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Asphalt pavement is one of the most recycled commodities in U.S.



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China's finalized recyclables ban impacts U.S. recyclers

by MAURA KELLER

mkeller@americanrecycler.com

For decades, the U.S. has exported about a third of its recycling material, half of which went to China. In fact, for decades, China has used recyclables from around the world to supply its manufacturing boom. But this summer it declared that this "foreign waste" includes too many other non-recyclable materials that are dirty and hazardous. So China filed with the World Trade Organization listing a variety of solid wastes it would ban from entering the country in an effort to "protect China's environmental interests and people's health."

Linda Li is chief strategy officer of Re-Teck and an expert in green supply chain management who specializes in cradle-to-cradle and design-

for-recycle programs. Li claims, with the ban the U.S. is left with more recyclable material to process than normal. Recycling manufacturers were already running at a high level, and now that there is more material to process, they're scrambling to adapt to the situation. If they don't adapt, it leaves more potentially reusable waste sitting in landfills.

Historically Speaking

During their manufacturing boom, China was willing to accept a variety of recyclables from other countries to use as raw materials by Chinese manufacturers. And for years, this worked well for the global economy. But now, China's manufacturing has cooled and the country no longer has the capacity to take on that volume of recycled materials, so they are banning the import of foreign waste.

As Christy Hurlburt, vice president of marketing at Enevo, explained, the initial step China took in this direction was with Operation Green Fence, implementing this program to improve the quality of recycled materials exported to China. But the industry has not fully cleaned up its recycling, so China is taking a stricter stance as they localize their nation's recycling efforts.

"The waste and recycling industry around the world is now in chaos, and the full impact of China's ban is currently unknown," Hurlburt said. "There are a lot of questions as we work to figure out who will accept and process the



restricted recycling materials moving forward."

The ban is having a significant impact on recycling companies in the U.S. and throughout the world because many developed countries that have been exporting their recyclables to China do not have the capacity at home to take on the processing of the recycled materials.

"Recycling is piling up," Hurlburt said. "And unfortunately, if there is nowhere else to put the materials, it is being landfilled. This is challenging the business models of recycling companies worldwide."

Indeed, as Li explained, the ban leads to an increase in scrap material, which in turn leads to a decrease in scrap prices. While some companies are taking advantage of the decrease in scrap price, other companies are helping to elevate a circular economy.

"In order to shift towards a circular economy, these companies must begin modifying the way they design and manufacture products from the very beginning," Li said. "By considering a products entire lifecycle in the early stages of development, companies can get the most from their recycled devices and keep the most from land-fills."

There is also an environmental challenge. With exporting recyclables, the responsibility of dealing with any contaminated or hazardous materials was China's responsibility during sort-

ing and processing. Now, those hazards need to be handled locally.

"This ban impacts the entire supply chain, not just at the end with the recycling bin or dumpster," Hurlburt said. "We'll have to take more responsibility for our waste generation as an industry and as consumers."

Strategic Approach

In response to the ban, some organizations are working with China to modify or reverse the ban. But while they do, recycled materials are piling up, and recycling companies are even finding that they are unable to accept more materials while consumption and waste generation continues.

Hurlburt said that in the short term, U.S. recycling companies are responding by looking at ways to clean up the contamination. Some have already started to exclude specific materials from their recycling collections as a result of the ban.

"These companies are evaluating where the banned recycled materials can now be processed, searching for other markets that have the capacity to take on these recyclables," Hurlburt said. "And in many instances, they aren't having much luck so these materials that should be recycled are being put in landfills."

And in the long term, experts predict that U.S. recycling companies will likely need to modify and build facilities here at home that can take our country's recyclables.

See CHINA'S BAN, Page 4

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Army engineers recycle during Puerto Rico hurricane recovery operations

On September 20, Hurricane Maria made landfall in Puerto Rico. The Category 5 hurricane wreaked havoc and destruction across the island, taking out electrical and communications infrastructure, as well as severely damaging thousands of buildings and homes.

The National Response Framework designates the U.S. Army Corps of Engineers (USACE) as the lead agency for Emergency Response Function 3, Public Works and Engineering. Under the function, Corps employees provide temporary generator power to critical facilities, inspect critical facilities, clear roadways and remove debris, and install temporary roofs on homes that were damaged during the hurricane.

As the hurricane made landfall, a small contingent from USACE had already deployed to Puerto Rico, to provide support following Hurricane Irma. They rode out Hurricane Maria and immediately started laying the groundwork for what would be one of the largest disaster responses in the Corps' history, in terms of the magnitude of the mission and number of personnel involved.

On September 24, Mobile District's commander, Col. James DeLapp and 13 employees from the Corps' Mobile and other USACE districts



U.S. Army Corps of Engineers contractors remove Hurricane Maria debris from a temporary disposal site in Ponce, Puerto Rico. Approximately 630,000 cubic yards of vegetative debris will be reduced for composting and other uses. Construction and demolition debris such as lumber and household furniture is expected to yield about one million pounds of recyclable metals.

boarded a military flight for San Juan, an advanced party that would set up the Corps Puerto Rico Recovery Field Office and assess the missions.

The Power Planning and Response Team, personnel from USACE's Albuquerque District and Soldiers from the 249th Engineer Battalion have installed 364 generators at critical facilities and have another 41 installations in progress, according to Reginald Bourgeois, the mission manager for the Temporary Power Team.

Each generator is supporting a critical function. For example, one generator provided power for the Guaynabo Hospital, a 150 bed facility that sees 40,000 patients a year. Two others supported the water pump stations in Manati, Puerto Rico, providing fresh water for a 44,000 resident community. In total, the team installed generators to support 48 hospitals, 190 water treatment plants, and 44 wastewater facilities, as well as 30 emergency services centers and the 9-1-1 call center.

The Debris Planning and Response Team, personnel from USACE's New Orleans District, working with more than 220 locally hired contractors have cleared miles of debris from roads and have picked up and properly disposed of more than 62,542 cubic yards of debris, according to Jasmine Smith, the mission manager for the Debris Team.

FEMA has allocated up to \$255 million for debris removal. The team has been tasked to complete debris removal within 39 of the 78 municipalities in the territory. Debris removal consists of the pickup, hauling and disposal of construction and demolition (building materials, furniture, metals, etc.) vegetative debris, household hazardous waste, and white goods (refrigerators, dryers, stoves, etc.).

"We are picking up debris, installing temporary roofs, providing emergency power to hospitals, other critical facilities, and getting water and wastewater plants up and running," DeLapp said. "We started with a couple of dozen soldiers and civilians who were either already here or managed to fly in on a military flight when most commercial flights were still unavailable. Now, we have close to 600 soldiers and civilians deployed to Puerto Rico."

AFGB advances plans for Tampa recycling facility

American Fiber Green Products, Inc. (AFGB) expects to begin building a recycling facility in Tampa, Florida in the first quarter of 2018.

Chairman Ken McCleave stated, "The company has been actively pursuing financing and sourcing of equipment to build a fiberglass recycling plant in Tampa, Florida. In that regard, the company has entered Phase II of engineering design. We have sourced the manufacturer to produce the housing for the conditioner that is a proprietary component of the Amour process."

The significance of a Tampa plant is to facilitate both research and development and for demonstration purposes of production of recycled fiberglass products.

McCleave continued, "Hurricanes Irma, Harvey and Maria this year have added thousands to the derelict boat population left behind from Hurricane Katrina. Over 10,000 sunken boats have been identified by the Coast Guard just around the coast of Florida and in its rivers and tributaries. Many of these are navigational hazards. A Florida facility can provide an end game for these boats that will keep them out of the landfill and generate revenue for AFBG."

2017 WasteWise winners recognized for prevention and diversion of waste

The U.S. Environmental Protection Agency (EPA) recognized the prevention and diversion accomplishments of the 16 WasteWise national award winners, who collectively prevented and recycled over 355,801 tons of waste, saving \$17.7 million in avoided landfill fees.

"This is yet another excellent example of the EPA partnering with communities and organizations to achieve environmental and economic benefits through waste prevention and management. The WasteWise award winners have exemplified tremendous environmental stewardship and fiscal responsibility, and we commend their efforts," said EPA administrator Scott Pruitt.

JK Moving Services, an international moving company located in Sterling, Virginia, received an Honorable Mention in the Mid-size Business category. During 2016, JK Moving Services diverted more than 3.7 million pounds of materials away from area landfills through recycling and repurposing initiatives.

For 23 years, EPA's WasteWise has helped organizations and businesses apply sustainable materials management practices to prevent and reduce municipal and select industrial wastes, saving them resources and money.

WasteWise partners reported preventing and diverting 8.5 million tons of waste that would otherwise have been disposed in landfills or incinerators. These actions – which include waste prevention, recycling, composting and donation – saved participants over \$400 million in avoided landfill fees.

WasteWise partners who report the best overall improvement in waste prevention and recycling activities – when compared to the previous year – receive awards in various categories.

The 16 national award winners are: College and University

•Texas: Partner of the Year – University of Texas Health Science Center at San Antonio

•Georgia: Honorable Mention – Georgia State University

Federal Government

•California: Partner of the Year – The Presidio Trust

Large Business

•New Jersey: Partner of the Year – Ravitz Family Markets, Price Rite Supermarkets, Inc.

•New Jersey: Honorable Mention – Ravitz Family Markets, Shoprite: Union

Mill Rd., Mount Laurel Supermarkets, Inc.

Local Government

•Illinois: Partner of the Year – City of Urbana

•Florida: Honorable Mention – City of Fort Lauderdale

Mid-size Business

•Wisconsin: Partner of the Year – Frito Lay, Beloit, Wisconsin

•Virginia: Honorable Mention – JK Moving & Storage

Non-profit Organization

Massachusetts: Partner of the Year
 Beth Israel Deaconess Medical Center

School/School District

•Florida: Partner of the Year – Pasco County Schools

Small Business

•Missouri: Partner of the Year – Urban Chestnut Brewing Company

•California: Honorable Mention – Earth Friendly Products

•Washington: Honorable Mention – CenturyLink Field

Very Large Business

•Wisconsin: Partner of the Year – Kohl's Department Stores

•Illinois: Honorable Mention – Sears Holdings Corporation

My dad died when we couldn't remember his blood type. As he died, he kept insisting for us to "be positive," but it's hard without him.

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Covanta shares progress update on sustainability

Covanta, a waste and energy solutions company, released its latest sustainability report, detailing performance and progress against goals.

The report details specific progress in Covanta's sustainability focus areas, which include: Materials Management, Environmental, Community Relations, Safety and Health, and Workforce Engagement. Highlights from the report include:

•Avoided, recycled or reused over 900,000 tons of waste (a 60 percent increase), meeting a goal four years

•Achieved a two-fold increase in nonferrous metals recovered for recycling over the past five years - Covanta now recycles more than 510,000 tons of metal annually

•Increased use of alternative water sources. Reclaimed wastewater, stormwater, saline water and oncethrough cooling discharge now comprise 35 percent of process water utilized

•Partnered with communities and law enforcement to safely destroy over 4 million pounds of unwanted medications through the Rx4Safety program, helping to curb abuse and protect water supplies

•Continued to make workplace safety the top priority: 26 Covanta facilities and/or groups were awarded the Occupational Excellence Achievement Award by the National Safety Council

•Supported the transition of military veterans into the workforce with over 150 new veteran hires. Veterans now represent 15 percent of the Covanta employee base.

"Sustainably isn't just the way we conduct our business, it is our business," said Paul Gilman, Covanta's chief sustainability officer. "Environmental and social responsibility are at the core of everything we do. Therefore, our sustainability goals guide not only our work in the sustainable waste management sector, but also ensure we provide a safe and diverse workplace for our employees, continue our practice of developing and maintaining strong ties with local communities and maintain our track record of delivering 'beyond compliance' environmental performance."

China's ban

■Continued from Page 1

"This is challenging as immediate action needs to be taken to address the current recycled materials that are piling up. Modifying a facility is typically a 2 to 5 year project and building new facilities can take up to 5 to 10 years," Hurlburt said.

Future Outcomes

In today's world, technology mega-trends, like IoT and EaaS, result in a shorter lifecycle for devices. Shorter lifecycles result in more recycled devices, leading to more e-waste than recycling manufacturers are used to. "For recycling companies, adapting to the influx of material might prove to be more difficult than expected," Li said. "Because of the ban, companies are having to rethink the way they design products. A better product design is critical to facilitating recycling and making devices easier to recycle or repurpose. By rethinking the way products are designed, manufactured and repurposed, companies can extract the most from devices and keep valuable, reusable resources from landfills."

We all know the three Rs of "reduce, reuse, recycle" but before this ban, the society in the U.S. and the recycling industry were really focused first on the third step. This ban may also force consumers, municipalities, and the industry to take a deeper look at our systems, to better understand where we are producing waste - trash and recycling - so that we can shift the focus instead on reducing first.

Also, because China had been so willing to accept the world's recyclables, waste generators were not forced to sort the materials. For years, we've been able to dump our recycled materials and not worry about what happens after that.

"Organizations and consumers alike have taken pride in their recycling as sustainability efforts. And we've even been able to get away with the process being less expensive by exporting the materials," Hurlburt said. "This ban will push the world economy to localize the recycling process, bringing more jobs back home to process materials, making us more accountable for what materials are being recycled and shifting our systems to reflect the true cost of waste."

The recycling industry is starting to see a push of technology-enabled solutions in the waste industry. At recycling facilities, the use of robotic sorting technology is progressing. While still expensive, robotic technology is proven to sort materials faster and more accurately than their human counterparts.

