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A publication for and about Linder Industrial Machinery customers • July 2023

Pictured above: Fontaine Construction Inc. utilizes a Komatsu PC360LCi-11 intelligent Machine Control (iMC) excavator and a D51PXi-24 iMC 2.0 dozer to renovate Lot 5 outside Memorial Stadium.

Feature Stories:

Fontaine Construction Inc.	pg.	4
Blew Bayou Services LLC	pg.	8
Scrap King and Alex's Metal Recycling	pg.	10





A Message from Linder



John Coughlin



Never too busy for safety

LINDER

Dear Valued Customer:

This time of year tends to be the busiest in the industry with lots of activity that involves manpower. It is easy to focus on the task at hand, but remember what's most important: your employees. I encourage you to review safety guidelines, from having the proper protection systems for your trenches to providing plenty of water and sunscreen to help your staff beat the heat.

To help get projects done on time, properly maintain your equipment. Fortunately, most new Komatsu machines come with complimentary Komatsu Care for the first three years or 2,000 hours. Our trained technicians perform the services at your convenience to help limit downtime — typically after normal work hours or when your equipment is not being used.

We hope you were able to attend CONEXPO-CON/AGG this past March, but if not, there's a recap of the event inside this issue that provides information about some of the machines that were on display, such as Komatsu's new PC210LCE electric excavator.

Be sure to check out the articles about our featured customers and employees. I'm sure you will enjoy their stories and find them inspiring.

You can also read about our new 15-acre branch in Asheville, N.C., which includes a sales, parts and service center; a state-of-the-art training facility; and proving grounds.

Plus, learn about our drone services, which are performed by our experienced Technology Solutions Group and can help you better manage production.

As always, if there is anything we can do for you, please feel free to contact one of our branch locations.

Sincerely, Linder Industrial Machinery Company

John Coughlin, President and CEO

<u>LINDER CLINK</u>

A publication for and about Linder customers

In this issue

Fontaine Construction Inc. pg.4 Learn about the renovations at Clemson University.

Blew Bayou Services LLC pg.8 Find out what unique solution helps this firm dredge canals.

Scrap King and Alex's Metal Recycling pg. 10 Meet Alex Gregory, the owner of two companies in Tampa, Fla.

Industry Event pg. 12 Get a glimpse of CONEXPO-CON/AGG 2023.

Equipment Acquired pg. 15 Discover which machine D.H. Griffin Companies purchased at CONEXPO-CON/AGG 2023.

Innovative Technology pg. 16 Delve into construction equipment electrification.

Smart Construction pg. 20 Move earth faster and save money with Smart Construction solutions.

Improved Design pg. 22 Take a look at BOMAG's CR 820 T paver.

Serving You Better pg. 25 Explore Linder's Asheville, N.C., branch.

Drone Services pg. 27 Manage production more effectively with Linder's drone services.

Tech Talk pg. 31 Check out Komatsu's upgraded machine control monitors and GNSS receivers.

Linder Employee Focus pg. 33, 35, 37 Get to know Linder's featured employees.

Linder News & Notes pg. 38 Read Linder's recent announcements.

Industry Insight pg. 41 Stay up to date on industry news.





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Fontaine Construction Inc. enhances Clemson University's Tiger Walk experience



Will Williams, Foreman/Operator



Jeb Kelley, Foreman/Operator

Fontaine Construction Inc. is known for its diverse range of sitework projects, including neighborhood developments and commercial jobs. Fontaine Construction's commitment to quality work and its strong relationships with clients have earned the company a reputation for delivering exceptional results. With a skilled team of operators and foremen, including Will Williams and Jeb Kelley, the company continues to make a mark in the construction industry.

According to Williams, Fontaine Construction is based in Pelzer, S.C., but has a strong presence in the Clemson area because the owner, James Curtis, is a Clemson University alumnus.

"A lot of our management went to Clemson, so it's close to their hearts to be able to do projects for the university," added Kelley.

Improving the Tiger Walk

Currently, Fontaine Construction is renovating Clemson University's Lot 5 outside Memorial Stadium and installing storm drain and sewer to enhance the Tiger Walk experience for fans and players. The Tiger Walk is a Clemson tradition where the football team walks 200 yards across Lot 5 through thousands of fans to the stadium. Fontaine Construction will not only improve the overall aesthetics of the area but also create a more enjoyable experience for the fans.

"The lot will have new planter beds, trees and plants," explained Kelley. "It's going to be really nice once it's all finished."

To complete jobs like the Lot 5 renovation, Fontaine Construction relies heavily on Komatsu equipment, particularly its intelligent Machine Control (iMC) dozers and excavators. Williams noted that the iMC technology makes it easier for average operators to achieve precise results.

"The iMC technology takes all the guesswork out and enables us to be more accurate and efficient in our work, which ultimately benefits our clients," Williams explained.

Fontaine Construction's Komatsu D51PXi-24 iMC 2.0 dozers have been particularly beneficial on the Clemson University project, and the improved capabilities of the iMC 2.0 dozers have made a noticeable difference in the company's efficiency and the quality of its work.

"We're mostly using the dozers for fine grading the parking lot and the slopes," said Williams.

Fontaine Construction is currently renovating Clemson University's Lot 5 outside Memorial Stadium and installing storm drain and sewer to enhance the Tiger Walk experience for fans and players.





An operator moves material with a Komatsu PC360LCi-11 iMC excavator.

"With the 2.0, you can blade the slope well each time. It's comfortable in the cab, and it's got great visibility, so you can see both corners of your blade. The D51PXi-24 is probably the best dozing machine I've been on."

Fontaine Construction also uses Komatsu PC360LCi-11 and PC210LCi-11 iMC excavators for various tasks, such as digging retaining walls and laying storm drains and sewers.

"The iMC excavators are a huge benefit," said Williams. "We cut a corner of the parking lot with an iMC excavator, slicked it up with the iMC 2.0 dozer, and it was right on grade. You don't have to set up a pipe laser."

The iMC technology has been particularly helpful for laying sewer lines, because it helps operators dig trenches more accurately and efficiently.

"The iMC helps speed the process up," noted Kelley. "Fontaine Construction runs all Komatsu equipment, and we get a lot of work done with a lot less equipment and people as other companies may have."

Great support from Linder

Fontaine Construction's partnership with Linder Industrial Machinery Company has been instrumental to the company's success. Both Williams and Kelley appreciate the support from their sales representative, Tyler Halbert.



Fontaine Construction utilizes a Komatsu PC360LCi-11 iMC excavator and a D51PXi-24 iMC 2.0 dozer to renovate Lot 5 outside Memorial Stadium.

"Tyler is great," Williams declared. "He checks up on us and always asks if we need something. Linder is a great company to deal with."

In addition to sales assistance, Linder provides a comprehensive range of services, such as troubleshooting GPS issues and providing prompt on-site help if necessary.



Discover more at TheLinderLink.com

'We have really good support with Linder'

... continued



An operator pushes material with a Komatsu D51PXi-24 iMC 2.0 dozer.

"We have really good support with Linder," emphasized Kelley. "If we ever have a problem, they're quick to address it, and they have the expertise to help us find a solution."

Training is another area where Linder has made a difference for Fontaine Construction. By offering training on the latest Komatsu iMC technology, Linder has helped the company's operators maximize the potential of the equipment.

"When we first got the iMC machines, a Linder representative came to the office and talked to us about the new functions on the 2.0 machines," said Williams. "We can call Linder if we ever have questions, and they'll help us out."

