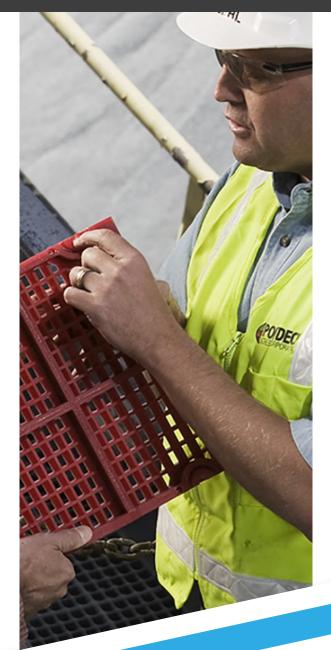
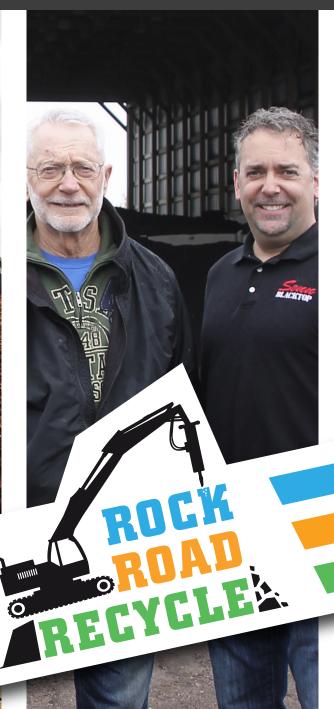
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CONSIDERATIONS FOR EFFICIENT WET SCREENING

BRITTON INDUSTRIES' IMPROVED STRATEGY

SENN BLACKTOP: SOLVING THE PUZZLE OF RAS



ROCK

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Considerations for efficient wet screening

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- Portable plants
- Wash plants

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plant

6

On the front

Fisher Phillips

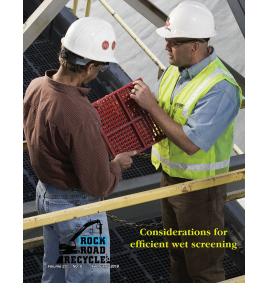
lines with

• Scales & weighing

H&K finds answer

with Emerald wash

by Moira Bradu



Considerations for efficient wet screening

by Bill and Mary Weaver

On the cover:

Using high open area synthetic media allows you to flatten your screen deck for better distribution and washing. The modular system can also give you greater control over your gradations for increased product yield.

PG4

Keestrack H6e cone crusher: High-end mobile secondary crushing



Prairie Dawg

by Tim Holmberg,

DEMI Equipment

Practical

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Associations and affiliations:











NATIONAL ASPHALT **PAVEMENT ASSOCIATION**





NATIONAL STONE, SAND & GRAVEL ASSOCIATION

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H&H Stone LLC: profiting through innovation





16

Superior's portable plants: efficiency on the move

The Guardian Screen Plant gives you accurate and efficient fine screening capabilities in a portable configuration. Superior's new and patent pending technology, Level Assist, automatically levels the plant once the machinery is raised to a desired height. The screening plant's centering hopper is designed to fold into position during operation, allowing material to spread uniformly across the full screen deck, which maximizes screening potential through proper feed.

The chassis is equipped with many standard features including hydraulic leveling legs, fixed structural cribbing legs, tool box, diamond plate walkway with drainage holes, access ladders and cribbing storage.

Standard conveyor features include Chevron® Wing and an Exterra® Primary Belt Cleaner pulley on the 60 inch horizontal fines conveyor and the plant includes two 24 inch reversing and roll-out cross-conveyors.

Another innovation to save time during set up or dismantling is the tilting motor base, which rotates to a travel position allowing owners and operators to transport the plant without having to remove the motor.

The Aggredry Wash Plant allows you to wash and dry fine material in a singular portable configuration. Standard features include a 5 x 10 dewatering screen. Also included is the 6 x 20 foot Guardian $\$ Horizontal Screen.

The Aggredry Washer produces instantly salable material with a moisture content as low as 8 percent. The plant chassis is equipped with an air brake system, toolbox, fixed structural cribbing legs, king pin supports, and diamond plate walkway with drainage holes. Also standard are access ladders and safety guarding (customer is responsible to have guarding inspected to meet local codes).

Among the optional features are Level Assist — Superior's new and patent pending technology that automatically levels the plant once the machinery is raised to a desired height.

For more information and to see the full list of features for Superior's portable plants visit <u>www.superior-ind.</u> <u>com/portable-plants/</u>.



The Guardian Screen Plant gives you accurate and efficient fine screening capabilities in a portable configuration.



RockRoadRecycle.com

PG 4



Typically, polyurethane is used for wet screening. However, rubber is a lower durometer and can work well with heavy impact applications. This can be typical in dredge situations when separating virgin rock from sand.

Photos courtesy of Polydeck

ften the most overlooked part of an aggregate operation is the screening circuit. However, getting this part of the operation done correctly can help avoid issues elsewhere in the plant, in addition to improving the quality of your aggregate, and increasing production capacity.

This is especially true in a wet screening operation, where you must ask yourself whether your water is working for you or against you. Significant amounts of equipment and manpower are dedicated to washing aggregate. Adding water to the screening process can double tonnage capacity compared to a similar dry application. Every ton counts, and every gallon of water

used efficiently can help. Bob Kurz of Polydeck Screen Corporation offered some suggestions to consider regarding wet screening to a large gathering at the recent Aggregate Producers of Wisconsin Annual Convention. high enough pressure to penetrate all the material. Adequate head box water increases both the efficiency (up to 50 percent) and the capacity

The first area to look at is the feed. The screening process really starts before any material even hits the deck. A proper headbox slurry will have dramatic impact on the screening performance. According to Polydeck, a good rule of thumb for overall water volume to the screen is 5 GPM for every TPH. One third of that volume should be allocated to your head box/prewash.

The important thing is having enough clean water hitting the material at a

Important Take-aways from presentation:

- 5 GPM Water per STPH Feed to the Screen
 - 40 PSI Water Pressure at the Screen
 - 1/3 of Water Going to the Head Box
- Spray Nozzles at 45 Degree Angle Towards Feed End
- Water Dams Increase Washing/Rinsing Efficiency
 - Know Your Gradation/Critical Decks

nigh enough pressure to penetrate all the material. Adequate head box water increases both the efficiency (up to 50 percent) and the capacity (up to 100 percent) of screen decks by allowing fines to pass to the next screen quickly, allowing full advantage of screening square footage. The higher the fines content, the bigger the gains in efficiency and capacity will be.

by Bill and Mary Weaver



If you can see fines Overlapping spray coverage and self-cleaning nozzles help compacting and pancak-

ing across the top deck, it is immediately clear that improvements can be made. Also, check to see if water/fines are hitting the first portion of the bottom deck feed end to measure if material is passing quickly enough. Any fines buildup would be an issue too, and would likely show up in the 200 wash.

The other two-thirds of the water should be allocated to the spray bars. This seems to be one of the more common areas that can be overlooked. The production season moves quickly, and there are always tradeoffs between production and maintenance. A spray bar doesn't get much maintenance attention when a loader or crusher is down. Middle deck inspections aren't much fun either. However, making sure the spray bars are clean and working properly will pay dividends. Pumps and fresh water supply are some other factors worth inspecting if there are constant issues with spray bars.

Determining which is the critical deck will help in identifying the best locations for spray bars. Decks will not all need the same amount of water. Generally, the critical deck will need more water than the others. Bottom decks are often the critical deck. This means water will need to penetrate a deeper relative bed depth (which should, for best results, be kept to a ratio of 4:1 between bed depth at discharge and the aperture — meaning a 4 inch bed depth for a 1 inch aperture size). The smaller particles on the bottom deck



Plugged spray bars/nozzles could be a bottleneck to increased screening capacity and/ or improving the quality of your product. Using a non-corrosive spray bar with self-cleaning nozzles can help minimize this issue.

have much more surface area compared to the larger aggregate, making them more difficult to penetrate with enough water when the bed depth becomes higher. This is where understanding specific feed gradation and product splits will help to determine the critical deck and also help maximize product yield.

However, if there is heavy clay adhering to feed material — or even clay balls — allocate the most water to the top deck, which will be the critical deck in this case. Clay is more difficult to remove from aggregate than rock dust and can tend to clump into balls because of its inherent moisture. You'll want plenty of water on the top deck to allow a head start on loosening the clay and breaking up any clay balls. In fact, for wet screening to separate rock from clay, the recommended water usage is the highest of any aggregate application: from 5 to 10 gallons per

minute per STPH of feed to the screen. In this case, focus the water and water pressure on the top deck and add more spray bars and/or nozzles, to that deck.