"In our trucks, we are seeing the use of cameras to take pictures of contaminated loads so that the haulers can send notices and even fines to the end customer for not adhering to recycling standards," Hurlburt said. "This puts more accountability on the waste generators"

At the dumpster level, we now have container sensors that use IoT technology to consistently monitor the volumes of materials coming out of a site. These connected devices allow waste services providers to identify changes in volume and understand where in the supply chain the materials come from, which ultimately helps with the goal of reducing waste.

"I think more companies will move from a linear economy to a circular economy, where resources are kept in use for as long as possible and are recovered and regenerated for new devices," Li said. "Companies will be more accountable for the amount of recycled material produced and be forced to develop a closed-loop solution. Not only is it good for the environment, but it can drive economic growth by demonstrating commitment to long-term sustainability efforts."

Events Calendar

February 11th-13th

C&D World Exhibition & Conference. Downtown Hilton, Nashville, Tennessee. 866-758-4721 | www.cdrecycling.org

February 19th-21st

Association of Plastic Recyclers Membership Meeting. Gaylord Opryland Resort & Convention Center. Nashville, Tennessee.

202-316-3046 | www.plasticsrecycling.org

March 4th-7th

Southeast Recycling Conference & Tradeshow (SERC). Rosen Center, Orlando, Florida, 800-441-7949 www.southeastrecyclingtradeshow.com

March 5th-7th

SWANApalooza 2018. Sheraton Denver Downtown Hotel, Denver Colorado. 800-467-9262 | www.swana.org

April 3rd

Northeast Recycling Conference & Tradeshow (NERC). Sheraton Baltimore Washington Airport Hotel, Linthicum Heights, Maryland. 802-254-3636 | www.nerc.org

April 5th-7th

United Recycler's Group Training Conference. Hyatt Regency Grand Cypress, Orlando, Florida. 303-367-4391 | www.u-r-g.com

April 9th-11th

Aluminum Association Spring Meeting. Omni Montelucia, Scottsdale, Arizona. 703-358-2960 | www.aluminum.org



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American Recycler is published 12 times per year, postage paid at Columbia, Missouri.

SUBSCRIPTIONS: Call our offices 877-777-0043 or www.AmericanRecycler.com. US 1 year \$48; 2 years \$72.

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NJ acquires online platform to promote recycling education

program to centralize recycling information for towns and counties in a single app that New Jersey residents may access through their smart devices and computers, Department of Environmental Protection Commissioner Bob Martin announced.

With the purchase, New Jersey became the first state to bring the Recycle Coach app free of charge to all residents to help increase recycling rates statewide and provide recycling information in a simple, clear, and concise manner. The app, already in use by 92 communities across 8 New Jersey counties, will become available statewide in early 2018.

As of 2015, New Jersey had recycled 43 percent of its municipal residential waste, which is well above the national average of 34 percent, and within reach of the state's longstanding goal of a 50 percent recycling rate.

After downloading the app to their smartphone or accessing it through their town's or county's website, Recycle Coach users can input their address to access a variety of information: when to put out recyclables and solid waste for pickup, ask questions about what is recyclable, receive specific communication from their town or county, read articles about becoming better recyclers, stay informed of missed pickups or holiday collection schedules, educational

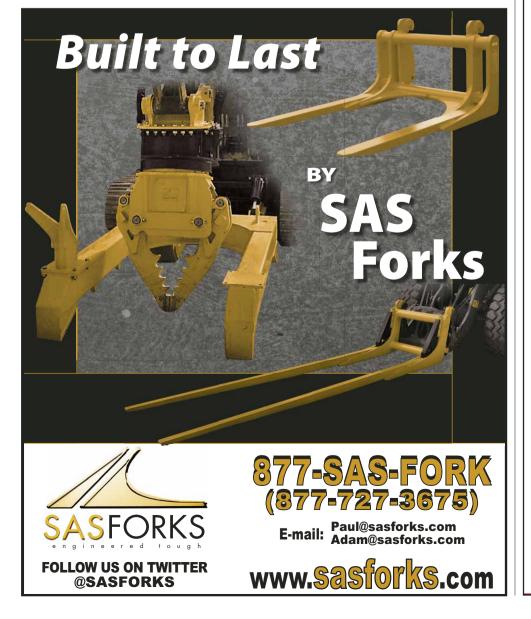
New Jersey is purchasing an online podcasts, interactive quizzes and more. A 'What Goes Where' database within the app will be especially helpful for knowing where to recycle a variety of materials.

> "People today get their information from many different sources, and DEP recognizes that adapting to today's technologies can help us grow our recycling outreach to the public," said Mark Pedersen, assistant commissioner for site remediation and waste management. "Through Recycle Coach, residents will be able to get reminders of when to put out their waste for collection and recycling, be advised of pickup schedule changes due to weather or truck breakdowns, and access information through the app or other online platforms."

> DEP plans an aggressive implementation schedule in coming months to Coach make Recycle available statewide, while ensuring that accurate and timely information about recycling and solid waste issues is easily available.

> Recycling has been a statewide priority for more than three decades. In April 1987, New Jersey became the first state to require residents to recycle by adopting the statewide Mandatory Source Separation and Recycling Act, which requires recycling by residents, businesses and institutions such as schools and hospitals.

When a guy says he likes girls with a sense of humor, he doesn't mean that he wants a girl to be really witty and funny. He means he wants her to laugh at his jokes.



Berry Global joins The Recycling Partnership as a funding partner

The Recycling Partnership, a nonprofit that applies corporate funding to improve recycling efforts, disclosed that Berry Global, Inc., a global provider of innovative protection and packaging solutions, has joined on as its newest funding partner.

"Our mission of always advancing to protect what's important is in direct alignment with the efforts pursued by The Recycling Partnership," said Tom Salmon, chief executive officer of Berry.

Since 2015, The Recycling Partnership has assisted more than 500 communities in improving their recycling efforts, reaching more than 26 million households, and has invested more than \$27 million of corporate funding in recycling infrastructure.

Recycling is a core component of Berry's commitment to sustainability. In addition to encouraging consumer recycling, the company of 23,000 employees is also working to decrease landfill waste in their own operations.

"Recycling in the U.S. is far from perfect," noted Keefe Harrison, chief executive officer of The Recycling Partnership. "Working closely with industry leaders like Berry allows us to expand access to recycling in communities across the nation, unlocking the environmental and economic benefits of strong recycling systems. Through these partnerships, we are empowering companies to create a circular economy, while building stronger communities and a cleaner, greener future."





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American Recycler

ALTERNATIVE ENERGY

Florida Power & Light opens four new solar power plants and closes another coal plant

Florida Power & Light Company disclosed the latest major milestones in its ongoing strategy of advancing clean energy affordably for customers – the retirement of one of Florida's largest coal-fired power plants and the opening of four new solar power plants comprised of more than 1 million solar panels.

These advancements will further improve FPL's carbon emissions profile, which is already approximately 30 percent cleaner than the U.S. industry average. At the same time, FPL's typical 1,000-kWh residential customer bill remains approximately 25 percent lower than the U.S. average. Moreover, FPL's typical customer bill is lower today than it was during the year 2008.

"The truth is progress like this doesn't happen by accident. It's because of our culture of responsible innovation and an unwavering commitment to customers that we're able to deliver cleaner, more reliable energy while keeping electric bills among the lowest in the country," said Eric Silagy, president and chief executive officer of FPL.

Solar plant openings

On January 1, 2018, the following new plants began powering FPL customers:

- FPL Horizon Solar Energy Center, located in Alachua and Putnam counties
- FPL Coral Farms Solar Energy Center, Putnam County

• FPL Indian River Solar Energy Center, Indian River County

• FPL Wildflower Solar Energy Center, DeSoto County

The company also expects to complete construction on the following four solar plants soon:

- FPL Barefoot Bay Solar Energy Center, Brevard County (entering service by March 1, 2018)
- FPL Blue Cypress Solar Energy Center, Indian River County (entering service by March 1, 2018)
- FPL Hammock Solar Energy Center, Hendry County (entering service by March 1, 2018)
- FPL Loggerhead Solar Energy Center, St. Lucie County (entering service by March 1, 2018)

At 74.5 megawatts each, these solar plants – which encompass approximately 2.6 million solar panels – total nearly 600 megawatts of new zero-emissions energy capacity.

FPL's new solar plants are designed to effectively pay for themselves over their operational lifetimes. In fact, the eight solar plants entering service in 2018 are projected to generate more than \$100 million in savings for FPL customers over and above the cost of construction.

Across Florida, FPL has installed more than 3.5 million new solar panels in less than two years. By 2023, FPL expects to grow this to more than 10 million solar panels.

Coal plant closure

The aging coal fired St. Johns River Power Park in Jacksonville, Florida was officially retired by co-owners FPL and JEA, the municipal electric provider for the City of Jacksonville. The approximately 1,300 megawatt plant served customers of the two utilities well for many years, but it was no longer economical to operate – the plant was one of the highest cost generating facilities to operate and maintain for both FPL's and JEA's systems. Closure of the plant is projected to prevent more than 5.6 million tons of carbon dioxide emissions annually and save FPL customers an estimated \$183 million.

In 2016, FPL shut down the Cedar Bay Generating Plant, another coal plant located in Jacksonville – preventing nearly one million tons of carbon emissions annually and saving customers a projected \$70 million. In addition, FPL plans to phase out its last coal plant in Florida, the Indiantown Cogeneration plant, which is projected to prevent more than 657,000 tons of carbon dioxide emissions annually and save customers an estimated \$129 million.

While the prices of almost all products and services have risen in recent years, FPL's typical 1,000-kWh residential customer bill has remained low. It is currently approximately 25 percent lower than the national average.

Duke Energy proposes \$62 million solar rebate program

Duke Energy has proposed a \$62 million solar rebate program designed to help its North Carolina customers with the upfront cost of installing solar panels.

This is the first of three customer programs Duke Energy is proposing as part of the implementation of 2017's Competitive Energy Solutions for North Carolina law – also known as House Bill 589.

Currently, in North Carolina, Duke Energy has about 6,000 customers who have private solar systems – with a total capacity of just over 50 megawatts. The program expects to increase North Carolina's private solar market by 200 percent over the next 5 years.

"The proposed solar rebates program is the result of two years of collaboration between the N.C. Sustainable Energy Association and Duke Energy," said Ivan Urlaub, NCSEA's executive director. "If approved, this program will enable more North Carolinians across our state to realize the cost-saving benefits of solar. We are glad to have been a voice for electric consumers in the design of this program."

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WASTE

SWANA focuses on safety after 7 fatalities in first 10 days of 2018

In the first 10 days of 2018, there were 7 solid waste-related fatalities in the U.S. These tragedies come just weeks after the Bureau of Labor Statistics again identified solid waste collection as the fifth deadliest job in the U.S., based on 2016 data.

The seven fatal incidents occurred in Pennsylvania, New York, Georgia, Virginia, Massachusetts and North Carolina and involved large solid waste companies, regional haulers and municipal sanitation departments. With six of the seven incidents involving solid waste collection, this disturbing start to 2018 reinforces the urgent need to create a safer environment.

"I am very disappointed by the number of fatal incidents in the first 10 days of 2018; each of them is a tragedy and serves as a reminder that the entire industry needs to improve its safety culture," said David Biderman, the Solid Waste Association of North America's (SWANA) executive director and chief executive officer.

While the uptick in fatalities to start the New Year is alarming, 2017 saw high numbers as well. SWANA is aware of more than 100 fatal incidents involving the solid waste sector in the U.S., and several more in Canada. With the frequency increasing in the first few days of 2018, SWANA is committed to increasing its safety resources even further to

jumpstart efforts throughout North America

Through multiple 2018 events and programs, SWANA will bring together solid waste professionals from across North America to share safety best practices and plan future industry initiatives. Safety will be a major topic at both SWANApalooza in Denver, Colorado, this March, and at Wastecon in August in Nashville, Tennessee, where SWANA's 6th Annual Safety Summit will take place. In the coming months, SWANA and its Chapter-based Safety Ambassadors will launch an initiative aimed at small haulers to provide resources, in multiple languages, to their drivers and helpers.

"We need to be more creative in our safety efforts and target smaller companies and local governments who may lack the resources and expertise to provide safety training and information to their front line workers," stated Tom Parker, Associate at CH2M Hill and SWANA safety committee chair.

Keeping the seven deaths that have already occurred in 2018 front-of-mind, SWANA will continue to grow its safety program to reduce industry injuries and fatalities, with the goal of moving solid waste collection off the list of most dangerous jobs and getting employees home to their loved ones safely, every day.



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ELECTRONICS

New York's second e-waste program showing success

New York State Department of Environmental Conservation (DEC) Commissioner Basil Seggos shared that the New York State Electronic Equipment Recycling and Reuse Act has driven the collection and recycling of more than 520 million pounds or 260,000 tons of electronic waste from 2011 to 2016.

Commissioner Seggos said, "Over the first six years of the program, New York State has successfully diverted hundreds of millions of pounds of e-waste destined for landfills and combustion facilities to e-waste recyclers for reuse and recycling, helping conserve valuable natural resources. The e-waste report will help DEC improve New York's strong e-waste recycling program, and the documented progress of this comprehensive product stewardship program is yet another example of Governor Cuomo's commitment to protecting our environment."