The strong relationship between Fontaine Construction and Linder has made it easier for the company to adapt and grow in an ever-changing industry. Fontaine Construction's success on projects like the Clemson University Lot 5 job and other developments can be attributed to their skilled team, advanced Komatsu equipment, and reliable support from Linder. Fontaine Construction's commitment to performing quality work, providing open communication, and embracing new technology has positioned them as a leader in the South Carolina construction industry. ■

(L-R) Linder sales representative Tyler Halbert offers support to Fontaine Construction's Jeb Kelley and Will Williams.



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OLKO pontoons provide unique solution that helps Blew Bayou Services LLC dredge Port St. Lucie canals



Daryl Nowling, Owner

After multiple hurricanes battered Florida's coasts, silt, sand and debris clogged many of the canals running between neighborhoods, limiting boat use for residents. Along the east coast of Florida, Blew Bayou Services LLC recently began dredging a canal system for the city of Port St. Lucie to restore access to the main channel. The project required a unique solution, but Blew Bayou Services is adept at working on job sites other companies shy away from.



(L-R) Owners Daryl and Deanna Nowling work closely with Linder sales representative Daniel Tafoya.

"Our company name is a combination of Blew for the wind and Bayou for the swamp," explained owner Daryl Nowling. "As the name implies, we like working in or near the water and prefer the amphibious projects other companies don't like to do."

Nowling continued, "On this job, the storm pushed sand through the culvert pipes and washed in on the banks, which keeps boats from reaching the docks. Our scope of work is dredging around the docks and down the canal to restore access. Because of several factors, we had to work with the city to find a solution that wouldn't disturb the residents but offered access to the canal and a place to dump and remove the dredged material."

The OLKO solution

After eight months of securing residential approval and funding, Blew Bayou Services began work in the fall of 2022. To dredge the canal, the company outfitted a Komatsu PC240LC-11 excavator with a long-reach, 50-foot boom and OLKO pontoons, which allow the excavator to work in the canal instead of along the banks. After dredging, material is loaded onto a barge and shipped down the canal where it is eventually removed via crane, and the process is repeated.

In a Port St. Lucie, Fla., canal, an operator places slurry into a pile with a Komatsu PC240LC-11 excavator outfitted with OLKO pontoons and a 50-foot boom.





An operator dredges a canal in Port St. Lucie, Fla., with a Komatsu PC240LC-11 excavator outfitted with OLKO pontoons and a 50-foot boom. "On this particular project, the OLKO pontoons provide better maneuverability in the water, propel the machine faster through the water, and provide more stability," said owner Daryl Nowling.

"The city couldn't use a traditional dredging contractor because the homes lining the canal don't leave enough room for equipment to access the canal or remove the slurry," noted Nowling. "Without the long-reach excavator and the OLKO pontoons, this project couldn't be completed. The residents and city have been impressed with the work that's been done so far."

Blew Bayou Services worked closely with Linder Industrial Machinery Company and sales representative Daniel Tafoya to purchase the pontoons and install them onto the excavator.

"We're pleased with the steel tracks and design of the pontoon, which holds up better than an aluminum frame," stated Nowling. "A lot of our work is in wetlands with stumps and rocks, which are very tough on the tracks. We've found that the reliability and efficiency of the OLKO pontoons outmatches anything we have tried in the past."

Nowling continued, "On this particular project, the OLKO pontoons provide better maneuverability in the water, propel the machine faster through the water, and provide more stability. The excavator has more counterweight



An operator uses a Komatsu PC240LC-11 excavator equipped with a 50-foot boom and OLKO pontoons to load a barge with dredged material.

than some of the lighter machines, so the extra weight from the steel frame on the pontoons is helpful. The drivetrain on the pontoons also helps tremendously. Overall, the OLKO pontoons allowed us to take on a project that otherwise would not have been possible."



Discover more at TheLinderLink.com

Scrap King and Alex's Metal Recycling provide premier scrap metal recycling services in Florida



Alex Gregory, Owner

Alex Gregory found his way to the scrap metal recycling industry through chance.

"I started out working for a friend's dad," recalled Gregory, who is now the owner of Scrap King and its sister company, Alex's Metal Recycling (AMR). "When he retired, I purchased some of his Komatsu equipment and grew the business from there. Today, we're one of Florida's premier scrap metal recyclers. We source materials straight from customers and process them in our processing yards before



An operator pushes scrap metal into a pile with a Komatsu WA500 wheel loader while another operator sorts it with an Atlas 350 MH material handler. "We added 10-yard buckets to the loaders, which allow our operators to effortlessly load a 20-ton pile of scrap," noted owner Alex Gregory.

Scrap King and AMR utilize an Atlas 350 MH material handler equipped with a Winkle 68-inch magnet. Owner Alex Gregory stated, "We use it for general dock cleanup, extracting material that is too close to the water, and shifting plates."



storing them at Port Manatee and eventually loading them into break bulk cargos for direct mill consumer purchases."

Both companies are based in Tampa, Fla.

"The Scrap King yard in Tampa is open to the public," noted Gregory. "We handle non-ferrous materials like copper, aluminum and household scrap. Our commercial facility at AMR handles large demolition iron, industrial scrap and other similar materials."

Efficient equipment

To help increase productivity, Scrap King and AMR utilize two Atlas material handlers, a 350 MH and a 400 MH, which were both purchased from Linder Industrial Machinery Company. The Atlas material handlers have extendable cabs that provide an optimal line of sight for the operator.

"At Port Manatee, the Atlas 350 has a Winkle 68-inch magnet on it with a 20-kilowatt gen set," explained Gregory. "We use it for general dock cleanup, extracting material that is too close to the water, and shifting plates. Eventually, as the ship is loaded with material and sits lower in the water, we can use the magnet to load straight into some of the hulls and hit the corners that the larger grapples are unable to fill in."

Gregory added, "The Atlas 400 loads material into trucks. When there's a boat in port, we'll use the machine to quickly load material into trucks at the staging area near the port. Once we're finished loading the boat, we'll put the 400 on a lowboy and send it back up to our Tampa yard where it will feed our shredding unit and process material around the facility."

According to Gregory, the Atlas material handlers outperform competitive brands.

"The Atlas has a faster swing time than the other brands we've run," noted Gregory. "We handle a lot of light material and the quicker we can move it, the more productive and profitable we can be. The Atlas is great for that application because the operator can see everything from the cab and efficiently load trucks or move around the yard."

Support from Linder

In addition to the material handlers, Scrap King and AMR utilize multiple Komatsu PC490LC



At the staging area near Port Manatee, Fla., an operator loads scrap metal into trucks with an Atlas 400 MH material handler. Owner Alex Gregory said, "We use Atlas material handlers to load and unload trucks, feed stationary shredders, and load and transload material when we're loading a boat."

excavators and Komatsu WA500 wheel loaders throughout the scrap metal recycling process.

"The WA500 is a beast of a machine," stated Gregory. "It has the power to push material into piles or load material into trucks. We added 10-yard buckets to the loaders, which allow our operators to effortlessly load a 20-ton pile of scrap."

Gregory continued, "We use PC490LC excavators to process material. Their power allows us to use the largest shear we would need effortlessly. Some are outfitted with stick shears, so you have the extra power to make larger grabs when handling rebar and similar material."

Gregory relies on Linder, especially sales representatives Julio Quiñonez and Randy Thomas, for service and support.