Spray bar nozzles should be oriented at 45 degrees back toward the feed end of the screen. This helps create a water dam to slow the material, increases the retention time and helps turn the material for effective washing. If you're having problems creating a water dam, which happens most commonly on inclined screens, you could consider adding screen media with dams already built into them. Dams on the discharge end can also help drain your decant water too. Otherwise, a slot or VR/Zig-Zag style aperture - which can be 20 percent more efficient compared to standard square aperture could do the trick. However, avoid these if flat and elongated material passing would be an issue for your



Panels with dams built into the surface are a great way to add retention time if the "water dam" from your spray bars isn't enough. The increased travel rate of inclined screens would make this a good application to incorporate dam panels.

product gradation and/or quality.

Two of the most common issues with wet screens are easily correctible.

Low pressure

If you can get consistent 40 PSI at the spray bar nozzle, you're doing great. Water pressure that is too low at the deck can create a variety of problems, including failure to create a water dam and to break up lumps and clay balls. A pressure of 40 PSI at the screen, on the other hand, removes fines more efficiently by penetrating bed depth.

Plugged spray nozzles

Selecting non-corrosive nozzles that are labeled self-cleaning or easy to clean will avoid a lot of problems. Use cleaning/blow out valves and have a regular inspection and cleaning schedule. Using a pump strainer can also help to prevent plugged nozzle problems.

Screening efficiency and capacity will also be affected by particle size vs. the screen aperture size. If a piece of aggregate is about half the size of the apertures, it may need to pass over only 4 holes before it falls through. If, however, much of your feed is approaching the size of the screen apertures, a given piece may need to pass over thousands of holes before it passes through to the lower deck, making screening a much slower, less efficient process. Understanding your half size and near size material within feed gradation will better equip you to attack the critical decks for increased efficiency.

All of Polydeck's modular synthetic screen media used in North America are produced in the USA, at the company's home base in Spartanburg, SC. Founded by a South African immigrant who settled in Spartansburg, the company celebrates its 40 anniversary in 2018. Devoted solely to the production of polyurethane, rubber, and mixed screen media for use in the aggregate, coal and mining industries, Polydeck has over 1000 different screen design options, with varying fastenings, integrated surface features and sizes and shapes of openings.

Their R&D department, with the help of a multi-national customer base and the Polydeck sales and applications teams, focuses on innovation with the goal of solving even the toughest problems in the screening of aggregate. For more information, visit their website at www.polydeckscreen.com.



Good overlapping spray with adequate PSI and surface dams can help increase quality, efficiency, and capacity.

PG 6



In the previous installment, we set forth five points to assist employers in addressing violence in the workplace that arises from an event other than an active shooter. These types of events can range from simple fistfights to sexual assaults. Employers, however, should analyze and address in their emergency action/response plans the active shooter scenario. As these events seemingly become near everyday occurrences, they must be addressed. This second installment will address five basic concepts that can be incorporated into an emergency action plan to assist employers with addressing the active shooter scenario.

On the front lines with Fisher Phillips: by Collin Warren and Travis Vance

Does your emergency response plan address workplace violence or active shooters in the workplace? (Part 2)

• Once an active shooter is identified have a distinct and clear warning system in place

Once an employer has implemented the basic workplace violence protocol there must be some form of adaptation wherein an active shooter situation is distinguished for the workforce. To distinguish this point, two co-workers at a mine whose dispute over last night's football game carries over to the workplace should not trigger the same response as an active shooter scenario. While law enforcement may be called to the site, the wholesale response that is needed in an active shooter situation will not be implicated. However, when that wholesale and unified response becomes necessary, employers should have a distinct signal in place to alert employees of the situation. This could be as simple as a PA announcement that "Grandma's cookies are in the kitchen for your enjoyment." Once the threat is identified and known, employees should be trained to identify and respond to the signal. Employers should be wary of sirens or other announcements that might impede law enforcement's ability to hear and discern where the threat is coming from.

• Employ some version of Avoid, Deny, Defend or Run, Hide, Fight After the threat is announced to the workforce, employees should be trained on how to respond and know their responsibilities. Most law enforcement agencies teach Avoid, Deny, Defend or Run, Hide, Fight (or some form, combination or subspecies of the above). Employers should check with their local law enforcement to determine if they have an active shooter response team in place. If so, those law enforcement agencies will frequently provide free training or advise employers on what their response will be and what they want to see from the employees once they arrive. In any event, the basic principles are simple. Avoid the shooter if possible. Deny the shooter access **Fisher Phillips 7**



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Caterpillar and FTP Solutions partner to boost mine network performance

Caterpillar and FTP Solutions have developed a cooperative agreement to deliver proactive monitoring and management of mining technology applications and the networks that these products depend on. FTP Solutions, based in Perth, Western Australia, currently offers products and services for monitoring and supporting site communications.

The collaborative work will make best use of the proprietary technology developed by each company to deliver best-in-class site solutions for mining customers. The integrated solutions will be offered as part of Cat® MineStarTM System.

"Through this partnership, Caterpillar and FTP Solutions are instituting means to enable mines to move close to enterprise network availability in their operational technology," said Sean Mc-Ginnis, product manager within Caterpillar's mining technology group. "When Cat MineStar products are installed with FTP Solutions' Integrated Management System, the mining operation has full vision of office and mobile applications across their manual and automated MineStar sites. This insight provides the





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Industry news

PG 7

means to enhance network availability.'

"The partnership enables us to create a single operational view to provide the most reliable critical networking environment possible," said Lachlan McMahon, managing director of FTP Solutions. "Providing this type of data transparency in real-time across an operational site will also deliver business benefits beyond existing support functions."

In practice, Caterpillar and FTP Solutions have been working together to optimize wireless networks at mine sites running Cat Command, a capability set within Cat MineStar System, and will now apply these solutions to the networks installed at sites running other MineStar applications — Fleet, Terrain and Detect. The effectiveness of the monitoring system and the collaborative effort is expected to deliver an improvement in the effort required to manage and maintain site networks. The sum of the efficiencies gained are expected to lower cost per ton.

Caterpillar and FTP Solutions started offering their joint services in Australia in 2017 and are expanding to all mining regions in 2018.

Fisher Phillips from 6

to your physical space. If the first two options are not available or fail, the individual should be prepared to Defend. The bottom line is the potential victim must find a reason to live and thus a reason to fight.

• Train employees to know that most active shooters do not employ an exit strategy

One consistent feature of most mass shootings is that the perpetrators generally have no "exit strategy." In fact, most either commit suicide or intend to be shot by law enforcement. Because of this common feature, employees should be aware and trained that verbal negotiating is likely to fail. As such, the importance of Avoid, Deny, Defend or Run, Hide, Fight is critical.

It is also important to understand that this aspect of mass shootings often changes how law enforcement responds to the situation. Employees should be aware that law enforcement will likely not render aid until the shooter is no longer a threat to any person. Only at that point will aid begin to be rendered to the injured. In these instances basic training on trauma treatment/response can be critical to survival of those injured. Employers should consider adding trauma kits (in addition to first aid kits) and training employees on how to use what may be unfamiliar but lifesaving tools.

• Provide simple tools to help employees "deny" and "defend"

Most employees deny and defend Most employees are resourceful, smart and skilled individuals; however, in situations such as these, you do not want your workforce to have to find its inner MacGyver to survive. For example, your office-based workforce can be provided with large, rubber doorstops. These are cheap and easy to use to prevent the opening of inward swinging doors. Likewise, employees can be reminded that outward swinging doors can be secured with belts and other straps commonly found on clothing or accessories. Additionally, while taboo in the HR world, tell employees to fight! There is a time for fighting in the workplace. Employees need to be trained that the time to fight is now. Employees who work outside should be trained to consider identifying and locating true cover. That is, something that provides more than mere concealment and provides physical protection from fired projectiles.

• Put a plan in writing, train and drill

Finally, the best of plans are of little use if they are not communicated to the workforce, trained on, and exercised. Even if the workplace is not required to have a written emergency action plan, employers should reduce their workplace violence plan to writing and consider utilizing both management and non-management participation in making the plan. Once the plan is finalized, employers should train employees on the plan and document the training. As with fire drills, a good way to ensure that employees are aware of where to go, and what to do. is a mock-drill. While employers may not be able to realistically simulate an active shooter, allowing employees to hear the warning signal(s), identify exit routes, as well as muster points, is a good way to ensure that each employee is aware of their responsibilities and what they need to do in the event of an emergency.