The e-waste recycling report for 2013 to 2015 builds on data in the first report and includes information on overall collection results, collection methods, recycling and reuse rates, stakeholder participation, fees and surcharges, as well as DEC's compliance and enforcement efforts. The report also notes continued opportunities for business development, as a number of businesses have been launched or expanded as a result of the recycling/reuse of e-waste. The e-waste reports are available on DEC's website.

From 2013 through 2015, electronic equipment manufacturers, consumers, and

the state's collection and recycling network successfully diverted nearly 300 million pounds of e-waste from the waste stream.

DEC continues its efforts to address challenges associated with e-waste collection and recycling, particularly Cathode Ray Tube (CRT) televisions and monitors by working with municipalities, industry representatives, recyclers, and others to improve CRT collection and recycling. In addition, while striving for overall stakeholder compliance, DEC is working to improve manufacturers' e-waste acceptance programs and continues public education and outreach, as well as enforcement, to ensure manufacturers are in compliance with the act's requirements.

To help municipalities implement ewaste recycling over the short term, New York has made \$3 million in grant funding from the State's Environmental Protection Fund available to help municipalities across the state address the unintended costs associated with the collection and recycling of eligible e-waste. DEC is distributing nearly \$1.2 million in grant funding to municipalities from the first two rounds of grant applications. Applications for the third and final round of available grant money were due to DEC by January 31, 2018, for expenses incurred between April 1 and December 31, 2017. Information regarding grants for municipal ewaste assistance can be found on the DEC website.



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INTERNATIONAL

Canadian cities receive funding for new initiatives

Amarjeet Sohi, Minister of Infrastructure and Communities, and Jenny Gerbasi, president of the Federation of Canadian Municipalities (FCM) announced funding for 72 initiatives in communities across Canada through three funding programs – the Municipalities for Climate Innovation Program (MCIP), the Municipal Asset Management Program (MAMP), and the Green Municipal Fund (GMF).

Improving Canada's infrastructure lays – in large part – in the hands of the municipalities. Communities across the country want to be sure they are investing their infrastructure money wisely, and that they are aware of and ready to adapt to the potential effects of climate change as they make local infrastructure investment decisions. The projects announced demonstrate the work being done on these fronts in municipalities large and small.

The Municipal Asset Management Program is helping Canadian municipalities make informed decisions on infrastructure investment based on sound asset management practices. For example, the Town of Smoky Lake, Alberta is completing an inventory and collecting data on the condition of their community's buildings, and using this information to create a 10 year plan for their infrastructure assets.

Through the Green Municipal Fund, communities are not only improving the environment around them, they are maximizing municipal resources and improving the lives of their citizens. For example, the City of Kingston is completing a feasibility study on the complete restoration of a vacant former factory to establish a new multi-use commercial property designed to high environmental standards.

MCIP, MAMP, and GMF are delivered by the Federation of Canadian Municipalities and funded by the Government of Canada.

•The Municipalities for Climate Innovation Program is a 5 year, \$75-million program designed to encourage Canadian municipalities to better prepare for and adapt to the new realities of climate change as well as reduce greenhouse gas emissions.

•The Municipal Asset Management Program is a 5 year, \$50 million program designed to help Canadian municipalities strengthen infrastructure investment decisions based on sound asset management practices.

•The Green Municipal Fund is a \$550 million program designed to support initiatives that demonstrate innovative solutions or approaches to a municipal environmental issues, and that can generate new lessons and models for municipalities of all sizes and types in all regions of Canada.

PET recycling rates in Europe increase significantly

Out of 3.147.000 tons of PET bottles and containers placed in the European market in 2016 (most recent numbers reported), a remarkable number of 59.8 percent – in total 1.880.900 tons - were collected and thereof 1.773.200 tons mechanically recycled. These conclusions come from the annual PCI Wood Mackenzie PET recycle survey for West Europe in 2016, commissioned by Petcore Europe. It shows that the collection rates increased by 7.4 percent, while the recycling rates also grew by 7.3 percent. In 2016, that resulted in 129.400 tons more collected and 120.000 tons more recycled PET compared to 2014.

"These PET collection and recycling rates are unreached in the plastics packaging industry while it is worth mentioning that PET recyclers still have unexploited capacities for recycling," stated Paola Arlotti from Equipolymers, Petcore Europe president. "The figures clearly outline the crucial role of PET in a Circular Economy and for reaching the plastics recycling targets currently discussed on EU level."

The top 5 in PET collection

When it comes to more country specific figures, the survey reveals that the combined volumes reported for France, Germany and Italy represent 47.9 percent of the total volume collected in the region, continuing the gradual decline in the top three's share (48.5 percent in 2014 and 53.3 percent in 2011). These three largest countries in terms of collection volumes are now joined by two other countries that contribute a significant proportion of the regional total, namely Spain and UK. The combined total share of these 5 countries in the overall EU collection accounts for 70.9 percent.

Composition of PET bales

The survey outlines a slightly more positive picture on the clear bottles amount compared to the previous years. Clear bottles accounted for 17.3 percent of the complete stream revealing an increase of 2.1 percent on the 2014 share and the first increase in share in 5 years.

"This is an encouraging sign for recyclers and hopefully this increased share is set to continue," outlines Christian Crepet, Petcore Europe Executive director. "However, the quality of bales with additionally a total share of 26.4 percent clear/light blue bottles, 25.5 percent mixed colours including green/brown bottles, and 30.8 percent of unspecified mixed colours clearly continues to challenge the recycling industry. Therefore, we believe that there is a vital need for a detailed analysis of the unspecified waste stream which will be part of the 2018 study commissioned by Petcore Europe."

"As regards the quality of the bales, a shift to more high quality markets also requires a stable and high level sorted input," states Casper van den Dungen, Petcore Europe vice president. "The survey confirms an increased waste ratio at the recycling stage. Therefore, efficiency increase in collection and sorting is needed and would also contribute to the cost reduction of the total system in the long term."

PET bottle reclamation capacities

Compared to 2014, the capacity increased by 2.5 percent and the actual processed volume grew by 7.2 percent. With an actual processed PET amount of 1.773.200 tons and the nominal input capacity of 2.147.600 tons, the industry average operating rate approached 83 percent in 2016, compared to 79 percent in 2014.

"This is a positive result, especially considering all the challenges that the r-PET industry is facing: low virgin resin prices, r-PET pricing, pressure on margins, decreasing quality of bales and rising process loss," states Christian Crepet.

End markets for r-PET

With 38 percent the major market for r-PET in 2016 remained sheet, followed by blow-molding applications with 26 percent and fibers with 24 percent. The remaining just over 11 percent are used for strapping and other applications.

Call2Recycle's new innovation increases battery safety

Call2Recycle Canada, Inc., Canada's national consumer battery collection and recycling organization, announced an innovation to bolster the safety in handling and transporting potentially dangerous batteries in Canada. Its battery collection containers now will include an innovative, flame retardant liner. This new feature is part of the organization's Charge Up Safety!™ initiative to further the safe collection, transport and recycling of consumer batteries.

When certain types of batteries reach their end-of-life, they may still retain a residual charge that can present a safety risk if not handled properly. To reduce any safety incidents, the Call2Recycle® program will include the flame retardant liner in all its battery collection boxes as an extra layer of protection during collection, transportation and recycling.

The patent-pending liner is made of a dry polyester fiber and provides an additional level of defense should a thermal event occur during the battery recycling process. The liner is made from used plastic bottles, and is both reusable and recyclable. This innovation, when applied with the program's guidelines, can limit the potential for flames to escape from a battery box in the event of a thermal runaway or ignition of materials.



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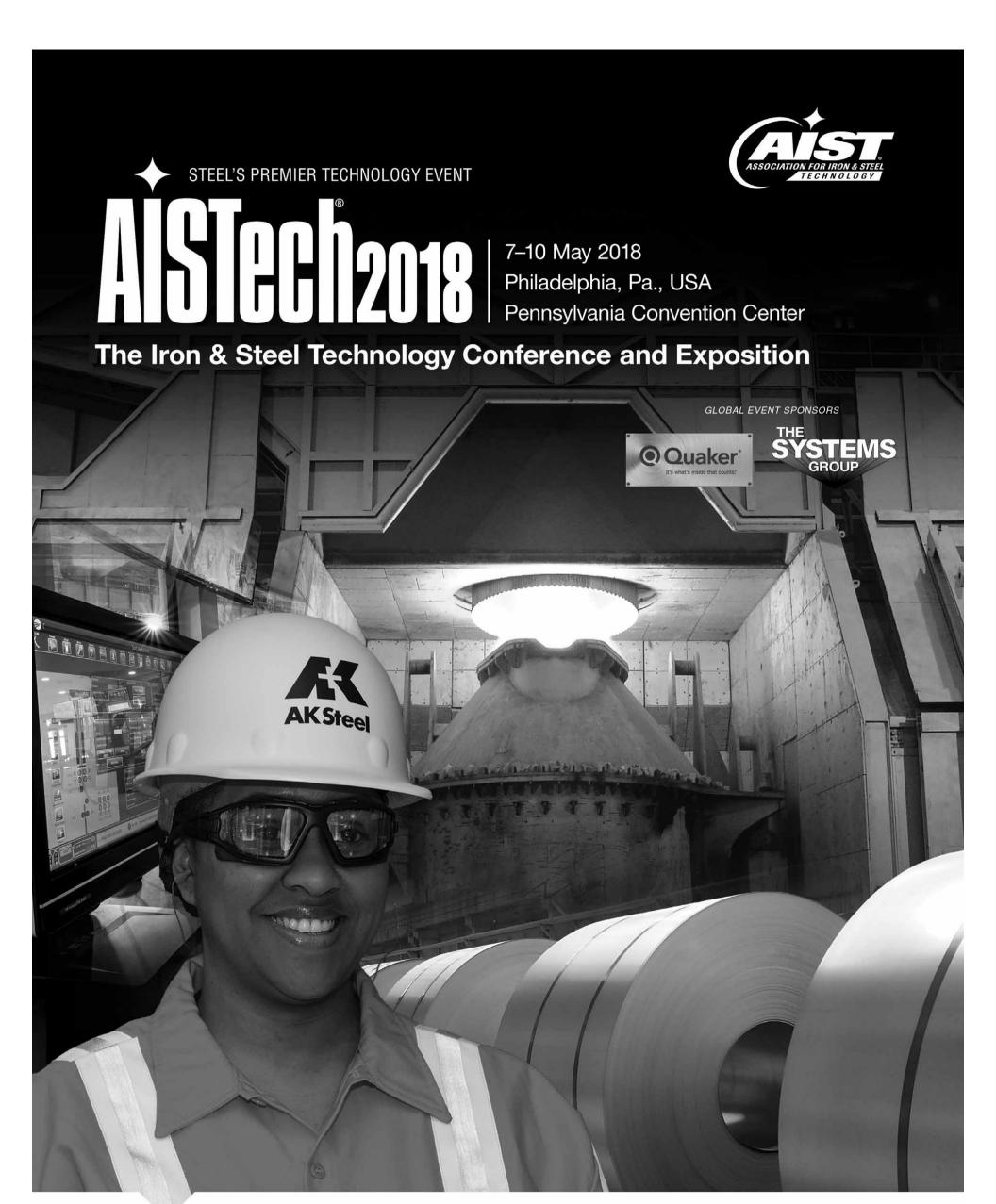
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My collection of vintage kitchen utensils includes one with an intended purpose that was a mystery. It looks like a cross between a metal slotted spoon and a spatula, so I use it as both. When not in use, it is prominently displayed in a decorative ceramic utensil caddy in my kitchen. The mystery was solved when I found one in its original packaging. It's a pooper-scooper.

Steel imports up 18 percent through November 2017

U.S. IMPORTS OF FINISHED STEEL MILL PRODUCTS

BY COUNTRY OF ORIGIN (Thousands of Net Ions)								
	NOV 2017	OCT 2017	2016 Full Year	2017 Annualized	% Change 2017 Annual vs. 2016			
SOUTH KOREA	210	392	3,812	3,881	1.8%			
TURKEY	66	113	2,416	2,327	-3.7%			
JAPAN	115	72	1,798	1,552	-13.7%			
GERMANY	141	157	1,192	1,419	191%			
TAIWAN	55	123	1,083	1,314	21.2%			
BRAZIL	98	94	823	972	18.1%			
CHINA	62	59	862	829	-3.8%			
NETHERLANDS	110	49	732	664	-9.3%			
All Others	1,269	1,495	13,621	17,194	26.2%			
TOTAL	2,126	2,554	26,338	30,150	14.5%			

Based on preliminary Census Bureau data, the American Iron and Steel Institute (AISI) reported that the U.S. imported a total of 2,718,000 net tons (NT) of steel in November 2017, including 2,126,000 NT of finished steel (down 14.6 percent and 16.8, respectively, vs. October final data). Year-to-date (YTD) through eleven months of 2017, total and finished steel imports are 35,632,000 and 27,637,000 NT, up 17.5 percent and 14.3 percent, respectively, vs. the same period in 2016.

Major products with significant YTD increases vs. the same period in 2016 include oil country goods (up 223 percent), line pipe (up 69 percent), standard pipe (up 41 percent), mechanical tubing (up 31 percent), hot rolled bars (up 25 percent), sheets and strip all other metallic coatings (up 21 percent), cold rolled sheets (up 18 percent) and sheets and strip hot dipped galvanized (up 15 percent).