"Since partnering with Linder, we've enjoyed building personal relationships with everyone, from the sales reps to the product support reps who are in our office all the time to the techs that come on-site and work on our equipment," stated Gregory. "We know them all by name, and they pick up the phone when we call. Their PSR always calls us with maintenance reminders, which, from a management standpoint, makes maintaining our fleet easier. They're extremely accommodating. Linder, Atlas and Komatsu are integral parts of our business." ■



Scrap King and AMR owner Alex Gregory (center), meets with Linder sales representative Julio Quiñonez (left) and Linder Vice President of Material Handling and Forestry Kevin Belflower (right) at Port Manatee, Fla. "Since partnering with Linder, we've enjoyed building personal relationships with everyone," said Gregory.



(L-R) Randy Thomas, a Linder sales representative, provides support to Scrap King and AMR owner Alex Gregory.





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Industry Event

CONEXPO-CON/AGG 2023 attendees see the future of construction as manufacturers highlight electric equipment



Electric! That describes both the atmosphere and an abundance of new machines at CONEXPO-CON/AGG 2023, which was held March 14-18 in Las Vegas. With an eye toward sustainability, a host of manufacturers across multiple industries debuted electric and autonomous equipment designed to reduce fuel usage and carbon footprints.

A record crowd of more than 139,000 people attended North America's largest equipment show, which was co-located with the International Fluid Power Exposition (IFPE) at the Las Vegas Convention Center. More than



Manufacturer representatives were on hand to answer attendees' questions about equipment and technology. "CONEXPO gives us the opportunity to show attendees how Komatsu can be an end-to-end solutions provider with equipment and digital tools that can help increase efficiency and reduce costs," said Komatsu's Brandon Rakers, Senior Product Manager for Technology Business Solutions (pictured above, right).

At CONEXPO-CON/AGG 2023, Komatsu introduced innovative new electric products such as the 20-ton PC210LCE electric excavator that features Proterra's lithium-ion battery technology.



2,400 exhibitors from 36 countries were spread out across approximately 3 million square feet of exhibit space, which was about 10% larger than the previous show in 2020.

"The innovations in the construction industry unveiled this week will play a role in helping construction professionals drive meaningful and sustainable economic growth," said CONEXPO-CON/AGG Chair Phil Kelliher. "Live events in the construction industry are very important, because you can see, touch and experience the products. That value was reaffirmed this past week across the show floor."

Sustainable focus

Komatsu introduced innovative electric products such as the 20-ton PC210LCE electric excavator that features Proterra's lithium-ion battery technology. It has 451 kilowatt hours (kWh) of battery capacity that offer up to 8 hours of operating time, depending on workload conditions and application.

Suitable for a diverse range of workplaces, including indoors, the Komatsu PC30E electric mini excavator with a 35-kWH battery and a 17.4-kilowatt electric motor was on display. The PC30E is designed to be fast-charged, and it offers quiet and simple operation with zero emissions and no vibrations.

Attendees had the opportunity to see Komatsu's smallest electric excavator — the PC01E electric micro excavator. Developed jointly with Honda, it is powered by portable and swappable mobile batteries. The new machine is designed for confined spaces in landscaping, agriculture and construction.

Komatsu's vision for the swappable battery system is to scale up the technology for use in larger micro excavator models. The PC210LCE, PC30E and PC01E will be available in select markets later this year.

Komatsu also showcased three types of charging infrastructure, as well as its WA electric wheel loader prototype with a chassis based on the WA70. The wheel loader prototype utilizes an "intelligent electrification system" that features an electric traction motor, lift, tilt and steering cylinders, power electronics, a system control computer, a battery, and a battery management system.



In addition to electric equipment, Komatsu showcased its new PC900LC-11 excavator, which was paired with a Komatsu HM400-5 articulated truck.

In addition to electric equipment, Komatsu highlighted its HB365LC-3 hybrid excavator designed for high production and efficiency with low fuel consumption. Its hybrid system can provide an additional 70 horsepower on demand and allows operators to be up to 15% more productive in Power mode. The hybrid's environmentally friendly operation offers up to 20% more fuel efficiency and 20% less carbon dioxide emissions compared to the standard PC360LC-11.

Also on display was Komatsu's suite of Smart Construction solutions — Dashboard, Design, Drone, Field, Fleet, Office, Remote and Retrofit — designed to optimize the job site, as well as its new Smart Quarry solutions that help increase efficiency, improve production, and maintain a high level of performance, such as Smart Quarry Site and Smart Quarry Study.

Lastly, Komatsu featured its intelligent Machine Control (iMC) 2.0 dozers and excavators, along with the new PC900LC-11 excavator, and other construction and forestry machines.

"We had a lot of great conversations at the show and really wanted customers to take away that we are committed to working with them to create value together," said Komatsu's Brandon Rakers, Senior Product Manager for Technology Business Solutions. "CONEXPO gives us the opportunity to show attendees how Komatsu can be an end-to-end solutions provider with equipment and digital tools that can help increase efficiency and reduce costs."



(L-R) Morgan Corp.'s Shawn Romig and Mike Shepard visited the Komatsu booth at CONEXPO-CON/AGG 2023 to see the latest advancements in the construction industry.



(L-R) Boeing Doub and Don Doub represented Blue Heaven Properties LLC at CONEXPO-CON/AGG 2023.

CONEXPO-CON/AGG is scheduled to return to the Las Vegas Convention Center March 3-7, 2026. ■

Learn more about Komatsu at CONEXPO: https:// www.komatsu.com/events/conexpo/?utm_ source=Komatsu&utm_medium=PressRelease&utm_ campaign=ConExpo2023&utm_content=pc900



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Equipment Acquired

D.H. Griffin Companies adds new Komatsu PC900LC-11 excavator to its fleet, the first of its kind in North America

The D.H. Griffin Companies (DHG) — a group of nine privately owned and integrated companies that provides contract demolition, environmental and site development services — acquired a Komatsu PC900LC-11 excavator at CONEXPO-CON/AGG 2023, which was held this past March in Las Vegas. The cutting-edge excavator is the first of its kind in North America.

"I'm very excited to be bringing the PC900 to our equipment fleet," said DHG President David Griffin Jr. "We have a lot of large excavation projects on the horizon, and this is going to fit very well into the Komatsu family of equipment that we have. Its size, mobility and performance make it perfect for our needs, and we believe it will punch above its weight in terms of productivity."

DHG's infrastructure group primarily focuses on large-scale industrial site grading and utility projects that often require fast-track execution. The PC900LC-11 is expected to play a significant role in several upcoming ventures, including work on a \$2 billion chip plant in North Carolina. The project involves the development of essential infrastructure for the massive manufacturing facility. "We're excited about the production capabilities this machine offers in its weight size category," stated Griffin Jr. "It incorporates machine control technology that helps reduce manual work. Safety also played a role in our decision. It has cameras providing a complete view around the excavator to help keep everyone on the job site safer."

To add the PC900LC-11 to its fleet, DHG worked closely with Linder Industrial Machinery Company.

"We have over a 20-year relationship with Linder and Komatsu, and it really is a true partnership," stated Griffin Jr. "We count on them every day, and they've always come through for us."

As the first company in North America to utilize the PC900LC-11, DHG is eager to demonstrate the machine's capabilities in the field. The introduction of this groundbreaking equipment to the North American market underscores DHG's commitment to innovation and excellence. With a long history of successful collaboration between DHG, Komatsu and Linder, the future looks bright for all parties involved. ■



David Griffin Jr., President



Discover more at TheLinderLink.com

DHG, Komatsu and Linder employees gather in front of DHG's new Komatsu PC900LC-11 excavator at CONEXPO-CON/AGG 2023.



Construction equipment electrification: a glimpse into the future of the electric job site



Andrew Earing, Director of Tracked Products and Service, Komatsu

From electric vehicles (EVs) to mining equipment, the shift toward an electric-powered world to reduce carbon emissions — including construction equipment electrification — has already begun.

