environmental advocacy groups and citizens who raised questions about the possible pollution the plant could emit. The Georgia Water Coalition put Brightmark on their Dirty Dozen list for 2021, saying the proposed recycling plant poses a serious threat to the state's water. Others feel this view is narrow-minded and doesn't consider the bigger picture, including the long-term benefits of such a process.

Brightmark offers a patented, closed loop technology that heats plastics until it's vaporized into liquids. The process then condenses the plastic to turn into other plastics, wax and even diesel fuel.

"Plastic-to-fuel is kind of untested. We certainly don't want to do something that would adversely affect our environment here in Macon-Bibb County, our clean air in Macon-Bibb County and certainly our waters here in Macon-Bibb County," Miller declared.

Brightmark chief executive officer Bob Powell said their technology "solves problems, not creates them."

"We do not incinerate. In fact, our process won't work if it is incinerated," Powell said. "I won't incinerate plastics because I think it's a bad environmental answer."

Powell claimed the plant would have minimal emissions similar to a medium-sized hospital.



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