While workplace violence and active shooter training is not fun to discuss, planning and training is the key to surviving such horrific events, which are becoming increasingly more frequent. The above ten points may not be failsafe in forming your program, but if given sufficient consideration, they should form the building blocks to a solid program.



have turned the fledgling quarry into one of their most successful and profitable quarries in the region producing 2.5 million tons of material per annum. Birdsboro Materials is equipped with a state-of-the-art railroad loading equipment that services a private rail line running to the quarry. The rail line provides the capability to transport bulk crushed stone to a variety of locations in the mid-Atlantic region at competitive prices. The trap-rock quarry produces a variety of crushed stone products, including 2A and 2B material as well as railroad ballast.

Like many quarries, Birdsboro Materials had a limited market for dry screenings. More than 150,000 tons had been accumulated on site over several years. The screenings stockpile was taking up valuable space on the quarry floor and was costing money rather than generating revenue.

H&K realized that washing the screenings to produce saleable spec sand was the answer but did not want the financial implication of settling ponds to recirculate the dirty water that a wet process would generate.

After consolidation with long time ter management system was designed trucked out to customers. The waste-

&K acquired Birdsboro Materi- uct that could be loaded onto the rail als in late 2000 and since then $\ \ cars$ with minimum water content.

> "Our vision of this project was to cut down on the #200 particle size in our AASHTO #10 product and keep a consistent gradation. We struggled to do so with our dry application. The turnkey project supplied by Emerald has been a success from start to finish," says Pep Hunsicker of H&K Group, Inc.

The Plant

The plant design incorporated a Terex Washing Systems (TWS) Finesmaster and a Matec water management system with a plate press.

A custom designed boiler box was installed to accept feed from various dry sources at the plant before entering the Finesmaster. The boiler box adds approximately 1000gpm to the dry screenings, turning it into a slurry mixture before entering the Finesmaster. The slurry mixture gravity flows into the sump of the Finesmaster 120 and is then pumped up to the hydrocylone where the mixture is cut at 200mesh. The saleable product discharges though the spigot of the hydrocylone and onto the dewatering screen to remove excess moisture before being stockpiled.

The sand contains less than 12 percent partner Emerald Equipment Systems, a moisture, which allows it to be used imfines wash plant with a closed loop wa- mediately either in the asphalt plant or with the key objectives of minimizing water and material below 200mesh exit water usage and producing a dry prod- through the vortex finder and is gravity

of processing. It is pumped from the just the quantity of flocculant dependpit into the deep cone silo where the separation of mud and water occurs. The waste water pipe is injected with a flocculent (biodegradable polyelectrolyte) before it enters the top of the silo; directly before entering the tank, a sample of the waste water is tested with the DOSON system to ensure the correct separation is taking place in order to achieve fast settling times inside the

fed to the slurry pit for the next stage silo. The DOSON will automatically ading on the required settlement rate to ensure consistent density and regular mud discharge.

> The deep cone silo (which does not contain any moving parts) is constructed in stainless steel. The pre-flocculated slurry expedites the separation of the mud and water inside the tank



The sand contains less than 12 percent moisture.



The TT2Fast opening system has been installed which expedites the opening and closing of the press resulting in more cycles times per hour.



The flocculated sludge falls down into the cone section of the tank where it remains for a short period of time until it reaches a preset thickness. The design of the deep cone ensures the weight and volume of the water overhead expedites the thickening process without adding additional flocculant. Afterward, the sludge gravity discharges into the homogenizing tank before being pumped to the filter press.

The plate press is 1.3x1.3 containing 100 plates and produces approximately 10 ton per cycle of dry mud cakes. The entire plant including the press is fully automatic and will switch on or off when there is sufficient mud to process. The mud pump is a HPT (high pressure) 2-stage which allows mud pumping and filtering within one component. The plate press closes and the thickened sludge is pumped up and into the chambers; once the pump detects that all the chambers are full, the pressure changes and the filtering process begins.

The filtering process forces the water in the sludge through cloths on the plates and out into the filtering trays. When all of the water has been expelled from the mud, the press opens discharging dry mud cakes. The TT2Fast opening system has been installed which expedites the opening and closing of the press resulting in more cycle times per hour.



When all of the water has been expelled from the mud, the press opens discharging dry mud cakes.

Plant Upgrades

• Running costs are minimal for the plant as H&K installed various options to promote more efficient running and dosing of flocculent.

• DOSON: Samples the flocculated slurry and adjusts the quantity of flocculant injected into the pipe reducing wastage by over dosing

• Deep Cone: With no moving parts and constructed of stainless steel

 \bullet Automatic Valve: the thickened sludge in the cone section automatically discharges and flows to a holding tank – no extraction pump is required

• Mud Sensor: Allows mud to achieve a thicker consistency before discharging to the filter press. Thinker mud results in fast cycles times

• TT2Fast: Opens the filter press in packs of 10 plates at a time resulting in faster opening and closing cycles

Benefits

Trucking fees reduced: Dry, cleaner sand means more volume could be loaded onto the rail carts for the same fee reducing the cost per ton to deliver

Liquid Asphalt: Cleaner sand resulted in the mixture requiring less liquid bitumen for the same process Dry Sand: less air pollution using drier sand in the asphalt mix

Immediate sale: low moisture clean sand could be used immediately for internal projects or sold to a third party.. it did not require settling / drying first.

Increased Revenue

Unwashed AASHTO#10 selling at \$4-6/ton Washed asphalt sand at \$14-16/ton

Fairbanks Scales announces new FB2550 weighing instrument

KANSAS CITY, MO — Fairbanks Scales Inc., the oldest scale company in the U.S. and the world's leader in weighing equipment, announces the new and improved FB2550 instrument (the FB2558), which maintains an industry leading feature set while incorporating faster processing power, an updated operating system, and more memory. Up to five FB2558 instruments can be networked, sharing transactional data and traffic light controls from up to eight scale platforms. Transaction data is shared between each networked instrument.

The new FB2558 features a powerful integrated web utility that gives technicians complete access to all menu options, including calibration, with a user friendly, web accessible interface. All configuration and calibration functions can be performed from a connected laptop or tablet using an Ethernet crossover cable or an existing network. When used with Fairbanks' unique Remote Configuration Device (RCD), a technician can calibrate the FB2558 right from the scale platform, eliminating the need to travel between the platform and instrument to test and calibrate the scale system.

The FB2558 gives users the ability to automatically email transactional data or trouble codes, improving access to transaction data and providing faster response times if there is ever an issue. Daily transaction data can be automatically exported to a shared user-defined network folder at the end of the day, placing key corporate data at customers' hands in a timely and reliable manner. Load cell diagnostics data can be viewed, printed, exported, or emailed.

Also standard on the new FB2558 is short or long platform Axlematic software, which enables customers to secure axle weights along with total vehicle weight to ensure compliance with DOT requirements. Powerful IP camera interface capabilities round out the new features.

To learn more about the FB2550, visit www.fairbanks.com/ .



All configuration and calibration functions can be performed from a connected laptop or tablet using an Ethernet crossover cable or an existing network.

Photo courtesy of Fairbanks Scales

Legacy tension fabric buildings feature structural steel frame

SOUTH HAVEN, NM — Combining rigid-frame engineering with the proven benefits of tension fabric membranes, Legacy Building Solutions offers superior quality fabric structures that are fully customizable. This design concept provides a high level of flexibility for processing and storage of bulk material, vehicle maintenance facilities, and other structures for mining operations.

Legacy fabric buildings utilize a durable rigid frame in place of the hollow-tube, open web truss "hoop" framing traditionally used for fabric structures. The strength of the structural steel frame provides several engineering advantages, most notably the ability to easily customize buildings to the exact width, length and height required. In addition to long clear spans, the buildings have straight sidewalls that maximize the useable square footage inside the structure.

The design allows for much more structural flexibility than traditional fabric structures, including the ability to add lean-tos, mezzanines, sidewall doors and more. The structures are also engineered to provide desired overhangs or handle additional loads for items such as sprinklers and conveyors.

Unlike hollow tube steel, Legacy's solid structural steel I-beams are not vulnerable to unseen corrosion originating inside a tube. Additionally, there are multiple coating options available for all steel components, including hot dip galvanizing, primer and powder coat paint.