The Bipartisan Infrastructure Law, which President Joe Biden signed in November of 2021, includes an investment of up to \$7.5 billion for EV charging stations to help build out a national network of 500,000 EV chargers.

Additionally, the Bipartisan Infrastructure Law created a joint office between the Departments of Energy and Transportation to collaborate with local communities and provide technical assistance to support the creation and development of EV charging infrastructure.

Actions are being taken at the state level as well. The California Air Resources Board announced the Advanced Clean Cars II rule in August of 2022 that codified Governor Gavin Newsom's climate goals for the state. The rule established that all new cars and light trucks sold in California must be zero-emission vehicles by 2035.

"While electrification is at the forefront of everyone's mind due to automotive, our equipment on the construction site is often creating that infrastructure for electric automobiles," remarked Andrew Earing, Director of Tracked Products and Service at Komatsu.

An operator places a battery in an electric Komatsu machine. "While electrification is at the forefront of everyone's mind due to automotive, our equipment on the construction site is often creating that infrastructure for electric automobiles," remarked Andrew Earing, Director of Tracked Products and Service at Komatsu.

"There are challenges, and we have solutions to those challenges that we are exploring, but it's not going to be a one-size-fits-all solution for the various applications and the various sizes of the products that we provide."

The electric advantage

Komatsu recently showcased a PC210LCE electric excavator and a fully electric compact wheel loader prototype at Bauma 2022, an international trade fair that was held in Munich, Germany, as well as CONEXPO-CON/AGG 2023 in Las Vegas.

In a press release, Seiichi Fuchita, Chief Technology Officer and President of the Development Division at Komatsu, noted that for Komatsu to reach its target of reducing the CO2 emissions of products in use by 50% by 2030 (from 2010 levels), and "to achieve carbon neutrality by the end of 2050, we are looking for promising technologies from suppliers to accelerate our electric machine development."

"Industries including construction are trending in the direction of carbon neutrality," added Earing. "We want to be a leader. We are a technology leader when it comes to construction and mining equipment. We feel that electrification is one viable option in the construction space."

With the PC210LCE, Komatsu created an electric excavator from a popular size class.

"We wanted to introduce the 20-ton size class, because it opens us up to a lot of different operating applications and environments," explained Earing. "They're going to be used indoors and outdoors. It's a very diverse size class, and we wanted to get a much better understanding of all those applications and how they work with electrification."

In 2023, the PC210LCE will begin to see real work on the job site.

"In North America, we are going to conduct a pilot program where we will work with many of our customers to jointly test not only this machine, but the solutions for our customers' applications to better understand the benefits to them, and how we can help meet their needs," said Earing.

Meanwhile, a Komatsu electric wheel loader prototype, created in collaboration with Moog, is currently undergoing further tests to enhance and showcase the advantages of a fully electric



Komatsu's PC210LCE electric excavator provides immediate advantages over a combustion machine, such as better air quality and reduced noise. "It can operate in areas where it may not have been able to operate before, and for longer durations," said Andrew Earing, Director of Tracked Products and Service at Komatsu.

machine, such as increasing its operating cycle, adding assist functions, and creating a comfortable environment for the operator. The wheel loader also has sensors to add automation capabilities.

Compared to its combustion predecessors, electric machinery provides two immediate advantages: better air quality and noise reduction.

"With a zero-emissions machine, it allows the flexibility for that piece of equipment to operate indoors without harming the air quality around it," said Earing. "It can now operate in areas where it may not have been able to before and for longer durations. When you have a traditional emissions vehicle operating indoors, air quality has to be monitored, and sometimes the machine must be shut down for extended periods of time to let emissions dissipate."

Metropolitan and urban worksites are often accompanied with restrictions for when a contractor can work — in part to reduce noise pollution for the populace.

"That's why urban environments are another application for electric machines," Earing continued. "It's not only due to exhaust emissions, but also because of sound emissions. Going with an electrified machine, which has near zero sound emissions, allows for an extended operating window for our contractors and customers."

Bridging the gap to construction equipment electrification

While combustion engines will remain crucial to the development of electric infrastructure, there is currently hybrid machinery available to help the transition between 100% combustion and 100% construction equipment electrification.

Komatsu released its first hybrid excavator in 2008, and its most recent model, the HB365LC-3, entered the market in 2017.

"The HB365LC-3 offers increased fuel efficiency without sacrificing power. A topper on the cake is the added benefit of reduced emissions that lowers your carbon footprint and promotes sustainability," said Kurt Moncini, Senior Product Manager at Komatsu. "Based on the Environmental Protection Agency's CO2 formula, the hybrid potentially offers up to a 20% reduction in CO2 emissions compared to the standard PC360LC-11."

The force behind the excavator's fuel savings is its electric swing motor, which offers a glimpse into the capabilities of future electric excavators. The electric swing motor captures and regenerates energy as the upper structure slows down and converts it to electric energy.



Kurt Moncini, Senior Product Manager, Komatsu

Continued...

'Swing is fully electric'

... continued

Moncini explained, "It's using energy that would normally be wasted and makes it available to do work, contributing to increased efficiency and decreased diesel usage."

The energy captured during each swing braking cycle is stored in the HB365LC-3's ultracapacitor. Each time the excavator swings, the capacitor discharges electric power to the electric swing motor.

"A traditional battery requires time for the chemical process that releases electricity to occur," stated Moncini. "The heavy work nature of construction equipment places a much faster demand on power transfer. The ultracapacitor's ability to store and discharge energy quickly makes it ideal."

He added, "Since swing is fully electric, all available engine power can go to the boom, arm and bucket when bringing a loaded bucket out of the ground and over a truck, spoil pile or hopper. This creates a faster cycle time and a very quick, responsive swing."

In addition to powering the swing motor, the ultracapacitor sends electric energy to the engine via the motor-generator. This energy is used to accelerate the engine from an ultra-low idle speed of 700 revolutions per minute (rpm) and improve hydraulic response. It is this technology that can likely be applied to future electric excavator models to extend battery life and increase power.

"Komatsu has the technology to not only capture but also supply energy into an electric swing motor, which gives the HB365LC-3 up to an additional 70 horsepower that it can use for efficiency needs or even use for additional performance needs depending on the customer's application," said Earing.

Steps toward carbon neutrality

Complete construction equipment electrification and hybrids are at the forefront of construction's push toward carbon neutrality, but electrification is just a part of what the industry sees as a solution to meeting carbon goals.

"We're not just exploring electrification — we're also exploring other technologies that are out there such as hydrogen fuel cells and clean fuels," said Earing. "We're looking at all of these options because we're making sure that we have the right solution for the right job site and customer application."

Earing concluded, "In the future, I would say that the trends that we see in carbon neutral machines will depend on the machine application, plus size and weight. With different sizes, there are going to be different technologies that suit those machines."

Hybrid equipment, such as the Komatsu HB365LC-3 excavator, bridges the gap between combustion and electric machinery. "The HB365LC-3 offers increased fuel efficiency without sacrificing power. A topper on the cake is the added benefit of reduced emissions that lowers your carbon footprint and promotes sustainability," said Kurt Moncini, Senior Product







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Available Through Linder Industrial Machinery

Smart Construction solutions, iMC help Castle's Renewable Energy Division move earth faster with decreased costs



Chris Scheve, Vice President, Renewable Energy



Joel Brewton, Vice President of Asset Management & Centralized Services

The company known today simply as Castle was originally founded as Progressive Pipeline in 1999 by Mike Castle Sr. His business focused on providing service to the oil and gas industry with jobs done with integrity, on time and on budget. That strategy proved highly successful, and within three years, the company landed its first multimillion-dollar contract, which led to the creation of more divisions within the firm.