In November, the largest volumes of finished steel imports from offshore were from South Korea (210,000 NT, down 47 percent from October final), Germany (141,000 NT, down 10 percent), Japan (115,000 NT, up 59 percent), The Netherlands (110,000 NT, up 124 percent) and Brazil (98,000 NT, up 5 percent). For the first 11 months of 2017, the largest offshore suppliers were South Korea (3,558,000 NT, up 0.4 percent vs. the same period in 2016), Turkey (2,133,000 NT, down 6 percent), Japan (1,422,000 NT, down 16 percent), Germany (1,301,000 NT, up 18 percent) and Taiwan (1.204,000 NT, up 29 percent).



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METALS

Resumption of coin redemption program hailed as a victory

The Institute of Scrap Recycling Industries (ISRI) applauded the decision by the U.S. Mint to resume the Mutilated Coin Redemption Program after a nearly three-year suspension. The program is worth millions of dollars to the recycling industry which recovers coins left in end-of-life products turned over for scrap processing.

"The resumption of the U.S. Mint's Mutilated Coin Program is a significant victory for the many recyclers that rely on the recovery of coins as part of their business," said Robin Wiener, president of ISRI."

Recycling facilities across the U.S. have been recovering coins from scrap for decades. The coins come from loose change left in cars or that has fallen between the seats, money left in vending machines and coin-operated laundry machines, and other sources. During shredding or other forms of processing the coins fall free or are purposefully recovered. As recycling technology has advanced the ability to accumulate coins in significant quantities has grown quickly, and is an integral part of many recycling companies' operations and product lines.

Along with the resumption of the program, the U.S. Mint also announced a number of important revisions including the establishment of procedures for certifying participants based on submission amounts and frequency, sampling submissions to authenticate material, conducting site visits for certain participants, and requiring information about how the submissions came to be bent or partial.

Schnitzer reports strongest quarterly earnings since 2011

Schnitzer Steel Industries, Inc. reported results for its first quarter of fiscal 2018 ended November 30, 2017. The company reported earnings per share from continuing operations of \$0.64 and adjusted earnings per share of \$0.63, both of which include an adverse impact of \$0.14 per share related to a legacy environmental liability of \$4 million. These results compare to fourth quarter fiscal 2017 earnings per share from continuing operations of \$0.65 and adjusted earnings per share of \$0.63, and the prior year first quarter loss per share from continuing operations of \$0.05 and adjusted loss per share of \$0.03.

Auto and Metals Recycling (AMR) achieved its best first quarter performance since fiscal 2011 with operating income of \$35 million, or operating income per ferrous ton of \$44, both of which are more than double the results of the first quarter of fiscal 2017. AMR's higher year-over-year operating income and operating income per ferrous ton reflect the benefits of operating leverage from 11 percent higher ferrous sales volumes and expanded metal margins.

Cascade Steel and Scrap (CSS) delivered first quarter operating income of \$8 million representing a significant improvement from the prior year first quarter operating loss of \$3 million which included an adverse impact of approximately \$2.5 million from downtime associated with a major equipment upgrade.

Consolidated financial performance in the first quarter included corporate expense of approximately \$17 million, an increase of \$8 million compared to the prior year first quarter primarily due to the recognition of the legacy environmental liability and higher incentive compensation accruals from improved operating performance.

"In the first quarter of fiscal 2018, we delivered our strongest first quarter performance since fiscal 2011. AMR's operating income per ferrous ton exceeded \$40, a level last reached during fiscal 2011 when both volumes and scrap prices were significantly higher than today. This performance demonstrates our continuous focus on increasing productivity and efficiency in our core operations which, combined with the success of our commercial initiatives to grow volumes, allowed us to take full advantage of the stronger market conditions," commented Tamara Lundgren, president and chief executive officer. "Our Cascade Steel and Scrap business also achieved significantly improved performance compared to the prior year first quarter, with operating margin expansion driven by higher volumes, reduced pressure from low-priced rebar imports, and continuing productivity improvements."

Volumes: Ferrous sales volumes in the first quarter increased 11 percent compared to the prior year first quarter, and decreased 8 percent sequentially driven primarily by seasonal impacts on demand. Nonferrous sales volumes were 3 percent higher compared to the prior year first

quarter, benefiting from higher production, while decreasing 14 percent sequentially primarily due to seasonality.

Export customers accounted for 70 percent of total ferrous sales volumes.

Pricing: Average ferrous net selling prices increased \$98 per ton, or 51 percent, compared to the prior year first quarter, reflecting stronger market conditions, and were up \$30 per ton, or 11 percent, sequentially. Average nonferrous net selling prices increased 26 percent compared to the prior year quarter, and 14 percent sequentially, reflecting the stronger markets.

Margins: Operating income of \$35 million increased \$11 million, or 47 percent, sequentially, and operating income per ferrous ton of \$44 increased 59 percent sequentially, both of which were more than double the prior year first quarter. The improved operating income was driven by stronger market conditions including metal margin expansion from higher priced shipments, increased supply flows, initiatives focused on broadening their supplier base, and sustained benefits from our productivity initiatives. First quarter operating results did not include a material impact from average inventory accounting, which compares to a favorable impact in the fourth quarter of fiscal 2017 of \$3 million and an adverse impact in the prior year first quarter of \$2 million.



Commodity		Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
#1 Bushelings	per gross ton	\$260.00	\$290.00	\$295.00	\$350.00	\$365.00
#1 Bundles	per gross ton	260.00	245.00	270.00	294.00	362.00
Plate and Structural	per gross ton	244.00	232.00	290.00	279.00	340.00
#1 & 2 Mixed Steel	per gross ton	205.00	201.00	200.00	300.00	307.00
Shredder Bundles (tin)	per gross ton	179.00	175.00	210.00	209.00	210.00
Crushed Auto Bodies	per gross ton	179.00	175.00	210.00	209.00	210.00
Steel Turnings	per gross ton	94.00	99.00	95.00	189.00	239.00
#1 Copper	per pound	2.65	2.64	2.82	2.90	2.98
#2 Copper	per pound	2.45	2.52	2.74	2.78	2.79
Aluminum Cans	per pound	.62	.72	.75	.65	.65
Auto Radiators	per pound	1.79	1.62	1.75	1.59	1.90
Aluminum Core Radiators	per pound	.69	.64	.60	.70	.55
Heater Cores	per pound	1.20	1.15	1.20	1.22	1.52
Stainless Steel	per pound	.65	.57	.57	.59	.60

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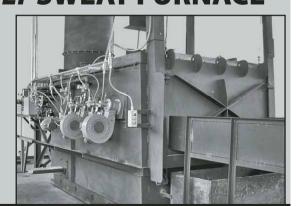
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AUTOMOTIVE

Steel intensive vehicles dominate auto shows in 2017

cles have debuted at major automotive shows across the country in 2017. These vehicles represent every major vehicle segment and size, including the high-demand SUV and CUV market.

"With so many new steel intensive vehicle debuts across key vehicle segments, it truly reinforces how advanced high-strength steel (AHSS) is driving innovation across the industry and helping automakers reach their lightweighting targets," said Jody Hall, vice president of the automotive market for the Steel Market Development Institute (SMDI). "There are more than 200

More than 60 steel intensive vehi-grades of innovative AHSS available to automakers today. This allows engineers to apply the right grade in the right location for exceptional occupant protection, durability and crash energy management."

Over the past 4 years, the amount of AHSS used each year in automotive applications has been 10 percent higher than forecast, according to a study conducted by Ducker Worldwide. AHSS continues its growth trajectory with approximately 254 pounds per vehicle in 2014, surpassing estimates by more than 20 pounds per vehicle.

Notable vehicle debuts from 2017:

2018 Chevrolet Traverse - It is 300 pounds lighter through use of highstrength steels.

2018 Honda Odyssey – A-, B- and C-pillars, roof rails, floor rails, front body area, and front subframe are composed of high-strength steel.

2018 Toyota Camry - Highstrength steel-intensive.

2018 Volkswagen Atlas – Built on the MQB chassis architecture, the body is made of stamped steel and the chassis boasts a large percentage of highstrength, hot-formed steel.

2017 Buick Lacrosse – Composed of 26 percent high-strength low-alloy steel, 23 percent mild steel, 16 percent ultrahigh-strength steel, 15 percent advanced high-strength steel, 9 percent bake-hardenable steel and 8 percent press-hardened steel.

2017 Chrysler Pacifica - Body structure is composed of 72 percent high-strength steel.

2018 Genesis G90 - Body is comprised of fully galvanized steel panels.

2017 Nissan Titan - The body-onframe and chassis are composed of corrosion-resistant and high-strength steel.

2019 Infiniti QX50 – Use of super high-formability (SHF) 980 Megapascal (MPa) high-tensile steel enhances safety and driving performance, while offering a 23 percent improvement in rigidity.

2018 Jeep Wrangler – B-pillars, quarter panel, sport bar are comprised of steel. The frame is also steel and made of higher-strength steels than previous generations.

2018 Kia Stinger – Composed of 55 percent advanced high-strength

2019 Subaru Ascent – Built on the Subaru Global Platform using extensive use of high-strength steel improves fuel economy and crash protection.

Salvaging Millions

by Ron Sturgeon Autosalvageconsultant.com

Positive energy – The way to the top

The first article in this series listed more than 25 tactics to increase your business success, all of them based on my experience. I started with nothing and didn't attend college, so I know you can achieve maximum success, regardless of your education.

Those of you who know me know I live the positive energy mantra. What do I say when you ask me how I am doing? I say, "The best!" There is no other way to achieve maximum success in what can be the grueling drive to the top.

How can you practice positive energy and what will practicing it do for you?

•Even in the middle of something negative, you can be positive. Look for that path, live it, breathe it and evangelize it. Everyone around you will notice and positive energy makes whatever you are facing likely to come out better. An employee wrecked the delivery truck this morning? He's ok, and we needed to replace that truck anyway. And now we can get the larger model, and aren't we glad we had insurance? Rent a truck and move on.

•Always be cheerful. My dad taught me that no one cares if your feet hurt, so why tell them? Being positive is infectious and appreciated by those around you most of the time.

•Positive energy can get you and your team through a rough spot; just for more than a short time; you must keep it positive! Again, your team will notice and be more effective.

•You can usually find a positive result, even in a bad financial report. You still have to work on the bad fundamentals, but approach them

with a positive spin. In other articles I've talked about my old boss at Ford, Dixon Thayer, and his mantra of positive dissatisfaction. Being positive will bring better results; no one likes to have negative energy.

•In private meetings, even when admonishing employees, get past the admonishment as soon as possible and focus on the path forward with a program to solve the issue and get to the result you both want. The employee wants to get through it more than you, and leaving it on a positive note can help the employee over the negative feelings sooner.

•With vendors, bankers, and other stakeholders, you want to be the one they remember as always having positive energy. Be careful not to be unrealistically optimistic so that you can always under promise and over deliver.

•Use the same positive energy in your personal life will improve your home life and your relationship with your kids and spouse.

Don't confuse having positive energy with just sugar coating everything negative. Not holding others or yourself accountable is not positive energy. Nor does positive energy mean you are unrealistically optimistic. Just be happy and optimistic as you plow through the minutia of the grind to the top. And love what you do.

You can't fake positive energy adopt it, buy into it and you must love what you do (most of the time). If you don't love what you do, go find something else that you want to do enough to let the positive energy flow.

Remember, only you can make BUSINESS GREAT!

This article was provided by autosalvageconsultant.com, which was formed in 2001 by recyclers for recyclers, to help them improve their businesses.

Anheuser-Busch pre-orders 40 Tesla electric self-driving trucks

Anheuser-Busch has placed an order for 40 Tesla semitrucks as part of a company-wide strategy to employ cutting-edge technology to reduce the environmental impact and increase the efficiency of its operations.

The 40 semitrucks, which represent one of Tesla's largest reported pre-orders, will be fully electric powered and equipped with autonomous driving capa-

Integrating the Tesla semitrucks into the brewer's distribution network will help Anheuser-Busch achieve its commitment to reduce its operational carbon footprint by 30 percent by 2025.

"At Anheuser-Busch, we are constantly seeking new ways to make our supply chain more sustainable, efficient, and innovative," said James Sembrot, senior director of logistics strategy. "This investment in Tesla semi-trucks helps us achieve these goals while improving road safety and lowering our environmental impact."

This technology will also improve safety and efficiency, particularly for truck drivers while they are operating these

vehicles, and will help ensure drivers continue to play a central role in beer distribution far into the future.

In addition to its partnership with Tesla, and a range of other recent investments in its transportation operations, Anheuser-Busch is also working with a number of innovative companies, including: Nikola, to develop and implement hydrogen-powered engines within our network, Otto and Uber Freight, to test autonomous driving, and Convoy to access on-demand trucking capacity.

In 2016, an Otto truck carrying 51,744 cans of Budweiser completed an autonomous truckload shipment from Anheuser-Busch's Ft. Collins, Colorado brewery to a distributor in Colorado Springs, a distance of 132 miles, marking the first ever commercial beer delivery using autonomous driving technology.

"We can't wait to get these trucks on the road, and keep leading our industry forward to a greener, smarter future in partnership with some of the world's most innovative companies," said Sembrot.