Legacy buildings feature high-quality fabric roofs that eliminate the corrosion concerns associated with metal-constructed facilities. A wide variety of polyethylene and PVC fabrics are available. The durable fabric allows natural light to permeate the structure during daytime hours, while insulation and liners can be added to meet energy codes or satisfy customer specifications.

Installation is up to three times faster than with

conventional buildings, and the design can be adjusted for stationary or portable applications. Sidewalls can be customized and built with any desired material — including steel, concrete or stone — and then easily lined with fabric to prevent corrosion to the interior, or to create a seamless look for occupied buildings. Legacy steel components and fabric covers are backed by a comprehensive warranty.

Legacy Building Solutions was the first manufacturer of fabric-covered buildings to incorporate structural steel beams instead of open web trusses. The company offers assistance from concept to completion, including renderings, foundation design, and installation and project management. To date, Legacy's in-house, professional installation crews have constructed more than 35 million square feet of fabric buildings. Committed to quality and continuous improvement, Legacy maintains ISO 9001:2008 and CSA A660-10 certification. For more information visit the company's website at <u>www.legacybuildingsolutions.com</u>.



The durable fabric allows natural light to permeate the structure during daytime hours, while insulation and liners can be added to meet energy codes or satisfy customer specifications.

Manual Angle, Rental Unit......

. \$4.000

Metso strengthens global presence and customer service for aggregates industry with 14 new distributors signed in 2017



Industry news

Metso has strengthened its presence in the aggregates market globally with 14 new distribution agreements signed during 2017. These new agreements further expand the coverage of Metso's crushing and screening offering for the construction industry and include Texas in the U.S. — one of the main markets for mobile equipment — as well as the new markets of Qatar, Morocco and Papua New Guinea. Several agreements were also finalized across the U.S. and Europe.

"Developing a global distribution community is one of the strategic focus areas within Metso's Aggregates business. We build strategic partnerships which, in cooperation with our product and service development teams, will shape Metso's future offering and create the best possible value for our customers", says Markku Simula, head of aggregates business at Metso.

Distribution model developed with best-in-class channel partners

By partnering with top distributors, Metso improves its presence in its traditional core markets, as well as in new areas. Distributors provide support for customers both in equipment and services. Metso's global aggregates community has currently well over 100 official distributors.

"We are constantly looking for new, best-in-class channel partners as well as developing the performance of our existing community. We are particularly interested in joining forces with distributors who are eager to develop further their service capabilities", says Adrian Wood, head of global aggregates distribution at Metso.

For more information visit: <u>www.metso.com</u> , <u>www.twitter.com/</u> metsogroup.



Metso has strengthened its presence in the aggregates market globally with 14 new distribution agreements signed durina 2017.

Photo courtesy of Metso



Spout Rotation, Hyd. Deflector.....

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0% For 84 Months



The facility in Bolingbrook, which employs 11-12 people including crushing personnel and drillers, makes a quality sand product out of a waste product. Photo courtesy of H&H Stone LLC

he large pile of byproduct sat in the corner waiting to be sold, though not at a profit. The goal of H&H Stone LLC, located in Bolingbrook, IL, was to simply sell the byproduct as fill even though they knew they would not break even on it.

Then in May of 2017, H&H Stone began using the McCloskey SandStorm 620 3D1S. According to Dave Hamman, owner of H&H Stone, "It has turned the by-product into a profitable item."

Hamman has been in the mining business since the mid 1970's, and he followed his father into the industry. Over the years, the Hamman family has had a limestone quarry and a sand and gravel operation in Kendall County, and more. The entity known as H&H Stone began in 2013. At that time, Hamman and a partner purchased the limestone quarry in Bolingbrook and a sand and gravel pit in Boone County, IL. The purchase was from an old Chicago mining family that was selling off its entities.

The facility in Bolingbrook, which employs 11-12 people including crushing personnel and drillers, makes a high quality sand product out of a waste byproduct by wet screening all of the plus 4mesh off the top of the sand product, then using cyclones to wash out the silts and clays from the bottom end of the sand product. They end up with a spec sand product used in concrete manufacturing. According to Hamman, "Some farmers put it on fields to control the pH level. But in our area, due to the lack of farmland, we wash it and use it for manufacturing."

H&H Stone's industry is very much tied to the economy, particularly real estate. When the economy tanked in 2007-08, the Bolingbrook facility was shut down. Hamman and his team reopened the quarry in September of 2014. The materials from the Bolingbrook plant are sold to either ready mix companies or precast companies. The ready mix companies use it for foundations in homes and driveways while the precast companies use it to manufactureprecast panels

for distribution centers and other precast buildings.

With the American economy humming along, business has improved for H&H Stone. Challenges, however, remain. Hamman cites two challenges in particular that he and H&H Stone face. "The Illinois economy has not recovered fully – it's way behind the rest of the nation." In addition, the material the quarry produces



In May of 2017, H&H Stone began using the McCloskey SandStorm 620 and according to Dave Hamman it has been a profitable decision.



Right: In addition to simply being there, Hamman remarked the McCloskey people are "cordial, easy to work with and nice people to do business with."

> Photo courtesy of H&H Stone LLC

is relatively low priced, so there's a limit on how far it can be shipped. Also, margins are low and like every other business/industry, there is competition.

So, how does H&H Stone rise above the challenges? It's about cleanliness. "I went to customers and told them 'I have a good clean product that is affordable," said Hamman. The product that H&H Stone produces is cleaner than that of his competition. "They [the competition] are trying to do the same thing we do but with older technology, so they end up with material that is usable but not for all applications."

Over the years, Hamman has rented various pieces of McCloskey equipment, including crushers and dry screening plants but never owned any. That all changed when McCloskey representative Craig Rautiola met with Hamman at the end of 2016. When Hamman met with Rautiola, "I gave him samples of my raw materials and told him the cleanliness level I needed on the finished product. He guaranteed he could produce materials as clean as I requested." That guarantee is what ultimately convinced Hamman to buy the SandStorm 620 3D1S plant.

Prior to being delivered to H&H, the SandStorm 620 3D1S was put on display at CONEXPO in Las Vegas in March of 2017. From there it was moved to H&H Stone's quarry in Bolingbrook. Hamman commented, "Building a traditional wash plant on site takes longer and is more expensive. This plant was built in a factory and therefore was easy to get up and running. They hauled it in in trucks and set it up in less than a week." The delivery was in May of 2017, and the equipment has been up and running since.

The SandStorm 620 3D1S has delivered on Rautiola's promise. Hamman said, "I'm very satisfied. It's doing an excellent job, better than any type of equipment I've used in the past." Billed as a modular, mobile wash plant, the SandStorm 620 3D1S is 148 feet in length, 111.5 feet in width and 26 feet in height according to the specs. Hamman appreciates the size, "It's relatively small." The mobility of the equipment — which he explained is part of the reason H&H Stone bought it — gives the company the option to move it. Hamman said they might consider doing that some day. One crucial component of the equipment is its speed. "It's about tons per hour, and we are very satisfied with its production," said Hamman. The Sandstorm 620 can produce up to four wash products at once. It's both powerful and durable and offers a variable speed belt feeder and an adjustable hopper door for consistent material feed and has dual and single sand options for up to for up to 400 tons per hour.

According to Hamman, the SandStorm 620 is also operator friendly. He points to the fact that it is touchscreen operated as proof of this. The fully automated machine is radio controlled and has an advanced automated control system. This makes it easy to use. Other features about the SandStorm 620 that Hamman appreciates are that it is a, "very quiet and clean plant and has very little spillage."

When making a major purchase, such as the one for the SandStorm, relationships come into play. After all, challenges are bound to occur and it's then that people want to work with others whom they are comfortable with and respect. "They [McCloskey] have addressed all of our issues and have been there when we needed them," said Hamman.

In addition to simply being there, Hamman remarked the McCloskey people are "cordial, easy to work with and nice people to do business with." Business does not end at 5:00 either. "The McCloskey rep who oversaw the set-up gave me his home number," said Hamman. But Hamman has never had to use Rautiola's home number. "He always answers his cell phone."

These days the pile of byproduct is being sold instead of piled After all, it's now a moneymaker and helps H&H Stone and the Hamman family continue to prosper in the business of mining.

For more information on H&H Stone, LLC visit: <u>www.hhstonellc.com</u>. For more information on the SandStorm or other McCloskey Washing System equipment visit: <u>www.mccloskeywashing.com</u>.



Craig Rautiola, technical sales and applications manager (North America) for McCloskey hosted an extensive tour of the SandStorm 620 while on display at CONEXPO, later delivered to H&H Stone.