In addition to Pipeline, Castle's divisions now include an Integrity Group, a Facility Group, Directional Drilling, Environmental Reclamation, and its latest undertaking: Renewable Energy, which focuses on sitework and other services for wind and solar projects.

"Castle saw the transition to renewables and wanted to be a part of that," said Vice President Chris Scheve, who joined the company about a year ago and has helped spearhead the formation and expansion of the Renewable Energy Division. "With our skilled workforce and our equipment, it's a nice fit to move over and do the renewables effort."

Joel Brewton, Vice President of Asset Management & Centralized Services, added, "Outstanding service is our hallmark, and that's really built around doing things safely and efficiently. We believe that goes hand in hand with delivering solid production. We are always seeking ways to improve our practices. Technology — such as the Komatsu Smart Construction machinery and solutions we now use — is playing an increasingly bigger role for us because we see the benefits it is delivering in terms of cost and time savings."

Brewton and Scheve emphasized that the two large solar projects that Castle's Renewable Energy Division recently took on in Wisconsin are prime examples. About a year ago, Castle began site preparation, including putting the sites to grade, building basins, and handling erosion control. Between the two, Castle team members moved about 700,000 yards of dirt.

"Our Onion River project, which is the bigger of the two, involved about 18 different sites, so it was pretty spread out," explained Superintendent Rocky Hartwick. "We started in July and had the mass grading done by the end of the year. Our Crawfish River project began earlier, and the grading was basically done within a relatively short timeframe."

Hartwick continued, "These projects were our first ones using Komatsu's intelligent machines, and we were very impressed with the ability to use the integrated GPS from grass to grade. Using traditional methods, we cut approximately two acres to grade each day. Komatsu's intelligent machines allowed us to





Komatsu's Jason Anetsberger (left) uploads data from the Smart Construction Drone flights to Smart Construction Dashboard. Castle's Joel Brewton (right) uses Komatsu's Smart Construction Dashboard in his office in Meridian, Miss., to check the progress of Castle's job sites in Wisconsin.



An operator cuts grade with a Komatsu D71PXi-24 intelligent Machine Control (iMC) dozer on Castle's Onion River project near Adell, Wis. "We were very impressed with the ability to use the integrated GPS from grass to grade," said Superintendent Rocky Hartwick. "The accuracy and efficiency are spot on."

do 10 to 12 acres without the need for a grade checker because the machines always know where they are in relation to final grade. The accuracy and efficiency are spot on."

Using Smart Construction solutions

Throughout the projects, Castle has used Komatsu intelligent Machine Control (iMC) dozers and excavators, as well as Smart Construction Drone, Smart Construction Dashboard and Smart Construction Remote. Castle also purchased its own drone, and staff members received training from Komatsu, so they could conduct flights independently.

"Komatsu corporate has been a big part of helping us learn the intelligent system as well as incorporating drone flights to verify that what the machines are seeing is exactly what we're seeing," Scheve explained. "We've made drone flights a standard, so before we ever move a speck of dirt, we do an initial flight of the sites to make sure we have accurate models to work from. CAD (computer-aided design) files are developed from those, and those models are uploaded to the intelligent machines. We do subsequent flights about a month apart to check progress and verify how much dirt was moved, and that gets uploaded to Dashboard. That information helps us put together as-built models we can show to the customer and keep accurate records."

Brewton said that level of accuracy has been impressive to Castle and its customers.

"We are a very schedule-driven contractor," Brewton stated. "When we make a schedule, we want to stay on it. Drone flights let you verify a site within a matter of hours rather than days with the old methods of walking the site and staking it. Instead of taking maybe 20 shots with a rover and a stick within a 10-foot section, the drone is shooting thousands of points in that same area, so it's delivering a more accurate picture. Billing is another advantage we see. We don't want to overcharge our customer or be underpaid. With the drone, you can verify exact quantities, and you get paid for exactly the work you've done, and that's what we want."

Additional adoption

Increased productivity and efficiency with Komatsu iMC machines and Smart Construction solutions on the Renewable Energy Division's Wisconsin projects have encouraged the Castle team to expand their usage of technology.

"Recent legislation is only going to put additional significant dollars into renewables, and we have customers asking us for commitments for several years out; making the investment makes sense," said Scheve. "We see the applications for the machines and solutions in our other divisions too, such as Pipeline, so we are looking into how to adopt it for those going forward."





Improved Design

BOMAG's CR 820 T paver was born for the road with features that make it more productive and economical

Can a highway-class paver be productive, efficient and comfortable to operate at the same time? BOMAG's CR 820 T proves it can with a new operator's platform, new controls and improved visibility, compared to its predecessor.

An 8-foot-class paver, the CR 820 T boasts Frame Raise and three-point suspension to float over subbase irregularities and maintain preset screed slope and grade, delivering higher mat smoothness over highway-class pavers with a fixed rear suspension. Like other CR series pavers, its Drive System movements are isolated from the rest of the paver, so the screed remains parallel to the paving surface, eliminating bumps in the road. The end result is a smoother surface with better profilograph readings.

Frame Raise IE: three-point suspension is an independent up/down rear drive movement that maximizes paver tractive effort by delivering more uniform wheel or track loading. With the three-point suspension, you won't get stuck in a rut trying to push a fully loaded asphalt truck.

BOMAG's Frame Raise System lets operators raise and lower the entire rear of the frame — instead of just the spreading augers — to prevent component damage during transport or adjust the spreading auger height for the best delivery of the material at the screed. With the augers being fixed to the frame, the material is always delivered to the spreading auger at the same height. This prevents unintentional segregation of the mix, which can happen on competitive machines with a fixed frame and adjustable augers.

Details, details

The 36,400-pound CR 820 T has an improved hopper design that delivers the material from the truck directly onto the slat conveyors, unlike its competitors that have a dead space prior to reaching the slat conveyors and require a center section that raises the dead material. The CR 820 T paves up to 283 feet per minute. A Stretch® 16 hydraulically extendible screed allows for infinitely variable paving widths from





BOMAG's CR 820 T paves up to 283 feet per minute. An improved hopper design delivers material from the truck directly onto the slat conveyors of the CR 820 T for greater efficiency, compared to the competition.

8 to 16 feet. Quick-connecting extension auger and screed extension kits deliver a maximum paving width of 20 feet.

The paver is driven by a 160-horsepower engine that provides ample reserve and efficiency for full-width paving, while having enough power in reserve to operate the screed's generator for screed heating and lights for nighttime paving.

Pivoting seat for greater visibility

The operator's platform features BOMAG's SIDEVIEW that gives operators the ability to pivot the seat out up to 45 degrees for better visibility of the side of the paver and down the road ahead. The engine hood and platform were designed to allow the operator a perfect line of sight into the hopper. The paver has an adjustable seat and operator console, as well as a smart console switch that allows the operator to switch sides with the push of a button, moving all preset function to the opposite console. Cup holders and cell phone chargers contribute to increased operator comfort throughout their shift.

Less maintenance downtime

BOMAG's exclusive SMARTRAC virtually eliminates manual track tensioning on the rubber-track pavers. It automatically

maintains proper track tensioning, without unwanted over-tensioning. Preventing track disengagement is accomplished by stopping travel prior to the track coming off. The push of a button lets the operator correct the disengagement situation. This gives owners thousands of hours of trouble-free operation — guaranteed up to 3,000 hours — and significantly lowers overall operating costs.