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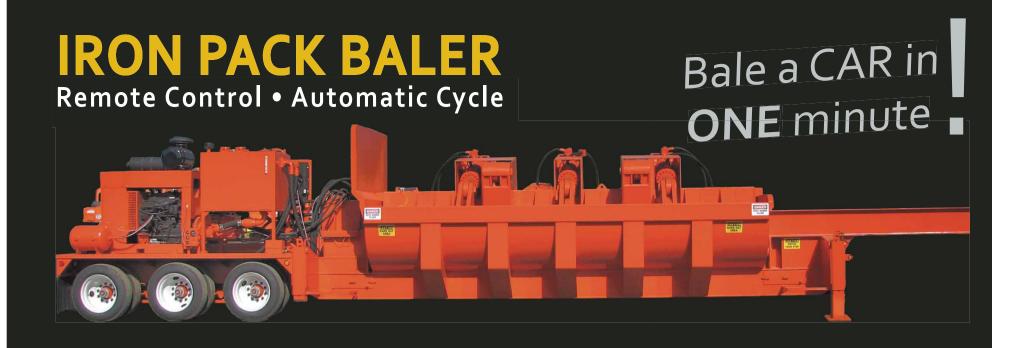


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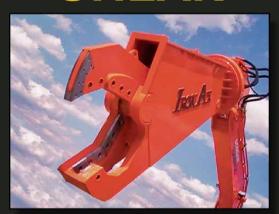
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American Recycler

AUTOMOTIVE

Toyota aims for sales of over 5.5 million electrified vehicles by 2030

Toyota disclosed plans toward the popularization of electrified vehicles for the decade 2020 to 2030. Toyota's electrified vehicle strategy centers on a significant acceleration in the development and launch plans of hybrid electric vehicles (HEVs), plug-in hybrid electric vehicles (PHEVs), battery electric vehicles (BEVs), and fuel cell electric vehicles (FCEVs).

Addressing environmental challenges, such as global warming, air pollution, and limited natural resources and energy supply are of utmost importance to Toyota. "Environment" is one of the anchors of the company's product development, alongside "safety/peace of mind" and "emotion." Electrified vehicles, which are effective for economical consumption of fuel and promoting usage of alternative fuels, are indispensable in helping to solve current environmental issues. In October 2015, Toyota launched the Toyota Environmental Challenge 2050, which aims to reduce the negative impact of manufacturing and driving vehicles as much as possible and contribute to realizing a sustainable society. In the ever-better cars category, Toyota aims to reduce global average new-vehicle CO2 emissions by 90 percent from 2010 levels.

Electrification across the entire Toyota and Lexus line-up

•By around 2030, Toyota aims to have sales of more than 5.5 million electrified vehicles, including more than 1 million zero-emission vehicles (BEVs, FCEVs).

•Additionally, by around 2025, every model in the Toyota and Lexus line-ups around the world will be available either as a dedicated electrified model or will have an electrified option. This will be achieved by increasing the number of dedicated HEV, PHEV, BEV, and FCEV models and by generalizing the availability of HEV, PHEV and/or BEV options to all its models.

•As a result, the number of models developed without an electrified version will be zero.

Zero-emission Vehicles

•Toyota will accelerate the popularization of BEVs with more than 10 BEV models to be available worldwide by the early 2020s, starting in China before entering other markets, with gradual introduction to Japan, India, the United States and Europe.

•The FCEV line-up will be expanded for both passenger and commercial vehicles in the 2020s.

Hybrid Electric and Plug-in Hybrid Electric Vehicles

•The HEV line-up will also grow, thanks to further development of the Toyota Hybrid System II (featured in the current-generation Prius and other models), the introduction of a more powerful version in some models, and the development of simpler hybrid systems will be implemented in select models, to meet various customer needs.

•Toyota also aims to expand its PHEV line-up in the 2020s.

Batteries are a core technology of electrified vehicles and generally present limitations relating to energy density, weight/packaging, and cost. Toyota has been actively developing next-generation solid-state batteries and aims to commercialize the technology by the early 2020s. In addition, Toyota and Panasonic will start a feasibility study on a joint automotive prismatic battery business in order to achieve the best automotive prismatic battery in the industry and to ultimately contribute to the popularization of Toyota's and other automakers' electrified vehicles.

Toyota aims to focus on the development of a social infrastructure conducive to the widespread adoption of electrified vehicles. This includes the creation of a system to help streamline battery reuse and recycling, as well as support of the promotion of plug-in vehicle charging stations and hydrogen refueling stations through active cooperation and collaboration with government authorities and partner companies.

IAA relocates and expands branches

Insurance Auto Auctions, Inc. (IAA), a business unit of global vehicle remarketing and technology solutions provider KAR Auction Services, Inc. has relocated its Jackson, Mississippi branch to a larger facility in nearby Byram, as well as the expanded its Grenada, Mississippi facility. The new facilities go from a combined 32 acres to more than 130 acres – offering expanded vehicle selection and inventory space for market growth as well as catastrophic events.

The new IAA Jackson facility in Byram will include two new run and drive lanes, a state-of-the-art Vehicle Inspection Center with covered vehicle inspection areas, ample space for onsite insurance customer staff, and increased security with thermal imaging cameras. It will host its auctions on Wednesdays, with preview days held every Tuesday. The newly expanded IAA Grenada facility provides additional inventory and storage space. It will host its auctions on Thursdays, with preview days held every Wednesday.

INTERNATIONAL

Vortex obtains ISO 9001:2015 certification

As of December 2017, Vortex Global Limited has been certified to the ISO 9001:2015 standard. Vortex Global's parent company, Salina Vortex Corporation, made a recent announcement that it too had obtained ISO 9001:2015 certification. Previously, Vortex Global was certified under the ISO 9001:2008 standard, and has been ISO-certified since its establishment in 2007.

ISO 9001 is an international standard that specifies requirements for a management system. By gaining ISO 9001:2015 certification, ISO 9001 acknowledges that Vortex Global has demonstrated the ability to consistently provide products and services that meet customer and regulatory requirements. In essence, the ISO 9001 standard acknowledges Vortex Global's credibility as a reliable and consistent supplier of material handling equipment and technical services to the dry bulk solids industry.

Among the major changes of ISO 9001:2015 versus ISO 9001:2008 was a transition of emphasis from "preventative actions" and "required documentation" toward more open communication with customers and suppliers, and greater information transparency within the organization and its shareholders.

To ensure the continuous improvement of its quality management system, Vortex Global has been utilizing turtle diagrams to assess the effectiveness of their enquiry, stock control, and works order processes. These diagrams are revised annually to better Vortex Global's processes and, ultimately, improve customer satisfaction from more efficient operations.

To improve internal transparency, Vortex Global's top management created a document to assess both shortterm and long-term opportunities and risks for the company's operations, and developed strategies for how those opportunities and risks will be approached to improve the business. Created in unison with Vortex Headquarters in Salina, Kansas, Vortex Global's top management also assisted in the development of a long-term business plan to provide Vortex employees and stakeholders with a clear understanding of the company's goals and strategic objectives for the

Vortex Global has demonstrated that within their small staff, cross-training efforts have been effective, job roles have been well-defined, and project information and product knowledge is recorded in a way that it is transferable among the entire staff. As a result, Vortex Global has constructed an efficient and high quality management program.

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American Recycler February 2018, Page A19

PAPER

AF&PA releases updated paper reports for November

Association released its November U.S. paper reports.

Printing-Writing Paper Report

According to the November 2017 printing-writing monthly report from the American Forest & Paper Association, total printing-writing paper shipments decreased six percent in November compared to November 2016. Shipments of uncoated free sheet shipments remained flat while the remaining three major printing-writing grades declined year-over-year. Total printing-writing paper inventory levels increased less than one-half of one percent from October 2017.

•November uncoated free sheet (UFS) paper shipments were flat yearover-year following year-over-year increases in two of the previous three months. Imports of UFS decreased by 30 percent year-over-year in October the fifth consecutive monthly decrease, with imports down 12 percent year-todate. Exports of UFS papers increased 30 percent year-over-year in October, following the 26 percent year-over-year increase in September, the sixth doubledigit percent year-over-year increase in a row.

•Shipments of coated free sheet (CFS) paper in November declined by a double-digit percentage for the second consecutive month. U.S. imports of CFS papers decreased nine percent year-over-year in October, the fourth consecutive year-over-year decline. Exports of CFS papers increased six

The American Forest & Paper percent year-over-year in October - the fourth consecutive year-over-year monthly increase thus far in 2017.

•Coated mechanical (CM) paper shipments declined year-over-year in November for the sixth consecutive month. Imports of CM were essentially flat or just under one-half of one percent compared to October 2016. Exports of CM increased 14 percent in October to 33,000 tons and for the year sit three percent lower than year-to-date

•Exports of uncoated mechanical (UM) papers decreased 4 percent yearover-year in September, but reached second-highest level in the past 24 months. Overall shipments of UM have declined year-over-year for seventeen consecutive months. Imports of UM decreased 13 percent year-over-year in September.

Boxboard Report

production Total boxboard decreased 0.4 percent when compared to November 2016 and decreased 2.0 percent from October.

Unbleached Kraft Boxboard production increased over the same month a year ago and increased compared to October.

Total Solid Bleached Boxboard & Liner production decreased when compared to November 2016 and was flat compared to October.

The production of Recycled Boxboard decreased compared to November 2016 and decreased when compared to October.

Cascades launches employee transportation program

Cascades launched a pilot transportation electrification project for its employees. To encourage them to reduce greenhouse gas emissions by acquiring an electric vehicle, the company has installed twenty-two 240V charging stations and one 480V fast charging station at its various plants in Kingsey Falls. In addition, Cascades will offer a \$2,000 financial incentive for employees who acquire an electric vehicle in the next year – a supplement to the government grants in effect.

Mario Plourde, president and chief executive officer of Cascades, made the announcement at the Salon du véhicule électrique de Saint-Hyacinthe trade show alongside Isabelle Melançon, Minister of Sustainable Development, the Environment and the Fight Against Climate Change, and André Fortin, Minister of Transport, Sustainable Mobility and Transport Electrification, before numerous representatives of the sustainable transportation industry.

The \$2,000 incentive for new electric vehicles will initially be limited to employees based in Kingsey Falls, who number approximately 1,400. These

employees will be able to charge their vehicles for free at the 23 new and the 7 existing charging stations. With a total of 30 charging stations available for a resident base of approximately 2,000, Kingsey Falls is now Quebec's most "plugged-in" city.

"Cascades' employees care about environmental issues. In fact, an internal survey revealed that 63 percent of our employees are considering purchasing an electric vehicle in the near future. As a responsible employer, we would like to help them turn intentions into action. We will assess the results of the program in a year, with the goal of extending it to all of our units in North America where it's possible to reduce the greenhouse gases," added Mr. Plourde.

Cascades did not want to leave the public out and, therefore, decided to cap off its program with the acquisition of a fast charging station, open to all drivers, travelers, tourists and anyone that will pass through the region. This is the first fast charging station available at an employer's site, and the first free charging station in Quebec.

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American Recycler

BUSINESS BRIEFS

AEM acquires data analytics company

The Association of Equipment Manufacturers (AEM) has purchased Minneapolis based Hargrove & Associates, Inc. (HAI) a data processing and business analytics company.

At a time when the innovative use of data is transforming the manufacturing industry, the acquisition allows AEM to enhance and build upon its statistics program to better meet the needs of its membership.

AEM has been an HAI client since 1989. Both organizations believe this is an opportunity to further develop the relationship and the statistics platform.

In addition to customer care and support, HAI employees will collaborate with AEM on projects using advanced data analytics that will help bring additional value to AEM members.

Hyundai Construction names Stan Park as VP

Hyundai Construction Equipment Americas, Inc. has appointed Stan Park as vice president of distribution and marketing, effective immediately. Park will be responsible for leading the teams in charge of building and supporting Hyundai's growing dealer network and overall marketing efforts.

Most recently, Park served as strategic distribution manager for the company, responsible for marketing and district sales management, strategic dealer development and national account sales. An employee of Hyundai Construction Equipment for more than 20 years, he has extensive experience in the material handling industry. Park has a marketing degree from Hofstra University.

Former landfill employees charged with embezzling

The former director of the Southeast Berrien County Landfill Authority and an employee have been charged with a \$249,000 fraudulent billing scheme.

Clyde David Fuller III, of Buchanan is charged with conducting a criminal enterprise and embezzlement of more than \$100,000. Fuller was the authority director until he was terminated in July of 2017. Terry Eldon Snow of Eau Claire has been charged with aiding and abetting a criminal enterprise and embezzlement.

Berrien County prosecutors said that the Berrien County sheriff's investigators determined that the authority made \$249,000 worth of payments to a company called GT&S Enterprises between December 2016 and June 2017.

Public records indicate GT&S is linked to a woman called Goldie Snow, the mother of landfill employee Terry Snow, prosecutors said.

Police uncovered financial records showing transfers to bank accounts owned by Fuller and Snow that coincided with payments to GT&S.

Prosecutors indicated the landfill authority board was not aware of the relationship between GT&S and the two landfill employees.

On\$\$I appoints Martinez as regional manager

OnSSI continues to build its organization with the appointment of Chris Martinez as their new South Central regional manager. Martinez is a veteran of the security industry, with over 20 years of experience – 12 years on the service/support side and 10 years in sales – where he developed, marketed, and sold security solutions throughout the U.S.

With experience gained during his earlier years as a field service technician, Martinez gained an in-depth knowledge of security solutions from inception to installation. He has previously run sales and operations covering multiple territories; been a top national sales producer; coordinated reseller training programs and created a national demo program for integrators. Martinez has a proven record of building productive strategic partnerships, customer alliances, and loyal sales teams that were instrumental in increasing sales throughout the South Central region. He is also a veteran of the U.S. Navy.

Martinez' territory includes Arkansas, Illinois, Iowa, Kansas, Louisiana, Missouri, Nebraska, New Mexico, Oklahoma and Texas.