Photo by Colleen Suo





Industry news

CNY announces milestone at The Crossing at Jamaica Station mixed-use project in Queens

New York, NY — CNY, acting on behalf of developers BRP Companies and Goldman Sachs, recently announced a milestone that took place on Friday evening into Saturday morning, Dec. 15 and 16, at The Crossing at Jamaica Station: a concrete pour for foundations of the Queens project's 30-story residential high rise and slab on grade for 25,000 square feet of ground floor retail. This transit-oriented development (TOD) located at Archer Avenue and Sutphin Boulevard, is heralded as an important part of Greater Jamaica's revitalization. CNY is providing Construction Management at Risk services for the project.

During the 16-hour event, approximately 2,500 cubic yards of concrete were poured, delivered by 280 trucks dispatched from two Queens-based plants, City Transit and Casa. Six chutes were set up on 147th and 148th Streets with two pump trucks positioned on both the west and east sides of the site.

"This pour marks a significant progression in construction," said Dennis Prude, Executive Vice President, Field Operations of CNY Group, "as it sets the stage for erection of a giant tower crane that will be situated onsite in about 10 weeks' time. Complicating the pour, is that it took place in a 24/7 busy urban environment — it is literally adjacent to an active parking garage, multiple retail stores, and between the LIRR and three MTA subway lines."



Six chutes were set up on 147th and 148th Streets with two pump trucks positioned on both the west and east sides of the site.



To ensure safety and oversight, BRP Companies and CNY worked closely with local authorities and entities to gain their support and assistance during the process, including the FDNY, police and the

Community Board. A superblock development, The Crossing at Jamaica Station features a 30-story, 539-unit rental high-rise, and a 14-story, 140-unit affordable housing mid-rise, parking for 176 vehicles and 25,000 square feet of ground floor retail. Designed by FXFOWLE Architects, the project is seeking to achieve a minimum LEED Silver certification. CNY is engaging MWBE trades which, in turn, will hire locally-based workers.

During the 16-hour event, approximately 2,500 cubic yards of concrete were poured, delivered by 280 trucks dispatched from two Queens-based plants, City Transit and Casa.

PG 15

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When operating as secondary crusher behind a Keestrack B4e in a Norwegian granite quarry, the Keestrack H6e produced up to 200 t/h of three final grain sizes 0/8; 8/16; 16/22 mm in a closed circuit.

A successful concept

Keestrack announced the expansion of the new series at least a year ago, shortly after the successful launch of its fully hybrid H4e cone crusher (approx. 46.0 t; max. 250 t/h). That is now followed by the Keestrack H6e 400 t/h model, which again guarantees a high level of mobility thanks to its compact design, economic productivity thanks to efficient transport and screening modules and a broad range of applications thanks to the proven cone crushing technology of a leading international specialist. A maximum feed size of 8.4645 inches (215 mm) and variable crushing chamber configurations and stroke settings enable the Keestrack KT-H6 to offer a wide CSS range from .25 - 1.75 inches (6 to 44 mm), while the drive and control technology have been specially adapted in line with the Keestrack hybrid concept.

The crusher is driven by a 220 kWelectric motor - the lubrication system, the hydraulic Hydroset control with overload cutout and the air compression of the crusher housing are powered by separate electric motors/pump units. All crusher functions are incorporated into the central Keestrack PLC controller, which also enables loading personnel in excavators or loaders to operate the machine by means of a remote control unit. As an option, Keestrack-er satellite-based telemonitoring documents all the key performance data of the crusher in real-time, alerts the operator to any malfunctions and collects the current production data if a belt-scale is installed (optional).

A 345 kW Volvo diesel engine (EU IV) with a connected 500 kVA generator supplies the onboard energy. The entire drive unit is designed as a removable module, as now is the case for the smaller H4e machine: Located remotely from the crushing plant, dust and vibration levels can be clearly reduced, maintenance access can be facilitated and hence the availability and service life of the drive unit can be clearly optimised. All the crusher operating functions remain active, including the 63A connector for add-on screening units or stockpile conveyors. The Keestrack H6e also offers plug-in power supply from the mains or additional generator as a standard, making it possible to reduce direct energy costs by up to 70 percent.

Efficient components

The size and capacity of all charging and discharging equipment are geared to the high capacities of the aggregate crusher and, like the track drive, hydraulic cylinders and other hydraulic components (motor/ engine fans) are powered via the load-sensing operating hydraulics by two 30 kW electric motors. Thanks to the lower number of consumers of the Keestrack



hybrid concept, new cyclone extraction technology and the generally good cooling characteristics of the largely steel piped hydraulic system, the operating-cost-sensitive volume of hydraulic fluid could be reduced to 31.7 gallons (120 litres).

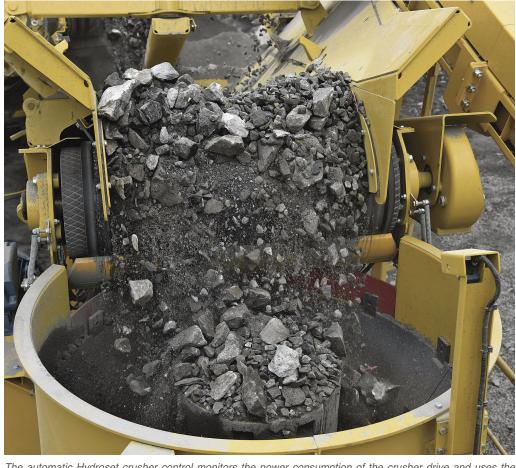
A 47.25 inch (1200 mm) wide hydraulically driven belt feeder with integrated metal detector feeds material from the 8 m³ hopper (optionally 12 m³) with load-release device for the equal distribution of the feedstock (max. 400 t/h). The main discharge conveyor has an 11 kW electric drive motor and reaches a drop/transfer height of 15 ¾ feet (4,800 mm), offering a stockpiling capacity of 350 tonnes without post-screening.

With a total screening area of 24.5 m² over three

decks, the optional H6e post-screen module also guarantees high production rates including oversize material recycling. The screen box has a sensor-monitored hydraulic drive; with all belts powered by maintenance-friendly electric drum drives. Providing large stockpiling capacity during operation, the discharge conveyors for transport can be fully retracted hydraulically for transport beneath 118 inches (3000 mm) overall width.

Impressive demonstration

During its world premiere at the Keestrack Innotech Demodays 2017 held in Spydeberg, Norway in mid-October, the Keestrack H6e was demonstrated over several days in a granite quarry. Loaded directly with coarse aggregate and working in-line after a Keestrack B4e jaw crusher, the unit demonstrated its value as an efficient stand-alone production machine and as a high-capacity secondary crusher for high-grade, precisely defined final grains. While operating secondarily, the Keestrack H6e produced up to 200 t/h of final



The automatic Hydroset crusher control monitors the power consumption of the crusher drive and uses the ultrasonic sensor at the crusher inlet to continuously measure the fill level of cone crusher KT-H6.

PG 17

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With a max feed size of 215 mm, the Keestrack H6e track-mounted cone crusher can also be deployed as a highly productive stand-alone solution when equipped with the three-deck post-screen module.



The 220 kW electric motor of the crusher drive (right) and the two 30 kW generators of the load-sensing operating hydraulics, which are mounted in a protected manner beneath the feeder, enable all-electric operations.

grains the size of 0/8; 8/16; 16/22 mm. The feed material for the machine combination was Granit 0/700 – the overall throughput of pre-crushed 0/150(X) mm of the H6e was approx. 240 t/h in closed circuit. The new large cone consumed an average 45 litres per hour in diesel-electric operating mode.

The track-mounted jaw crusher Keestrack B4e with a new, detachable power-supply module (235 kW Volvo diesel engine (EU4) / 225 kVA generator) for the 110 kW electric motor of the crusher and the electrical 55 kW drive of the operating hydraulics was also presented at Spydeberg. During the few months it has been on the market, the hybrid version of the successful 50 t model B4 (formerly Apollo) enables all-electric operations from the mains, thereby presenting a highly economical alternative for semi-stationary deployment to recycling companies, large construction sites or quarries. The machine with a double-deck vibrating pre-screen unit and proven 1100x700 mm jaw crusher (max. feed size 600 mm) reaches hourly outputs of up to 300 tonnes and can optionally be equipped with a single-deck post screening unit.