To further reduce costs, BOMAG designed the CR pavers for reduced maintenance downtime with full accessibility to all major components. A one-piece, power-tilt hood and swing-away fuel tank design (track model) make servicing the engine quicker and more efficient. Maintenance and emergency uptime kits with common spare parts are available.

It takes half the time to replace feed wear items compared to other brands, according to BOMAG. The frame is slotted for the head shaft to drop down as a subassembly and these components can be swapped from left hand to right hand for double the life.

BOMAG backs the paver with its Super Paver Wear Guarantee that covers rubber tracks and slat drive chains for three years or 3,000 hours; conveyor floor liners for five years or 5,000 hours; and slat bars for 10 years or 10,000 hours.



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Available Through Linder Industrial Machinery

Asheville, N.C., branch provides service center, training facility and proving grounds in one location

Linder Industrial Machinery Company's scenic Asheville, N.C., branch overlooks the French Broad River and is located within 20 minutes of the downtown area. The 15-acre branch includes a sales, parts and service center; a state-of-the-art training facility; and proving grounds. Service Manager Tony Nussbaum joined Linder five years ago and has witnessed the transformation firsthand.

"When I came on board, we were just a small support center in a strip mall," noted Nussbaum. "Since then, we've purchased our current facility and grown into the location. We're now able to fully service all of our customers, provide training for our staff and customers, as well as test out equipment and provide demonstrations at the proving ground."

Over the last 18 months, the branch has doubled its staff, which now includes six service technicians to better support customers throughout the region.

"Since we've opened our shop, we've focused on servicing our customers' entire fleets, not just the brands Linder represents," stated Nussbaum. "That's simplified the service process for many of our customers. It also shows our dedication to being their business partner more than just the company that sells them Komatsu equipment."

As the branch has expanded its services, the number of customers seeking support has grown. According to Nussbaum, customers especially appreciate the proving grounds, because they can test equipment and see the positive impact a machine could have on their operation.

"Our proving grounds and classroom training facility work hand in hand to develop our customers' knowledge of equipment and the technological solutions we offer through Smart Construction," said Nussbaum. "You can sit down in the classroom to learn about the equipment and Smart Construction solutions, then head out to the proving grounds to see it in action. Until you get here to see it for yourself, you don't really understand how impactful this facility is and how beautiful the location is. For any of our current or potential customers interested in building a relationship or touring the facility, our doors are open." ■



Tony Nussbaum, Service Manager



Discover more at TheLinderLink.com



Linder employees teach a class inside the new training facility.



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Drone Services

Linder now offers Komatsu's Smart Construction Drone to help customers more effectively manage production

Customers can use Komatsu's Smart Construction solutions to harness technology for accurate data collection, comprehensive reporting, and remote capabilities. By implementing Smart Construction Drone, Linder Industrial Machinery Company aims to help customers digitally track their projects from beginning to end.

"At the beginning of a project, drones can be used to assess the topography and create 3D models," explained Joel Cramblett, General Manager of the Technology Solutions Group at Linder. "Throughout the life of the job, Linder's TSEs, or technology solutions experts, can fly the site to accurately track material movement, ensuring accurate payment and increased efficiency. Our goal is to have all of our TSEs pass the Part 107 UAV pilot's license test." Cramblett added, "If you are interested in adding Smart Construction Drone, just contact us at Linder, and we can dispatch someone to come explain the solution to you and fly your site. We can provide 3D modeling solutions as well."

The size of a customer's operation is a significant factor in determining whether to utilize Linder's drone services each time or have a Linder TSE train an employee to be an in-house drone pilot.

"The need for a designated drone pilot depends on workload and cost," explained Field Operations Manager Vernon Williams. "Sometimes, it's more cost-effective to use Linder's services on a per-flight or

Continued . . .



Joel Cramblett, General Manager of the Technology Solutions Group, Linder



Vernon Williams, Field Operations Manager, Linder



Discover more at TheLinderLink.com



Linder performs drone services, trains customers

... continued

per-survey basis. Ideal customers for having Linder perform the drone services are small to midsize contractors or those who need drone services infrequently. As these customers grow,



Linder Technology Solutions Expert (TSE) Noah Pawlowski operates a drone.

Linder can help them integrate technology into their operations and train their staff as needed, so they can utilize the technology themselves."

When integrated with Komatsu's suite of Smart Construction solutions, Drone will help provide a more complete picture of a job from first cut to final grade.

"The drone serves as a tool to connect field operations with office staff, bridging a historical disconnect," said Williams. "Smart Construction applications like Field and Drone integrate into other solutions like Office or Dashboard, making information accessible in one central location for office staff."

Looking beyond sitework, the highly sensitive cameras and data collection tools on the drone allow other construction-related industries to benefit from the drone's capabilities.

"Drone surveys are also useful for quarry applications, such as flying over aggregate piles to determine material volume," added Williams. "This is particularly useful for stockpile calculations. This information helps to verify the accuracy of scales and production figures, often leading to greater profitability and efficiency."

> VIDEO

(L-R) Linder's Technology Solutions Group includes: TSE Noah Pawlowski, TSE Ryan Dean, TSE Stephen Fuller, TSE Ryan Waite, TSE Evan Porter, Field Operations Manager Vernon Williams, TSE Jay Richardson, TSE Andrew Stickl, Technology Solutions Trainer Mike Ohler, and General Manager Joel Cramblett.



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Tech Talk

New replacement monitors, GNSS receivers provide upgrades to your existing intelligent Machine Control devices

Komatsu's intelligent Machine Control (iMC) equipment has always been on the cutting edge of technology that automates grading and excavating. To ensure that's the case on all models of iMC equipment, Komatsu has now introduced remanufactured, upgraded machine control monitors and GNSS (global navigation satellite system) receivers.

"Komatsu always looks to upgrade its equipment and components in order to increase our customers' efficiency and production, and we updated these devices to the latest technology as well," said Goran Zeravica, Senior Product Manager, Reman. "There have been slight changes to the hardware, but the biggest upgrades came in software that makes them even more effective than the previous models."

The new devices are replacements for the original monitors in iMC dozers and excavators and their GPS/GNSS receivers. All are now Komatsu Genuine Reman with proprietary technology, including the PH700 iMC excavator monitor (replacing the older X31) that shows

operators where cuts and fills are, as well as other job site features. Users can upgrade their GX-60 to a new GX-55 in iMC dozers. As with the PH700, the GX-55 shows cuts and fills and other job site features.

Previous MC-i3 GNSS receivers have been replaced with new MC-i4 models, which provide GPS/GNSS positioning for the machine, so it knows where it is on the job site and in relation to final plan elevations.

Available through distributors, My Komatsu

"As with cell phones, which you upgrade periodically to have the latest technology, we encourage you to do the same with your iMC devices," said Arash Moghaddamzadeh, Product Manager, Reman Products and Forestry Aftermarket. "These new devices are available through your Komatsu distributor by contacting your product support representative, technology solutions expert, or through the parts department. Additionally, they are available as Reman by using your My Komatsu account."



Goran Zeravica, Senior Product Manager, Reman, Komatsu





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Service Manager Kevin Turner's background in the military helps him excel at Linder

Kevin Turner spent 26 years as a maintenance engineer for the military, gaining invaluable skills as a mechanic and leader. After retiring and taking a year to assess what was next in life, Turner applied for the service manager position at Linder Industrial Machinery Company's Plant City, Fla., branch and has been there since the fall of 2022.