Novelis invests \$4.5 million at Warren facility

Novelis Inc., an aluminum rolling and recycling company, announced a \$4.5 million manufacturing investment at its facility in Warren, Ohio. The investment in state-of-the-art technology provides greater versatility for pretreatments, improves operational efficiency and reduces costs over time. Novelis' Warren facility has 75 employees dedicated to applying coating to rolled aluminum sheet. The sheet is then used for production of lids for the tops of aluminum beverage cans, producing enough for more than one billion beverage can lids each month.

Novelis supplies industry leading beverage can materials to some of the world's most recognizable brands, including Coca-Cola, AB InBev and PepsiCo.

ASV Holdings adds Ohio dealer to network

ASV Holdings Inc., a manufacturer of compact track loaders and skid steers, has added National First Equipment, LLC to its dealer network. The Berea, Ohio based center rents, sells and services a variety of used compact construction equipment, including skid steers, mini excavators, wheel loaders, dozers and backhoes.

National offers all ASV Posi-Track compact track loaders, featuring best-inclass rated operating capacity, cooling systems and hydraulic efficiency, from the RT-30, the industry's smallest sit-on CTL, to the new VT-70, ASV's first mid-frame, vertical lift model, and all the way up to the RT-120 forestry unit, the industry's most powerful CTL. The company will also carry ASV's full line of skid-steer loaders.



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Material Handlers







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American Recycler

NEW PRODUCT SHOWCASE



Bandit Industries, Inc. 6750 Millbrook Road Remus, MI 49340 989-561-2270 www.banditchippers.com

BANDIT INDUSTRIES FEATURES THE BTC-300 TRACK CARRIER

Bandit Industries unveiled the BTC-300 track carrier with a cab that is comfortable and quiet, making it easy to put a full day of work at the controls. The 10-way adjusting air-ride captain's chair positions all the controls with easy reach. And bulletproof-grade glass eliminates the need for metal safety bars, so the BTC-300 offers the best visibility while still maintaining safety standards.

The BTC-300 rides on powerful CAT 315 steel tracks, allowing unbeatable ground clearance. Engine options are available from John Deere, Cat and Volvo up to 321 horsepower.



BossTek 1607 W Chanute Road Peoria, IL 61615 309-362-7039 www.bosstek.com

NEW MOBILE DUST SUPPRESSION DESIGN: RUGGED, COMPACT SIZE

BossTek debuted the DustBoss® DB-30 Fusion™ with a design that is versatile, featuring a transportable atomized mist unit, engineered with a workhorse electric motor and 30 KW generator. Permanently mounted on a rugged trailer, the company's Fusion lineup is proving to be an effective means of delivering powerful dust suppression technology to sites that lack a convenient power source.

Water is supplied to the DB-30 Fusion by a standard 5/8" (15.8 mm) garden hose, so it can be used at any location with a working hose bib. It consumes just 2.5 gallons of water per minute.



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KINSHOFER OFFERS HYDRAULIC MOBILE SHEARS SERIES

Kinshofer, offering high-quality excavator and loader crane attachments, introduced the DXS Series of hydraulic mobile excavator shears. The series debuts with the DXS-50 model which is ideal for scrap processing, tire recycling and demolition.

DemaPower™ cylinder technology gives the DXS-50 the same power as shears two sizes larger. The cylinder uses four chambers instead of the two found in other shears, resulting in 20 percent more surface area within the cylinder. The 9,920 lb. DXS-50 features a closing force of 1,203 tons. The DXS-50 also features a piercing tip that can be welded again and replaced.



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TUFFBOXX GRIZZLY PROVIDES LOCKABLE STORAGE

Paris Site Furnishings introduces the TuffBoxx Grizzly lockable, animal-resistant secure storage container which is ideal for waste storage. Constructed of galvanized steel, this model features gas shocks on all top lid access containers for safe and easy lid control with no pinched fingers. The lockable lid ensures security in all environments. Textured powder coat paint provides aesthetics and durability. With a 20 cu.ft. capacity and sized at 51" wide x 27" deep x 33" high, there is ample space for 6 bags of garbage. The Grizzly is suitable for curbside collection or for intermediate storage until garbage can be taken to a municipal waste management center.



Sennebogen LLC 1957 Sennebogen Trail Stanley, NC 28164 704-347-4910 www.sennebogen.com

SENNEBOGEN'S SIGNATURE MAXCAB OFFERS MORE COMFORT

Standard on Sennebogen machines, the updated version of the Maxcab is about 3" longer than the previous generation. The resulting cab expansion not only provides more space, it also offers additional room for an optional electric cooler behind the seat, as well as added storage space.

An improved cooling system, enlarged viewing windows, charging outlets, and ergonomic work station enhancements complete the Maxcab upgrade.

Sennebogen machines continue to employ efficient, cost-effective operating technologies while keeping controller comfort in mind.

BUSINESS BRIEFS

Jim Riley to lead federal affairs at NWRA

■ Darrell Smith, president and chief executive officer of the National Waste and Recycling Association (NWRA) announced that Jim Riley would lead the association's federal affairs team as vice president, federal affairs and deputy general counsel.

Riley comes to NWRA from the National Stone, Sand & Gravel Association where he was a strong advocate for the aggregates industry in Washington. He spent the last 16 years with NSSGA, first as director and later senior director of government affairs. As part of his duties, he oversaw the association's political action committee, ROCKPAC, growing it into one of the top federallyregistered trade association PACs. Riley also organized and directed the association's award-winning grassroots advocacy network. Prior to NSSGA, Riley was senior analyst for Civil Justice Reform & Insurance with Citizens for a Sound Economy.

In addition to being a registered lobbyist, Riley is an attorney admitted to practice law in the District of Columbia, New York and Massachusetts as well as before the United States Supreme Court.

Fuchs adds distributors in North America

■ Leslie Equipment Company has been appointed as one of the new Fuchs distributors in North America. With its headquarters and five locations based in West Virginia, Leslie Equipment Co. will now meet demand for Fuchs equipment throughout the entire state.

Leslie Equipment Company opened its doors in West Virginia supplying John Deere Construction and Forestry lines to all those with construction and forestry needs. Now over 50 years later, Leslie Equipment Company has opened 8 different locations throughout West Virginia and nearby states, employing more than 200 people throughout the territory.

W.I. Clark Company, headquartered in Wallingford, Connecticut will be supporting existing Fuchs owners in Connecticut, Rhode Island and portions of southeastern New York State.

Founded in 1925, The W.I. Clark Company is a fourth generation family business. The company represents a diversified group of manufacturers with products for general construction, land-scaping and scrap and recycling.

W.I. Clark will now support existing Fuchs owners in Connecticut, Rhode Island, and in New York: Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester.

ALLU names new dealer located in Australia

■ ALLU announced that the Qld Rock Breakers division of RD Williams is its new distributor throughout Australia. The company will not only supply a comprehensive range of ALLU Transformer and Processor attachments, but will also provide full aftermarket care, spare parts and dedicated customer service.

Customers throughout Australia will be able to benefit from even greater levels of support through its new distributor, RD Williams (RDW).

Based in Brisbane, servicing clients nationwide, RDW is considered to be an industry leader when it comes to earthmoving equipment solutions. Founded in 1988 by Rod Williams and Dick Karreman, RDW has successfully been established as a people first organization, committed to its people and its customers, providing quality solutions in everything it does.

By using four dedicated business units, the RDW team uses its extensive industry knowledge and problem solving skills to find the best solution for its clients' needs: Now an established name through Australia, RDW is able to provide levels of services and support which are synonymous with the ALLU brand.

In practical terms this means that as well as RDW providing point of contact customer support, when the situation requires it, the company will be able to call on round the clock assistance from ALLU's Finland based technical support department.

Quest Resource Holding enters service contract

■ Quest Resource Holding Corporation announced a multi-year contract to service equipment and recycle a variety of automotive waste streams.

The auto care and tire retailer is a current customer of Quest that has taken the step to commit to a long term business relationship. Quest's national coverage, safety, operational excellence and commitment to customer service were all factors contributing to the decision. Quest will continue to be instrumental in helping the customer achieve its long-term environmental vision.

Quest helps its customers reduce their environmental footprints by recycling hundreds of materials. Last year alone, Quest ensured that more than 40 million gallons of used motor oil and about 19 million used tires were properly recycled.



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BUSINESS BRIEFS

Dave King retires after 25 years of service to C&M

Dave King, vice president of inside sales at C&M Conveyor, has retired after 25 years of service to the company.

C&M Conveyor, headquartered in Bloomington, Indiana, designs, manufactures and installs material handling equipment.

King joined the company in 1992 as inside sales manager. He became a sales trainee in 1993 and served in positions of increased responsibility prior to being named vice president of inside sales. King has an associate's degree from Indiana State University in mechanical technology.

Alter Trading promotes Jay Robinovitz to CEO

Jay Robinovitz has been promoted to the role of chief executive officer of Alter Trading Corporation.

Robinovitz will retain his prior title of president and will also become a member of the Alter Trading board of directors. His leadership at Alter over the past eight years, coupled with his long history of success in the recycling industry make him uniquely qualified for his new role. This promotion is an important step in the company's succession planning process.

Michael Goldstein has been promoted to the new role of corporate vice president of operations. He will report to Robinovitz and will oversee the daily operations of all 60 operating and processing facilities. Goldstein joined the company in 2009 and has taken on numerous assignments giving him broad exposure to metals recycling operations, domestic and international ferrous and nonferrous marketing, mergers, acquisitions and related integration activities. Goldstein represents the fifth generation of the Alter & Goldstein families in executive roles at the company, and this assignment positions him in a key leadership role.

Robert Goldstein will transition to the role of executive chairman of Alter Trading Corporation. Goldstein has been with the company since 1969 and most recently serves as chairman of the Alter Trading board and as chief executive officer. He also serves as chairman of the board and chief executive officer for Alter's parent company, the Goldstein Group and held the position of chairman of the Isle of Capri Casinos until its divestiture earlier this year.

A guy went to the post office and saw a middle-aged man standing at the counter methodically placing "Love" stamps on bright pink envelopes with hearts all over them. He then sprayed perfume on the envelopes. The guy was curious so he went up to the man and asked him what he was doing.

The man answered, "I'm sending out one thousand Valentine cards signed, 'Guess who?'"

"But why?" asked the man.

"I'm a divorce lawyer," the man replied with a grin. $\P\P\P$

Frontline International expands footprint in Asia

Ohio-based Frontline International, a provider of Smart Oil Management[™] systems for foodservice operators around the world, is expanding its reach in Asia. The company has signed an agreement with Philippines based Technolux for distribution and service of its products in the region.

Technolux is the Philippines' largest importer and supplier of food service equipment, serving the major players in the nation's food and hospitality industries.

The environmental impact and profit potential of collecting and recycling used cooking oil is sure to present new opportunities for many in that part of the world. Through the new deal, operators of commercial kitchens will have access to solid advice and regular visits from an experienced team.

Frontline International's fresh and waste oil management equipment will continue to be designed and manufactured in the U.S.

Mr. T Carting names Thomas Toscano CEO

Mr. T Carting Corp., a private carting company located in New York, has appointed Thomas N. Toscano as chief executive officer effective January 1, 2018. Previously, Toscano was the chief financial officer for Mr. T Carting, Hi-Tech Resource Recovery and Scholes Street Recycling. He also served as inhouse counsel on all legal and financial matters.

Genesis promotes Mike Booth to product manager

Genesis Attachments has promoted Mike Booth to product manager.

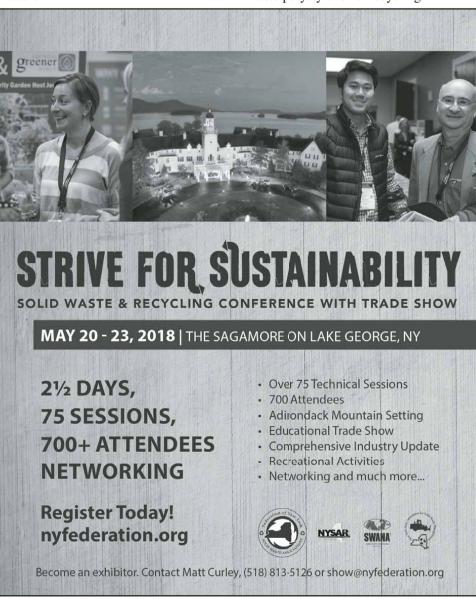
In this newly created role, Booth will be responsible for internally managing the recently introduced GHB Hydraulic Breaker and GCG Cyclone Rock and Concrete Grinder product lines. He will also work with demolition, construction, road and bridge, utility, excavation and trenching customers to further develop these product lines to ensure they meet end user needs.

Since January 2016, Booth has been the Genesis Northeast & Mid-Atlantic regional manager. Prior to joining Genesis, Booth worked for 18 years in the construction equipment industry where he received multiple awards and accolades for his sales accomplishments.

Companies join to recycle polystyrene waste

Agilyx Corporation, B-Line, and Fred Meyer launched a pilot program to recycle polystyrene foam from seven of the Fred Meyer stores in the metropolitan Portland, Oregon area.

B-Line will use their fleet of tricycles to collect polystyrene from two of the downtown stores, thereby reducing congestion and greenhouse gas emissions. All the polystyrene will be delivered to Agilyx where it will be recycled in a fully circular solution back into styrene oil. The agreement is an innovative collaboration in which a major store chain works with a "final mile" logistics company to deliver waste polystyrene for recycling.