Videolink: https://vimeo.com/246960865 Contact: www.keestrack.com



The detachable motor/generator module of the Keestrack H6e crusher (in the background) guarantees a lower load on the drive through dust and vibrations. This solution is now also available as an option for the Keestrack B4e large jaw crusher (right).



Above: All system functions, including the Hydroset crusher settings, can be operated comfortably and safely via the central Relytec panel of the Keestrack PLC controller.



Transforming customers' business -New distributor for ALLU

PG 18

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

ALLU's world leading Transformer series needs no introduction; but now customers throughout Australia will be able to benefit from even greater levels of support through its new distributor, RD Williams (RDW). The appointment of such a professional and experienced industry distributor reinforces ALLU's commitment in providing even greater levels of customer focus. It further enhances locally focused customer support, whilst at the same time enabling customers to benefit from dealing with a truly global company.

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. This will further enable customers to benefit from the specialized advice and assistance that has made ALLU the world leading supplier of material processing attachments – the Transformer and Processor series. Of the appointment of RD Williams, Marjut Lindroos, group marketing manager states: "We are sure that the combination of ALLU equipment and

global aftermarket support, together with the local knowledge and industry expertise of RDW, will enable ALLU customers throughout Australia to benefit from a winning combination."

Industry news



ALLU is proud to announce that the Qld Rock Breakers division of RD Williams is its new distributor throughout Australia. Photo courtesv of ALLU

New Ph.D. specialization expected to increase many opportunities

RAPID CITY, SD — The decision to add a new Ph.D. specialization in the Mining Engineering and Management Department at South Dakota School of Mines & Technology will increase research opportunities and funding, and develop critical collaborations.

The department recommended the Ph.D. mining engineering specialization in response to increased interest from students; an increased need within the industry and government for Ph.D. employees; and a desire for more federal research funding opportunities. The addition will also develop stronger collaborations between the earth systems programs at Mines — geology, geological engineering, petroleum systems and mining engineering, says Lance A. Roberts, Ph.D., and head of the Department of Mining Engineering and Management.

"Working collaboratively with the Department of Geology and Geological Engineering allows us to efficiently leverage numerous resources and attract new students into a unique interdisciplinary program," says Roberts. "Our goal is to graduate top-notch academics, engineers and researchers who are needed to solve the most complex minerals-related problems facing the United States and the world today."

Roberts said the new specialization in mining engineering, in concert with the existing specialization in geology and geological engineering, will allow the departments to "incubate and nurture emerging programs" that could lead to additional specializations. Interdisciplinary specializations also make departments more competitive when vying for research funding, as many funders want research expertise in multiple areas. Roberts says one example is the development of strategic minerals, which are minerals critical to both the national defense of the United States and its industry. Currently, the United States must often import the minerals from less-than-friendly nations. "To ultimately solve this problem will involve the disciplines of multiple specialties," Roberts says.

The addition of this Ph.D. specialization at Mines was approved by the South Dakota Board of Regents summer 2017.

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HIGHLIGHTS INCLUDE: 3 PIPE LAYERS: 2014 Cat PL61(cab), (2)Cat 583N, 25 ARTI. HAUL TRKS: (3)2016 Cat 745C, 2006 Cat 740, (2)2015 Cat 725C, (6)Volvo A40F, 3 STRAIGHT FRAME HAUL TRKS: 2008-2007 Cat 777F, 10 ROUGH TERRAIN CRANES: 2014 Grove RT765E2, 2010 Grove RT9130E, 2005 Grove RT875E, Grove RT700E, Grove RT65S, (2)2013 Sany SRC840(40-ton), 2 TRK CRANES, 228 EXCAVATORS: Unused Cat 352FL, Cat 350L, Cat 345BLII, Unused Cat 336FL, (2)2013-(2)2012 Cat 336EL, Unused Cat 335FLCR, 2008-(2)2006 Cat 330DL, Cat 330CL, (2)2015-2014 Cat 329EL, Cat 324DL, (2)Unused Cat 323FL,Cat 322CL, (5)Unused Cat 320FL, (2)2015-2014-(3)2013 Cat 320EL, 2010 Cat 320DL, Cat 320CL, 2013 Cat 316E, 2007 Cat 314CLCR, (4)Unused Cat 313FL, (5)2015 Cat 312EL, 2011 Cat 312DL, (2)2015 Cat 311FL, (7)Unused-2015-(9)2014-2013 Cat 308ECR, (2)Cat 308ECRII, (3)Cat 308D, Unused Kobelco SK350LC-8, Unused-2015 Kobelco SK350LC-8, (2)2012 Kobelco SK350LC-9, 2017-2016-2015 Kobelco SK210LC-10, (2)Demo Kobelco SK140SR, Kom. PC600LC-6, 2012 Kom. PC360LC-10, (2)2016 Kom. PC138US-11, 2014-2012-2010 JD 27D, 2012 Hyundai 380LC-9, 2013-2007 Volvo EC360CL, 2012 Volvo EC340DL, Unused Volvo EC160DL, 2013 Volvo EC160DL, Unused-(2)2016-2012 Volvo ECR88D, (2)2016 Volvo EC60E, (2)Unused Volvo ECR40D, (2)2016 Volvo ECR40D. (2) Unused Doosan DX225LC-5, 2017 Doosan DX225LC, 2014 Doosan DX180LC-3, 2015-2014-2013 Doosan DX140, (3) Unused Doosan DX62R-3, 2016 Linkbelt 210X3, 2012 Linkbelt 210X2, 2013 Case CX210C, (2)2013 Sany SY135, 2014 Sany SY75C, JCB JS130, 2016-2015 Bobcat E85, 2011 Bobcat E80, (3)Unused Bobcat E62, (5)Unused-2011 Bobcat E45, 2013 Bobcat E26, (3)2015 Bobcat E17, 2008 Bobcat 435, Demo Bobcat E32, 2008-2006 Kubota KX91R, 2008 Kubota KX41VR1T4, 2014 Kubota KX080-4, 6 LONG REACH EXCAVATORS, RUBBER TIRED EXCAVATOR, LONG REACH BOOM & STICKS, 34 HYDRAULIC HAMMERS & ACCESSORIES, 16 GRAPPLES, 7 HIGH REACH DEMOLITION EXCAVATORS, 26 MOTOR GRADERS: (2)2017 Cat 140K, (5)2010 Cat 140M, Cat 14H, (2)Cat 140H, 2015 Cat 120M2, 2012 Cat 12M2, Cat 12M VHP, 2012 Cat 120M, Cat 12HVHP, Cat 120G, MOTORSCRAPER, 67 RUBBER TIRED LOADERS: (2)Cat 988F, Cat 980B, Cat 980G, 2011 Cat 972K, (2)Unused Cat 966M, (3)Cat 966K, (2)Cat 966D, Cat 960F, (3)Unused Cat 950M, Cat 950K, (2)Cat 950F, Cat 950, (5)Cat 938M, 2009-2008 Cat 938H, 2014 Cat 930K, Cat 926, 2012 Cat 924K, (2)Cat 924H, (2)Cat 924G, (4)Cat 910, (3)Unused Cat 908M, 2011-2009 Kom. 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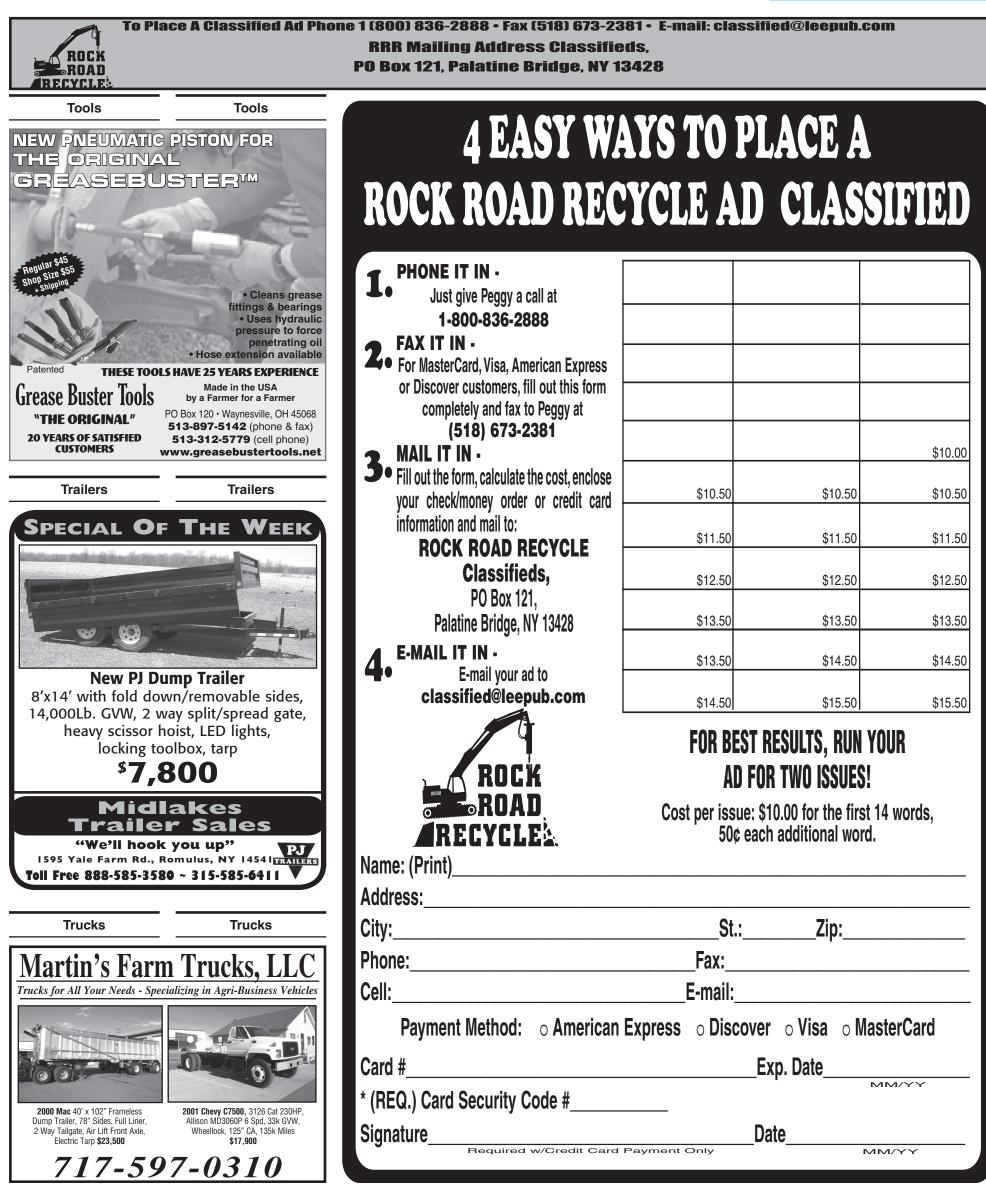
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PG 20