"From the personnel to the customers, it's been wonderful," commented Turner. "The position was a good fit for me because I didn't want to deviate from my previous role. My leadership skills and technical knowledge helped me excel."

Early on, Turner wanted to build relationships with customers and employees.

"I've met with several of our customers to understand what their expectations are when a machine is in the shop," explained Turner. "Our customers can't afford downtime, and our goal is to get their equipment in and out of the shop as quick as possible and make sure the equipment is fixed correctly. I want to put my best foot forward and keep the customers at the forefront of my mind."

Turner also sets high standards for himself and his team.

"My goal for this position is to make this service section the best within the company," Turner stated matter-of-factly. "I want anybody within the organization to be able to look at our work and see how it's been successful and benefitted the customer. I also take pride in making sure that everyone on my team is taken care of and has the tools and resources they need to do their job properly. Having a successful team is all about relationships, so I want to make sure that not only are our customers taken care of but our team at Linder feels supported."



Kevin Turner, Service Manager, Linder



Discover more at TheLinderLink.com

Equipment Manager Mary Jo Warren provides solution-oriented support at Raleigh branch

For about five years, Eastern North Carolina Regional Equipment Manager Mary Jo Warren has provided solution-oriented support at Linder Industrial Machinery Company's Raleigh, N.C., branch. As one of several equipment managers at Linder, Warren says the title does not fully encompass the work she does on a day-to-day basis.

"You would think as an equipment manager my focus would be managing inventory, which I do take care of some inventory, but I would describe myself as more of a sales coordinator," Warren explained. "Once a sales representative gets a signed purchase order from a customer, they hand it over to me, and I put everything together. However they want the piece of equipment to look, it's my job to get it to look that way. At the end of the deal, I get it delivered to the customer, and then I do all the paperwork afterwards as far as getting it to the corporate office, so they can invoice it out." Warren works closely with the service department as well. She is frequently using her problem-solving skills, so equipment deliveries go smoothly.

"Sometimes we run into issues where we don't have a specific part in stock or something isn't working out quite the way we envisioned," noted Warren. "That's when I go into problem-solving mode. I look at the situation from the customer's perspective to come up with solutions that are realistic and will keep everything moving forward. I'm a very process-oriented person. Linder was a good fit for me because of that."

Outside of work, Warren enjoys spending time with her two kids, who are both in high school.

"They keep me busy, but it's probably going to get a little bit quieter when one goes off to college because she's into sports, so I won't have that to do anymore; I'm going to have to find some hobbies," joked Warren. ■



Mary Jo Warren, Eastern North Carolina Regional Equipment Manager, Linder



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Ultralok® Tooth System

Available Through Linder Industrial Machinery

Randy Fusselman reflects on his role as a technical trainer

Randy Fusselman became Linder Industrial Machinery Company's technical trainer in Florida in 2016 and retired this year. His career wandered through multiple industries and companies, where he made sure to approach every job with one thing in mind: passion. Fusselman also made it a point to make his classes enjoyable for everybody who attended.

"I always started a class by letting everyone know our goal was to have fun, and hopefully, they would learn something new by the end of the week," commented Fusselman. "I think the classes were effective because I grew up a farm boy and kept the information down to earth. That meant avoiding overly technical explanations and keeping the class engaged. What really fulfilled me was bringing our technicians to a new level and being a positive impact on their lives."

Outside of training Linder technicians, Fusselman also hosted training seminars for customers. "I've enjoyed customer training because they are sponges," said Fusselman. "Our customers' technicians don't always get the proper amount of attention on the training side, so Linder's approach of providing training classes for them has been very rewarding. I actually got some nice emails from a couple of the classes."

Before retiring, Fusselman helped train the next generation of technical trainers, who he believes are ready to hit the ground running. He appreciates the support he's received from managers, team members and everyone he has worked with throughout his career. Now that he's retired, he plans to focus on his Etsy woodworking shop.

"I've had the Etsy shop for about five years, and I make calendar holders," explained Fusselman. "I'm going to push that to the next level. The coolest thing is receiving an order and seeing where it's going because I sell worldwide. I really enjoy it, so I'm going to stay busy."



Randy Fusselman, Technical Trainer, Linder



Discover more at TheLinderLink.com

Study: Repealing prevailing wage laws has negative impact

Between 2015 and 2018, six states — Indiana, West Virginia, Kentucky, Arkansas, Wisconsin, and Michigan — repealed their prevailing wage laws, which are meant to protect local construction standards in the competitive low-bid process.

Repeals of prevailing wage laws have negative consequences for construction workers, according to data from a study released by the Illinois Economic Policy Institute and the Project for Middle Class Renewal at the University of Illinois Urbana-Champaign. The study showed that wages, benefits and productivity fall behind; on-the-job fatalities increase; reliance on government assistance programs worsens; and fewer projects are completed without saving taxpayer money.

"At a time when the United States is making historic investments in the nation's infrastructure and contractors are having difficulty finding qualified workers, prevailing wage laws can attract, develop and retain experienced construction workers," wrote the report's authors — Frank Manzo IV, MPP; Robert Bruno, PhD; and Larissa Petrucci, PhD. "To ensure that American infrastructure is built locally by skilled construction workers, state lawmakers should consider strengthening or expanding their prevailing wage laws, implementing new prevailing wage laws, and reversing recent repeals of prevailing wage laws."

A NEW WAY TO TACKLE

WINDBLOWN WASTE COLLECTION



Great solutions often stem from difficult problems. This was certainly the case when Terramac developed its rubber tracked debris collection system. Windblown waste is a common issue among landfills and is easily worsened by severe weather. Collection of this lightweight debris has traditionally been done by deploying crews on foot. While once sufficient, this method was never the most cost-effective or efficient. And when labor shortages began impacting the industry, the problems with windblown waste collection were exacerbated by the added challenge of finding adequate personnel.

EQUIPMENT SOLUTION

Quick to react, Terramac, a U.S.-based crawler carrier manufacturer, produced a welcome solution proven to dominate windblown waste collection by reducing manpower and labor requirements while saving time and money.

Terramac's debris collection system features a powerful 74-HP vacuum engine that provides 12,000 CFM of airflow for suctioning the windblown waste from fence lines and highways. Debris travels up the boom before being pushed through a 28" impeller fan, which mulches the trash as it enters the 14-cubic-yard hopper. The machine is operated by a single person who can control the hoist system, boom, and winch from within the cab for added operator safety.

"It's extremely exciting to see manufacturers like Terramac producing innovative equipment that simplifies work and solves an industrywide problem," says John Coughlin, President & CEO of Linder Industrial Machinery Company. "This one machine takes the place of a three-man crew, making it an asset for our landfill customers working to keep up with lightweight waste collection."

Terramac's signature feature, low ground pressure, is ideal for this application, allowing operators to maneuver effortlessly along fence lines, no matter how narrow the path or challenging the terrain. Fully loaded, the unit exerts 5.3-PSI.

MULTI-PURPOSE USE

The debris collection system attaches to Terramac's crawler carrier with a hooklift-mount configuration. This method provides advanced versatility with the ability to quickly change various bed styles and support equipment to increase overall carrier utilization. Therefore, the carrier can be repurposed with a dump bed for hauling daily cover, a hydroseeding unit for applying alternative daily cover and so much more. "What's great about this unit is that its versatility is endless," explains Matt Slater, Terramac VP of Business Development. "Today a landfill may need it for debris collection, but when priorities shift, they can continue to utilize the carrier for other tasks."

The carrier's hooklift, which supports the debris collection system, is also interchangeable with most truck-mounted attachments already being used on landfills. Thus, when ground conditions are poor due to leachate or weather, the carrier can pick up where trucks leave off to keep projects on schedule.