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FOCUS on C&D RECYCLING

SECTION B www.AMERICANRECYCLER.com FEBRUARY 2018

Asphalt pavement is one of the most recycled commodities in U.S.

by MAURA KELLER

mkeller@americanrecycler.com

Within the construction and demolition industry, recycled asphalt, known as reclaimed Asphalt pavement (RAP), has been successfully used for decades and grown slowly over the past six or so years that the National Asphalt Pavement Association (NAPA) has been tracking trends. In fact, according to NAPA and their latest survey data, during the 2016 construction season more than 76.9 million tons of RAP and nearly 1.4 million tons of recycled asphalt shingles (RAS) were put to use in new pavements in the U.S., saving taxpayers more than \$2.1 billion. Also, more than 30 percent of all asphalt pavement mixture produced in the country that year was made using warm-mix asphalt (WMA) technologies.

According to Randy West, Ph.D., director of Auburn University's National Center for Asphalt Technology, the amount of concrete that is recycled is miniscule compared to asphalt.

Other recycled materials that are sometimes used in asphalt paving mixtures include recycled asphalt shingles, recycled tire rubber, slag, foundry sand, re-refined used engine oil, paper (cellulose fiber), and to a much lesser extent, glass and plastics (low-density polyethylene).

"RAP is primarily generated by milling existing pavements as part of the rehabilitation of roads and highways," West said. Milling removes distressed (cracked, rutted, potholed) pavement layers and provides a better surface for an overlay. This operation is done within the asphalt paving industry, so it is a self-contained part of the C&D industry.

"There are not a lot of regulations around milling other than state DOT specifications regarding the smooth-



PHOTO BY REINHARDT | DREAMSTIME

ness and texture of the milled surface," West said. "There are some new regulations regarding the generation of silica dust that will impact milling operations."

Over the last 10 years asphalt recycling has increased across the construction industry. More contractors, engineers, municipalities and private owners have become aware of the value of recycled asphalt.

As Kris Bernens with Mac Asphalt in Clark County, Indiana, explained, asphalt recycling comes in different methods, in-place (hot or cold), incorporating in new hot mix asphalt, and manufacturing of cold mix asphalt.

"All of these methods are reducing cost of constructing new or revitalized roadway surface," Bernens said. "Recycling asphalt is also reducing our carbon footprint. We use less virgin liquid asphalt in our new hot mix asphalt (HMA) mixes because we are reclaiming the existing asphalt from the RAP. When we recycle the asphalt in-place, the RAP is processed on-site with rejuvenator liquids added to the process."

Also, by processing on-site the RAP is not trucked to the asphalt plants processed and then hauled back to the site. All asphalt removed from Mac Asphalt's construction projects is recycled at the company's asphalt plant or

processed to become a new sub-base for parking lots or roadways.

And when it comes to asphalt recycling, regulations vary from agency to agency. State agencies set limits of RAP usage in new HMA mix designs. For instance, Kentucky and Indiana have different limits but when removing asphalt from projects all typical regulations apply.

"Most of the regulations for these recycling operations pertain to dust control and keeping the asphalt away from any water sources," said Gianni DiFranco, president of DiFranco Contractors Inc. in Chardon, Ohio. "It's a

See ASPHALT PAVEMENT, Page B2



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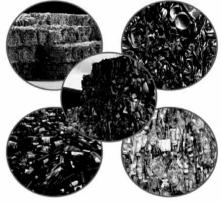
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Asphalt pavement _continued from Page B1

done properly. Locally we have a recycling plant near a residential area that doesn't cause much uproar with the residents."

Recycled asphalt has been used for some time in DiFranco's area for aggregate in hot mix asphalt. When the material is heated up it's reintroduced into new hot mix and does well as the oil is still in the old material. Recently, some ready mix concrete operation are adding recycled concrete aggregate to their mix designs to concrete that doesn't need to be freeze/thaw cycle-resistant like concrete footers.

"This a great way to use these materials as it replaces the original virgin material used with a recycled one," DiFranco said.

Of course, construction and demolition contractors are always more motivated to recycle when there is a value or cost reduction to their services. "MAC Construction buys asphalt removed from demolition and construction projects at a low cost per ton," Bernens said. "Often this sale of the demolished asphalt covers the cost of trucking the material to our plant site."

Trends To Notice

State DOTs and the asphalt industry are very interested in further increasing recycling RAP, shingles, rubber, etc. because of the economic and sustainability benefits. According to West, the constraint has been that we lack test methods that can be used to ensure that asphalt mixtures with higher recycled contents will perform equal to or better than mixtures with all virgin materials.

"That has been a key focus area of researchers at the National Center for Asphalt Technology (NCAT) at Auburn University," West said. "We are working with state DOTs and the asphalt industry to validate and refine lab tests that will be used to design and for day-to-day quality control of asphalt paving mixtures.

As the NAPA website shows, across the U.S., the average RAP content of asphalt mixtures is about 21

"Once we nail down the laboratory 'performance tests,' it will open the door for much higher RAP contents and better utilization of other recycled materials," West said. "Japan and the Netherlands currently have average RAP contents of about 50 percent. NCAT has built and trafficked test sections on its world famous Test Track with 50 percent RAP mixtures that outlasted all virgin asphalt mixtures, to prove it can be done in the USA with existing plants and construction methods."

Another proven recycling technology that is gaining momentum is cold recycling of RAP as a base layer in pavements. This approach uses about 97 percent RAP with approximately one percent foamed asphalt or asphalt emulsion and one percent cement.

As West explained, the approach was developed in the late 1950s and

relatively clean process as long as it's has been used around the world, but somewhat forgotten in the U.S. until recent work by the Virginia DOT.

> "VDOT worked with NCAT to prove the cold recycled layer would hold up to heavy traffic and develop input properties of the material for pavement design," West said. This work was recognized in 2017 by the American Association of State and Highway Transportation Officials (AASHTO) as a Sweet Sixteen High Value Research Project.

> Also, many engineers and designers are starting to let these materials be used where they were originally not. For instance, in Ohio, most public works projects would not let a contractor use recycled concrete aggregate for sub base in roads.

> "This is starting to change, which is great for the building green trend," DiFranco said. "Most aggregate used in residential construction is recycled in Northeast Ohio."

Technological Advances

In the asphalt industry a huge effort is being made to better utilize RAP. Manufacturers of HMA plants are working on better ways to process the materials. According to Bernens, manufacturers of equipment are working on ways to better process the materials on-site.

"Asphalt rejuvenators are becoming more widespread across the coun-Bernens said. try," Asphalt rejuvenation is a process of adding oil back into the demolished asphalt to increase the asphalt binder content. The asphalt binder is lost over time due to oxidation caused by UV light from the sun and scrubbing from

"Some of our asphalt rejuvenators are made from recycled products as well," Bernens said.

According DiFranco, it does seem that there has been some improvement of the machines that are used to grind up the recycled asphalt and concrete materials.

"The new machines require less maintenance and do a much more efficient job making the aggregate," DiFranco said. "Previously, concrete pavement that was recycled usually had a lot of steel reinforcement material where today it is virtually free of any metals. The amount of asphalt and concrete has dramatically increased in the last 15 years. Virtually all this material is recycled and turned into aggregate."

It's important to note that, in order for these materials to be recycled properly, they need to be kept clean. Many contractors tend to mix too much dirt and other organic materials when removing the pavement. "This creates a problem when the material is recycled as this organic material is not to be used in aggregate as it doesn't compact properly," DiFranco said. "Care must be taken when the concrete or asphalt is removed or it can't be recycled properly."

Macagnone named to U.S. Green Building Council-Long Island chapter

The Northeast Regional Council of Carpenters (NRCC) announced that Tony Macagnone, the Northeast Regional Council of Carpenters' Long Island Team Lead, has been named as a board member of the U.S. Green Building Council-Long Island Chapter (USGBC-LI).

The USGBC-LI is dedicated to encouraging and facilitating sustainable practices on Long Island through advocacy, education and outreach efforts to local municipalities, residents and building industry professionals.

In addition to his role at the NRCC, Macagnone also serves on the town of Oyster Bay, New York council. As a town councilman since 1999, he has initiated legislation to establish a "living wage" law, ensuring that employees of companies that perform service contracts or sub-contract for the town earn an hourly wage that meets their needs. He also sponsored legislation that made the town of Oyster Bay, the first town in Nassau County to require contractors and subcontractors to have apprenticeship training programs.

As an Oyster Bay council member, Macagnone has been a strong proponent for the development of projects that follow the Green Building Council guidelines. One example is the upcoming Bristal at Jericho assisted living facility project in Oyster Bay. The project uses material that meets green building standards, including high end insulation and windows with strong UV protection. Construction of Bristal at Jericho – being built by Local 290 carpenters and other Union laborers – will be completed in mid-2019.

Barriers to Carpet Recycling: the toxic ingredients that are being swept under the rug

by JIM VALETTE | MONICA WILSON

jvallette@healthybuilding.net / monica@no-burn.org

California's new carpet recycling mandate is an admirable one - it requires the carpet industry to achieve, in California, a 24 percent recycling rate by 2020, up from 10 percent in 2015. Carpets are a significant hurdle in the waste stream, comprising more than 4 billion pounds of waste in American landfills, 3.5 percent of all landfill waste in the entire country. Only five percent of the country's carpet waste is recycled; the rest winds up in landfills and incinerators. California's stronger carpet stewardship program is a step in the right direction, but in order for the recycling mandate to be achieved, manufacturers need to design carpet to be more recyclable, which in part means making them less toxic.

Unfortunately, our recent report shows that carpets contain over 44 toxic chemicals linked to serious health effects, putting consumers and workers at risk and creating a significant barrier to safe recycling.

For example, polyurethane backings contain isocyanates, which present a significant hazard through inhalation or skin contact – one drop of liquid isocyanate on a person's skin can cause the onset of asthma. Polyurethane backings can contain organotins, which are potent neurotoxicants, and halogenated flame retardants, which are linked to hyperactivity, learning disabilities, reproductive harm, and cancer.

There's a host of problems with how carpet fibers are treated. Traditional stain repellent treatments on carpet fibers contain fluorinated chemicals that can cause developmental and reproductive harm, anti-microbial treatments contain carcinogenic formaldehyde and triclosan (an endocrine disrupter), and some anti-static treatments contain perchlorate that disrupts thyroid function.

These hazardous chemicals can be emitted into dust and air during use and from operations that recycle carpet and render some carpet products unrecyclable.

An additional wrinkle is the lack of transparency in product labeling, which deprives consumers of information needed to avoid exposure and means recyclers have a hard time protecting workers and preventing the recycling of toxic materials. In January, Mohawk Industries announced a new line of carpet made from PET face fibers bonded to a PET backing. PET, although it is a petrochemical, has no known direct health hazards. The company says the face and backing are easily separated by heat and reusable in new floor coverings. While a positive step forward, the lack of disclosure about potentially toxic substances like fluorinated stain repellants in these new products keeps consumers and recyclers in the dark.

Most carpet contains recycled materials, which manufacturers say brings us one step closer to a circular economy. But many manufacturers forsake consumer safety in developing products they can brand as "green." For example, upon the creation of "recycled content" credits in the early 2000s, several manufacturers filled carpet backings with fly ash from coal fired power plants and other facili-

ties. The ash contains toxic heavy metals like arsenic, mercury and lead and can comprise as much as 40 percent of the weight of some carpets. This has been the most common filler material in carpet over the past 15 years.

Fortunately, due to increased awareness and consumer pressure, the tide is turning on carpet design. Shaw Industries told us it stopped using fly ash at the end of 2016. And Home Depot announced in October that it was no longer selling carpet containing fly ash. Tarkett announced in December that is was no longer selling carpet containing fluorinated stain repellants, joining Interface and three carpet fiber manufacturers. Home Depot's new policy on carpet bans many other toxic chemicals, such as phthalate plasticizers and formaldehyde. But there are many others left to eliminate.

Policy makers, consumers, and recyclers can work together to ensure all toxic substances are removed from carpet manufacturing in order to protect workers and residents and achieve the ambitious recycling targets laid out in the improved Carpet America Recovery Effort program. If California is able to model a successful partnership between the carpet industry and recyclers to close the loop, other states are sure to take notice.

OP-Ed submitted and co-written by Jim Valette, research director for Healthy Building Network and Monica Wilson, GAIA's Policy and Research Coordinator and Associate Director of the U.S. office.



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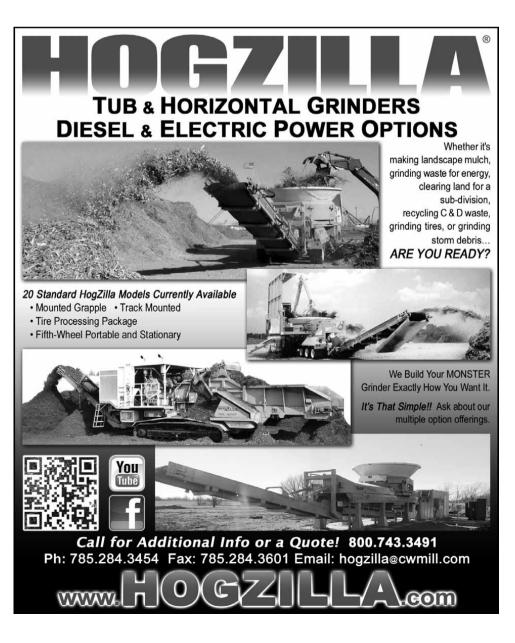
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EQUIPIVIENT SPOTLIGHT



Shears

by MARY M. COX

maryc@americanrecycler.com

Shears are an integral component in the process of construction and demolition. The Brokk® company offers the MC200 Multi Cutter to expand smaller Brokk models' versatility for contractors in steel cutting applications. The product promotes safe and efficient steel material cutting in a variety of industries, including demolition, recycling, nuclear, process, food and construction. The steel cutting attachment, manufactured by Brokk's sister company, Darda®, offers a high power-to-weight ratio and sleek, compact design. The attachment also addresses a need for a lightweight, economical steel cutting tool.