PG 21

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Hey Prairie Dawg, "What's Involved in painting older equipment?"

As you sit in your warm office these colder winter months you may be staring out the window seeing equipment just sitting there, looking all ragged and a little bent under that soothing blanket of snow. Maybe this is the year you want to improve your hard working tool's image and instill a little pride back into the fleet — as well as the operating crew.

Is it true that if the equipment looks better or is better kept it may actually operate and produce better — or is this just a myth? I believe it's a visible daily reminder that often improves attitudes that may have become somewhat apathetic or even negligent of taking responsibility to go that extra mile in upkeep. I've found it amazing how a vibrant updated paint job can inspire a whole new sense of housekeeping initiatives throughout the entire organization. For a minimal investment, it is worth its weight in gold. Also as a great lead-in for suggesting other overdue changes; improving your operational upkeep as well as the public's overall view of your offering - quite possibly the competition's too.

How much will this new look cost? Let's take a deeper look. To start with, figure what overall branding image or color scheme your company may already have in place. Does that scheme still fit with the newer generation of as-



Prairie Dawg Practical by Tim Holmberg, DEMI Equipment

sociates? I recommend asking within for opinions and ideas — it is amazing the pool of talented individuals you may already have within or what connections they may have.

Next question is where to get the work accomplished - after all, this equipment isn't your typical hot rod sized item. Consider the tedious yet valuable time needed for preparing the subject piece - overrun with 20-plus years of gravel and rock chips, bent metal panels and sharp torched edges. Maybe even ten pounds of sticky gooey grease that is baked on or bonded so well that quality hot pressurized jet spray won't quite get it removed. Using a combination of elbow grease, cutting and welding, manual scraping and even some brake cleaner; over time it will start to take shape.

Sandblasting: is it cost effective and will it be regretted if not considered? The answer is yes and if you have a local provider to do it, it is worth every penny especially if you are planning on keeping the equipment for an extended period of time. Sand blasting is actually rather reasonable — and surprisingly, depending on the consumable being used — is actually environmentally safe.

However, if the machine is 40 or more years old, you should test for leadbased paint beforehand. There are simple tester kits on the market that can easily be done without any special equipment.

Once all the surface prep work is complete, be sure to tape over, remove or cap items such as hoses, tires, and v-belts; after all who wants an auction-looking, used car lot result. Next - decide where and how to get this giant sized machine into a space where the wind and weather isn't wreaking havoc. Remember, primer and paint have specified temperature and time in order to cure. There are actually air-assisted blow up paint booth systems for the do it yourselfers out there — or you simply may have to find a facility nearby that can accomplish the final (more educated) process of painting. Having product knowledge and vocational training is extremely valuable for the best possible finish — highlighting all your preparation efforts.

This is the part of the project you really don't want to skimp on, as both the application process and choice of product used will make the entire investment shine like the desired finish. I always say when consulting with customers that the best possible way to keep from being penalized or regularly targeted by the stringent laws and codes that MSHA enforces, is to start with the appearance of the equipment. Keeping the machine free of rocks and dirt everywhere, excess grease wiped clean, cutting and welding repairs touched up with spare paint, and all the guarding properly contrasted or safety yellowed and being positioned properly into place makes it obvious that the item is highly regarded — a valued tool, working within a safety-conscious environment.

However, I'm not implying that your inspector is easily fooled; I'm simply stating again that if the equipment is maintained outwardly in its physical appearance — usually the inner workings and safety aspects of the operation are also maintained to the utmost. Best housekeeping practices breed great maintenance and productivity throughout an operation — as everyone involved makes it a team effort leading to success — and look great doing it.

Please, if you enjoy these random aggregate and quarrying equipment based subjects, tune back in for more topics to come. Send me a subject or topic you would like brought to light and any associated questions you would like to have discussed and I will gladly provide my best answer based upon my specific point of view and personal experience. Questions or Comments? Tim Holm-

berg <u>prairiedawg@pdpractical.com</u>

Or simply write me a letter and we will send you a T-Shirt or Ball Cap: Tim Holmberg / 2915 Idea Ave. / Aberdeen, SD 57401

Caterpillar and Rio Tinto to retrofit Cat® trucks for autonomous operation at Marandoo Mine in Australia



Industry news

Caterpillar and Rio Tinto have signed an agreement for retrofitting 19 Cat® 793F mining trucks for autonomous operation at the Marandoo iron ore mine in western Australia. Caterpillar will also install Cat Command for hauling software for operation of the autonomous fleet. The result of the agreement will be the first fleet of Cat autonomous trucks deployed by Rio Tinto.

The first few trucks will be retrofitted in mid-2018. The project will be completed by the end of 2019. Beyond installation and startup, both Caterpillar and the regional Cat dealer, WesTrac, will play ongoing roles in managing and supporting the autonomous haulage system.

"We are grateful for the opportunity to work with Rio Tinto in installing their first Cat autonomous haulage system," said Jean Savage, Caterpillar vice president with responsibility for the Surface Mining & Technology Division. "Working with WesTrac, we look forward to helping Rio Tinto enhance operations with our proven mining technology."

Rio Tinto Iron Ore chief executive Chris Salisbury said, "We are proud to have partnered with Caterpillar for 50 years and are excited about starting this new chapter in our automation story. This project with Caterpillar accelerates deployment of autonomous haulage via retrofit in our Pilbara operations and helps meet our objectives of making our operations safer and more productive."

The Cat autonomous trucks system draws capabilities from the full range of Cat MineStarTM System technologies: Command, Terrain, Fleet, Detect and Health. At Marandoo, the mine-wide implementation of Fleet, the scheduling-and-assignment and material tracking system, will mark the first use of the system by Rio Tinto.

For more information about Cat mining technologies, go to: <u>www.cat.com/</u><u>minestar</u>.



Beyond installation and startup, both Caterpillar and the regional Cat dealer, WesTrac, will play ongoing roles in managing and supporting the autonomous haulage system.

> Photos courtesy of CAT

At Marandoo, the minewide implementation of Fleet, the scheduling-and-assignment and material tracking system, will mark the first use of the system by Rio Tinto.