Terramac carriers are assembled in the U.S. and supported by an expansive dealer network with more than 200 branch locations. Parts, service, and operator training are readily accessible, ensuring landfill managers have safe and reliable equipment as well as the know-how for maximizing their utilization. For more information on Terramac's landfill solutions, visit www.terramac.com/landfill-management.







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After 49 years at Linder, BJ Chastain retires and plans to embrace gardening

For nearly half a century, Barbara J. "BJ" Chastain worked for Linder Industrial Machinery Company (originally H.F. Mason Equipment Company, which merged with Linder in 1989). After starting out on the parts counter, she has spent the latter part of her career as an administrative assistant at the company's Plant City, Fla., office.

"I take care of the credits that come through from our manufacturers, approve invoices, help out with purchasing parts through our company card and reconciling the purchases, and am occasionally the travel coordinator for our employees on the road," explained Chastain. "The people have made it for me. All in all, everybody in the office is close, and it's been good. I've watched people join the company, have kids, and then their kids start working here as well." Chastain notes that some of her favorite memories at the company have been interacting with the Komatsu and Sumitomo employees who visit the office from Japan, which is a unique opportunity.

"I've always enjoyed meeting the Japanese employees that come in and learning about their culture and their work ethic," said Chastain.

At work, Chastain's office is decorated with a wide range of knick-knacks related to gardening. After retiring, Chastain looks forward to expanding the garden at her house.

"Growing up, my family always had a garden," noted Chastain. "My nephew recently built me several planters that are about eight feet long and three feet deep, and they're almost at my height, so I don't have to bend over. That makes gardening a whole lot easier. I can just stand there and do what I want to do." ■



Barbara J. "BJ" Chastain, Administrative Assistant, Linder



Discover more at TheLinderLink.com

Brenda Allen remarks on career and life after retirement

For the last 37 years, Brenda Allen has worked for Linder Industrial Machinery Company (previously Mitchell Distributing Company) in North Carolina. A majority of her career was spent in the accounting department at Linder's Concord branch, where she built strong relationships with her co-workers.

"I love the people here," Allen said. "Linder is a good company to work for, but I think it's the people who make the business. You have people here who work together. It's home to me. I've made friends that I will keep for the rest of my life."

Allen added, "I would like to thank all the people I've worked under throughout my time at Linder; they have all been wonderful. I was lucky enough to know John Coughlin before he became the president of the company. I've loved watching some of the employees grow from young kids just starting out to now having their own families and balancing work with teenagers. It's almost like an extended family." Allen has watched the company grow into a dominant equipment distributor in the Carolinas.

"Years ago, it would be really slow during wintertime," Allen noted. "The last couple years, we haven't slowed down much. We seem to keep growing."

Allen noted that Linder's new facility is a testament to that.

"It's been really nice — good job, good place, good people," she said. "I'm going to miss it."

After retiring, Allen plans to spend more time with her daughter and grandchild.

"I have an 8-year-old grandson, and my daughter's a single parent, so I'll get to help raise him more," Allen stated excitedly. "He keeps us young. Hopefully, I will find something that interests me, even if it's working part time or volunteering somewhere at a hospital. I want to continue to get out and be around people."



Brenda Allen, Accounts Payable, Linder



Discover more at TheLinderLink.com

New location in Myrtle Beach

Linder Industrial Machinery Company now has four locations in South Carolina, the newest in Myrtle Beach. The parts branch allows our technicians and product support representatives to support customers in the six counties in the Myrtle Beach market.

"Linder has long-standing customer relationships in the market," said Rob Leavel, General Manager of Operations for the Carolinas. "This will allow us to meet their needs better and meet the growing demand of the entire customer base."



Mauldin is Linder's new paving partner

Linder Industrial Machinery Company's road-building line has gotten even better. We are now the dealer for Mauldin Paving Products in areas of Florida and Southeast Georgia. Mauldin Paving Products has manufactured quality asphalt paving equipment since 1948.

"We are excited about our partnership with Mauldin," said John Coughlin, President and CEO of Linder. "This completes the entire line of the highest quality paving products from commercial to highway class. Our offering of equipment allows customers to perform all phases of their projects from start to finish."

Currently celebrating its 29th year of operation under the family-owned Calder



(L-R) John Coughlin, Glen Calder, Zach Lincolnhol, and John Nie

Brothers Corporation, Mauldin's line of equipment includes a full offering of asphalt pavers, oil distributors, tack tanks, motor graders, maintainers, rollers, and water tanks. ■



Growing in Greensboro

The hybrid Linder Industrial Machinery Company and Linder Turf & Tractor facility is taking shape in Greensboro, N.C.

"We're excited to see walls up and the showroom and offices taking shape," said Jason Jarrett, Branch Manager of Linder Turf & Tractor — Burlington.

The new 32-square-foot facility near I-40 is a co-branded Komatsu and Kubota branch that is scheduled to open this summer. ■





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Industry Insight

Heat increases rates of traumatic injuries for construction workers, according to Oregon State University study

Rates of traumatic injury among workers in construction and agriculture are significantly higher during periods of high heat versus more moderate weather, according to an Oregon State University (OSU) study. Researchers said the results highlight the importance of providing robust safety protections for outdoor workers, especially in extreme heat events.

"The big take-home message I want people to get from this is that, if the temperature is high and you have workers out there, they're more likely to be injured, whether it's due to dehydration, reduction in mental capacity or exhaustion," said Richie Evoy, lead author on the paper and a recent doctoral graduate from OSU's College of Public Health and Human Sciences.

The study looked at Oregon workers' compensation data from 2009-2018, with researchers studying nearly 92,000 claims involving temporary or permanent disability or death. They focused on injuries that occurred in the months of April through October because the average heat index was above 55 degrees during that period.

Researchers found that construction and agriculture workers were significantly more

likely to suffer a traumatic injury on days when the heat index was above 75 degrees, compared to a 65-degree or less baseline. The effect worsened when the heat index was above 90 degrees, with an increased risk of 19% to 29% over baseline as the index ranged from 90 to 119 degrees.

"These results support the need for occupational safety practitioners to include protections for workers during extreme heat," said Laurel Kincl, co-author of the study and an associate professor in OSU's College of Public Health and Human Sciences. "While our study is based in Oregon, this is true of other states and regions since these conditions will likely become more frequent with climate change."

The other co-authors of the OSU study were Perry Hystad and Harold Bae, who are both in the College of Public Health and Human Sciences. The researchers also studied the impact of wildfire smoke on injury rates.

To learn more about the study, read the article by Molly Rosbach on OSU's website at https://today. oregonstate.edu/news/osu-study-finds-higherrates-traumatic-injuries-outdoor-workers-duringhotter-weather.

> An Oregon State University study found traumatic injury rates climbed as temperatures soared. Researchers said the results highlight the importance of providing robust safety protections for outdoor workers, especially in extreme heat events.

USED EQUIPMENT



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KOMATSU \$192,500 2018 D61PXI-24 Hours: 5,110 E00061362



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\$139,000

Hours: 4,023 E00060239



KOMATSU \$225,500 2021 PC360LC-11 Hours: 3,553 E00062708



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KOMATSU \$108,000 2017 WA320-8 Hours: 7,311 E00061019



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2011 D7E CATERPILLAR Hours: 9,746 E00062224 \$109,000



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2016 D61PXI-24 Hours: 4,443 E00062905

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2021 D51PX-24

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2017 PC210LCI-10 Hours: 4,397 E00062420 \$159,500







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