Brokk Inc.

The 10" x 13" Multi Cutter is 40" long and can be used on machines weighing 2,650 to 6,170 lbs., including the Brokk 110, 120 D and 160 models. "This one-of-a-kind cutter brings easy maneuverability to confined jobsites with its slim profile, making it ideal for use in tight spaces, such as building interiors, where our machines excel, due to their electric operation and compact size," noted Brokk vice president of sales and marketing, Peter Bigwood. The attachment also features a hydraulic 360° rotary drive for exact positioning and an 8" wide jaw opening, able to handle a variety of metals. It weighs only 265 lbs., yet uses a hydraulic booster to exert 50 tons of cutting force at 3,900 psi to easily cut through steel. To reduce costs to the end user, Darda also designed the MC200 Multi Cutter so operators can sharpen the jaws rather than replace them.

Bigwood added, "The MC200 Multi Cutter, combined with the smaller Brokk machines' remote capabilities and arms that extend as far as 16', allows contractors to easily cut beams, cable, supply lines and steel pipes in hard-to-reach areas. This improves efficiency and minimizes labor costs. Paired with a Brokk machine, the attachment reduces the risk of injury to laborers by eliminating the need to climb scaffolds and ladders with handheld tools. The Multi Cutter also alleviates the risk of injury from openflame torches, which are a common but dangerous method for cutting steel. This traditional approach can also create fire hazards and increase the risk of exposure to harmful emissions."

Indeco ISS Steel Shears have been specifically engineered to meet the demands of today's scrap and recycling industries. "They are super tough and the culmination of over 35 years of hydraulic engineering and manufacturing experience. Our products make a job more manageable and so increase productivity – and they handle all types of steel demolition and scrap processing tasks. The ISS Series is available in a variety of mounting configurations including fixed, second member and rotating and third member," Bill Pankracij, public relations director, explained.

The Indeco ISS Series models feature a special Hardox® main body frame, an integrated regeneration valve which accelerates no-load movement of the jaw and a pivot group that prevents the jaws from buckling. Pankracij noted, "The ISS cycle time is 30 percent faster than similar products on the market –due to the ISS integrated regeneration valve – and the Hardox steel eliminates shear flexing. Our exclusive oversize cylinder design can withstand over 10,000 psi of pressure, which is ample for any type of working condition. The shear's quick change wear bushing ensures the knives are always optimally aligned and the continuous, high-speed 360° hydraulic rotation of the shear allows for better positioning and optimal cutting in any working position. Dual piercing design from both the upper and lower jaws improves cutting ability and the heavy



Indeco North America

duty pivot group provides long-term cutting efficiency." He said four identical main knife blades are designed to be interchangeable and rotated three times to get maximum usage and cutting ability.

A patent is pending for the shear's dual guide pack system, which can infinitely adjust alignment and prevent deflection in both directions during the cutting cycle. Special second and third member mounting bracket systems are available on all shear models and accessory options include blades and connecting hoses.



(inshofe

Kinshofer, one of the world's leading sources of high quality excavator and loader crane attachments, offers the DXS Series of hydraulic mobile excavator shears, and the DXS-50 is the newest model. The line features Kinshofer's DemaPower[™] cylinder technology to give the DXS-50 the same power as shears two sizes larger. The cylinder uses 4 chambers instead of the 2 found in other shears, resulting in 20 percent more surface area within the cylinder. That allows the DXS Series to exert up to 25 percent more power from a smaller attachment, resulting in the best powerto-weight ratio in its size class. The 9,920 lb. DXS-50 features a 1,203 ton closing force.

The DXS-50 fits 25 to 35 ton carriers when boom-mounted and 32 to 50 ton carriers when stick mounted. Also, the cylinder technology allowed Kinshofer to design the DXS-50 with a jaw opening 29.2" wide and 30.7" deep.

"Our product's double-acting speed valves and innovative cylinder technology also give the DXS-50 superior jaw closing and opening speeds. The cycle time is as fast as 5.5 seconds, 50 percent faster than any model in the attachment's weight class," Francois Martin, Kin-

See SPOTLIGHT, Page B6

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INDUSTRY PROFILE

A Closer Look

by Donna Currie

■ Supershear, Inc. ■ Larry DeMik • 800-999-8100

Like many companies, Supershear started off as one sort of business and slowly changed into another. Larry DeMik, the owner of Supershear, described the history of the industry and his business.

In the late 1980s, DeMik said catalytic converters were being "yanked off" of vehicles using torches. Cars were prepped while they were still on their wheels in junkyards. Not only did this take a lot of time, but it could also be very dangerous. And it simply wasn't efficient.

DeMik explained that at that time, a man named Dave Casebolt was in the business of buying catalytic converters from auto salvage companies. He looked at the process and said, "There's probably a better way to do this." But he didn't just think about better ways, he designed and patented a machine that made the removal of catalytic converters much easier. They were the first Supershears.

Casebolt then gave the machines away to the yards that were removing the catalytic converters. "He gave them a machine," DeMik said, "and he received a better price on the cats."

It was a win-win. The yards saved on labor costs, the employees who removed the catalytic converters had an easier job, and Casebolt had a steady supply of catalytic converters at a price that made him a nice profit. It didn't take long before the cost of the machine was paid for while Casebolt continued to buy the converters at the lower price.

At that time, there was a large margin between the purchase price and the sale price, but, DeMik said, "Nowadays there is a whole lot tighter squeeze on what you buy and what you sell."

DeMik came into the picture in 2004, when he bought the business along with two partners and formed an LLC. In 2010 he bought out both partners and incorporated the business. "And here we are today," he said.

While DeMik wasn't particularly interested in recycling catalytic converters, Supershear was a very good fit for his interests. DeMik said he "always worked on cars," until he got out of that business and into finance, which he also enjoys. When the deal to buy Supershear came along, "I got to do both things," he said.

While Casebolt's business was all about buying catalytic converters at a good price, under DeMik's management, Supershear changed into a company that simply sells equipment.

While some of Supershear's customers operate much like Casebolt, where they give away machines in return for exclusive rights to buy the catalytic converters, many of the customers use the machines to remove catalytic converters from the cars they are processing. "We provide a machine that helps these guys take a catalytic converter off," DeMik said.

Supershear services the machines, and they also sell parts so customers can do maintenance and repairs on their own. "I enjoy it when someone calls up and says, 'my machine doesn't work,' and I can fix it over the phone," DeMik said.

While they "still sell a lot of equipment to the mom and pops," Supershear also does a lot of business with larger companies. "We're doing a lot more business today than before."

Besides selling the Supershears, the company also sells decanning machines, which cut the converters in half so the catalyst can be removed. DeMik explained that the catalyst includes platinum, palladium, and rhodium, which is why it's valuable. At the time of this article platinum and palladium were both over \$1,000 per ounce.

There are three models of Supershears. The difference between the three is "what powers the hydraulics." The electric model is best for stationary use, where the converters are removed on a rack. The gas and 12-volt models offer much more mobility.

When DeMik started the business, he was "a one-man show," but it has grown into a family company. Since 2012, DeMik's son Jacob has been involved. Instead of DeMik buying the dolly carts that his machines ride on, Jacob began to fabricate the carts in-house. Later, Jacob learned how to build the Supershear machines as well. Not only did this save money over purchasing carts, but "I also have a loyal employee," DeMik said.

In 2017, DeMik's son Michael also joined the company, and he serves in a variety of areas. Michael had worked in the retail bicycle business, and also did bike repairs. When the retail bicycle business went soft, DeMik decided to "carve out a spot for Michael to build Supershear machines, but he can still do bike repairs too." He is also slowly getting involved in customer service.

With all that great help in the shop, DeMik spends most of his time in the office, working on the financial end of the business. "I don't know that I'd have time to go back into the shop," he said. "Taking care of the books has become a full time job." And looking to the future, he said, "I'm trying to work it out so the boys can take over."

Spotlight

■Continued from Page B4



Rotar North America Inc

shofer North America general manager, noted.

Martin said the DXS-50 reduces carrier fuel consumption by up to 20 percent compared to other shear models. The attachment's efficient design allows it to function normally when the carrier is set in economy mode, achieving the same performance as a competitive shear on an excavator running at full throttle.

'The DXS-50's high power-toweight ratio and narrow frame make it ideal for top-down demolition, a technique growing in popularity in urban areas. Contractors can use smaller carriers to better reach areas to demolish, plus the attachment's light weight and superior cylinder technology improve fuel efficiency while the excavator arm is fully extended. The DXS-50 complements Kinshofer's demolition attachments, many of which also feature DemaPower cylinder technology for improved power, speed and productivity. We offer a wide product range with just about every type of attachment for equipment carriers with and without hydraulics in industries as diverse as scrap, demolition, railway, landscaping, construction, snow clearing, excavating, road building, forestry, tire recycling and biomass," Martin concluded. The Kinshofer group of companies also includes Demarec, RF Systems, Auger Torque and Solesbee's brands.

Rotar offers high quality concrete demolition tools that can separate steel and process concrete. "We focus on saving money for our clients, providing quality product performance, an environmentally friendly approach to design and leading the way in green sustainability manufacturing," explained Sal LeCourte, national sales director.

The firm's premier product is the mobile hydraulic steel processing shear, which is part of the RSS Series. "Our shear out-cuts and out-performs any similar product in production work. The custom designed, hydraulic speed-valve of the shear improves processing speed while saving carrier fuel usage. The RDC Series primary demolition tool leads the market in cutting performance and light weight design. Utilizing the latest steel composition wear abrasion steel technology, the RDC Series is built from Strenex 900, the latest in high performance tool steel.

"For material handling work, the high performing RG Rotational grapple is just the tool for your needs. Using a heavy duty high pressure cylinder, the RG grapple holds steady at any load amount and places it precisely where you want it. The dual-drive rotational system out performs any hydraulic rotational grapple in its class, whether for hurricane clean up or in handling waste material at transfer stations. Our RSP secondary concrete processor is a specialized tool. A fast cycle time and superior hydraulic cylinder force allows the RSP to make quick work of any production concrete job. At a lower than average cost than similar products, it is the exact tool needed to make money for you," said LeCourte.

Folks at Rotar have built high quality equipment for the demolition and steel scrap processing industry since 1978. Their products are built in Holland and sales and distribution facilities are located worldwide.

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Testimonial -



I received your publication by mail. I can confirm I have never seen it before in its hard copy version. I like the layout and it is very informative, in a league of its own in terms of quality information. No wonder it is the only recycling publication quoted on Lumistar's blog. I look forward

to upcoming issues.

I have read issues of your publication in the past by accessing digital archives at one of two libraries I am a member of. Your website is also fantastic.

—Paul Angel, LUMISTAR CORPORATION

Construction employers add 24,000 jobs in November

by 24,000 jobs in November 2017 to the highest level since November 2008, according to an analysis of new government data by the Associated General Contractors of America. Association officials said that tight margins are keeping firms from paying even more to attract hard-tofind workers, noting that efforts to cut tax rates should help lead to higher average hourly earnings for the sector.

"Employment and pay in construction have risen more rapidly over the past year than in the economy overall, as the supply of unemployed, experienced workers continues to shrink," said Ken Simonson, the association's chief economist. "With unemployment so low overall and in construction, contractors are likely to have increasing trouble filling many types of hourly craft and salaried openings.'

Construction employment totaled 6,955,000 in November, a gain of 24,000 for the month and 184,000, or 2.7 percent, over 12 months. The economist pointed out that the year over year growth rate in industry jobs was nearly twice the rise in total nonfarm payroll employment.

Residential construction – comprising residential building and specialty trade contractors - added 14,800 jobs in November and 85,900 jobs, or 3.2 percent, over the past 12 months. Nonresidential construction (building, specialty trades, and heavy and civil engineering construction) employment increased by 8,600 jobs in November and 97,700 positions, or 2.4 percent, over 12 months.

The number of unemployed jobseekers with recent construction experience fell

Construction employment increased to 467,000 in November, down from 517,000 in November 2016, while the unemployment rate in construction dropped to 5.0 percent last month from 5.7 percent a year earlier. These declines show how difficult it has become for the industry to find experienced workers, Simonson said.

> Average hourly earnings in the industry climbed to \$29.17, a rise of 2.9 percent from a year earlier. That was a steeper increase than for the total private sector, which rose 2.5 percent to an average of \$26.55 per hour. The economist noted that construction pays nearly 10 percent more per hour than the average nonfarm privatesector job in the United States.

> Construction officials said that one reason construction wages have not grown more rapidly is historically low profit margins for most construction projects as firms cope with increased regulatory compliance costs, higher health care costs and robust competition for work. They said that if proposed tax reforms are enacted in a way that lowers tax burdens for all employers, construction firms will have more room to increase wages as they work to recruit workers amid tight labor market conditions.

> "Given current labor market conditions, it is reasonable to assume that many construction firms will take advantage of tax cuts to boost pay and benefits," said Stephen E. Sandherr, the association's chief executive officer. "Increasing wages should attract more young people into the industry, while boosting overall economic activity."





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