Haver & Boecker to showcase convenience and flexibility at AGG1

Haver & Boecker introduces the skid-mounted Hy- wash screen. The vibrating screen dro-CleanTM 1000 Wash Plant as a complete solu- removes any remaining dirt or clay tion. In addition to a Hydro-Clean 1000 washing still on the stone as it fractionates system combined with a Tyler L-Class vibrating rinse the material. Haver & Boecker enscreen, Haver & Boecker now offers semi-portability by mounting the complete system on a custom skid perience to design and build a skid structure. The opportunity to purchase the three structure perfectly suited for the components together saves operations months of time they would have spent on designing and building a skid structure for a wash plant. The new package delivers maximum serviceability in a small footprint. Haver & Boecker is highlighting the HC1000 Wash dro-Clean 1000 employs 2,000 psi Plant, March 6-8, in booth 1641 at AGG1 in Houston.

"We're always looking for ways to solve our customers' problems and improve their productivity and efficiency," said Karen Thompson, president of Haver & mineral mixtures. Boecker Canada. "By offering the Hydro-Clean 1000 Wash Plant, we're saving producers from spending component, the L-Class vibratextensive time on engineering and manufacturing a structure for a wash plant. This gives them an opportunity to focus their time and money on improving profits elsewhere in their operations."

Haver & Boecker combines the Hydro-Clean 1000, a nations in a compact design. With a single-deck, linear-stroke, 6-by-16-foot Tyler L-Class horizontal screen, material spends horizontal vibrating rinse screen and a skid structure to create the compact wash plant. The system processes as much as 200 tph of sellable product with its short retention times; using minimal water and power. During the cleaning process, the washed material works its way down the HC1000's drum and exits onto a discharge conveyor that leads to the L-Class In addition, mechanics can easily use the plant's cat-

gineers drew on their extensive exsemi-portable system.

Taking feed material as large as 6 inches (150 millimeters) into its 40-inch vertical drum, the Hyhigh-pressure nozzles, rotating at 90 rpm, to remove silt and clay particles as small as 63 microns from

The wash plant's other major ing screen, uses a double-shaft overhead drive system, with dimultiple speed and stroke combi- from aggregates, recycled materials and other minerals. more time on the deck for optimal cleanliness.

The HC1000 Wash Plant includes serviceability features for maximum convenience and safety. Haver & Boecker manufactures the plant with stairs, eliminating the dangers of carrying parts and tools up ladders.

rect-mounted motors, to provide The Hydro-Clean's high-pressure nozzles effectively clean deleterious material

Photos courtesy of Haver & Boecker

walks and platforms to reach service points, such as spray nozzles.

Haver & Boecker can engineer wash plants to customer specifications by, for example, including a different size or type of vibrating screen, more decks or a different Hydro-Clean model.

offers increased mobility to maximize flexibility and ROI for aggregate and mining operations. Each portable F-Class features a base frame that easily attaches to a custom-built chassis. The portable plant includes a hydraulic system that positions the vibrating and cross contamination, therefore increasing overall screen at the optimal angle. These two features allow efficiency and profitability." producers to move and setup the portable F-Class in less than 30 minutes in nearly any location.

Haver & Boecker is also featuring the F-Class vibrating screen in their booth at AGG1. "To help our customers streamline their operations, and provide high-performance, double-spherical roller bearings. solutions to a broader array of operations, we amplified our F-Class vibrating screen by adding portabili-

Haver & Boecker's portable F-Class vibrating screen ty," said Karen Thompson, Haver & Boecker Canada president. "This not only gives customers the flexibility to easily travel from jobsite to jobsite, but our leading edge, four-bearing screening technology virtually eliminates the common issues of pegging, blinding

> Beyond flexibility, Haver & Boecker's updated F-Class vibrating screen offers up to three screen decks. The vibrating screen features an advanced double eccentric shaft design, supported by four Each F-Class is equipped with Haver & Boecker's revolutionary Ty-Rail $\ensuremath{^{\text{TM}}}$ quick-tensioning system, which

minimizes downtime for screen media change-outs by about 50 percent.

The F-Class is ideal for screening situations that require consistent, load independent performance at constant g-force in all operational modes. Featuring a unique and reliable, proven four-bearing technology, the vibrating screen minimizes structural vibration and delivers a consistent stroke, which two-bearing screens cannot provide.

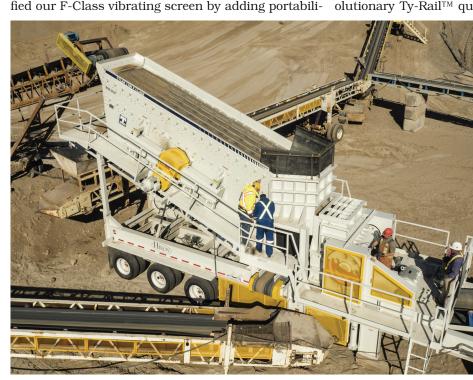
The vibrating screen is mounted on a chassis, which uses hydraulics to achieve an optimal screening angle — from 15 to 25degrees — as well as to lift the machine while adding cribbing for support. This than 30 minutes to complete. Take down is even faster, requiring less than 20 minutes to lower the unit so it can move to the next location.

"With the fast pace of the industry and the underlying need to increase screening efficiency and profitability, it was the right time to launch the portable F-Class," Thompson said. "The demand for portable plants has grown significantly over the years, which is why we wanted to provide a solution for our customers. We're using our decades of experience coupled with that of our partners, such as HIKON Industries, to develop the absolute best mobile screening platform on the market. Together, we can offer our customers the entire package."

Businesses can customize the portable F-Class setup to include a crusher system for enhanced productivity. The F-Class is ideal for tough applications, such as scalping and classifying ores, minerals, stones, sand and gravel.

The portable F-Class includes Haver & Boecker's Uptime Service Package, providing 36 months of warranty coverage on any new equipment purchase. Uptime offers customers a full-service approach to equipment optimization - from parts inspection and equipment assessment to screen media evaluation. Additionally, Haver & Boecker offers the PulseTM vibration analysis program to monitor the ongoing health of vibrating screens through real-time views, logged reports and data analysis. It's designed by Haver specifically for vibrating screens to catch small inconsistencies before they grow into problems and downtime.

"Overall, the portable F-Class brings the industry's best screening equipment to a mobile platform," Thompson said. "Beyond its mobility, there are optional service programs operations can use to practically ensure their uptime. This way they can keep up with the fast pace of the industry, and easily move from one jobsite to the next."



Haver & Boecker's portable F-class increases operational flexibility by allowing operators to setup process takes less move it quickly between jobsites.



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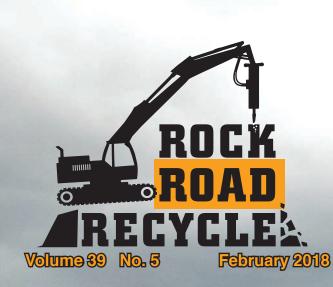




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Shifting equipment acquisition strategy improves total operation for Britton Industries by Brad Stember

On the cover:

The company keeps a range of buckets handy that allow for easy changeover and for any loader to load any size truck or trailer

PG4

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by Brian O'Sullivan





PG 3 RockRoadRecycle.com

SDLG launched new compact wheel loaders at Excon 2017

With high demand for smaller-capacity wheel loaders in India projected to continue, SDLG has added the compact L936 and LG946L to its product line.

SDLG has launched two new compact wheel loaders in India at Excon 2017, the country's largest construction equipment trade show. The 3-ton-rated L936L and 4-ton-rated LG946L wheel loaders were unveiled during a customer event on Dec. 13, 2017, at the Bangalore International Exhibition Centre.

The two new wheel loaders, already available in other Asia-Pacific markets, were displayed at SDLG's outdoor booth 24 alongside the brand's bestsellers — the LG958L wheel loader and the G9138 motor grader.

"Compact wheel loaders are becoming increasingly popular in India as customers start seeing the efficiency gains that they deliver for specific jobs such as material handling, truck loading and stockpiling — over utilitarian ones like backhoe loaders," said Sanu George, head of SDLG in India.

With the introduction of SDLG's two smaller-capacity wheel loaders, customers now have more models to choose from in the 3-ton and 4-ton rated range to meet growing demand.

"With the L936, customers now have a second option to the existing LG933L. "Plus, our first 4-ton-rated wheel loader also helps bridge the gap between our 3-ton and 5-ton wheel loaders," George said. "Both wheel loaders feature Weichai Deutz Tier III engines, which deliver lower lifecycle costs through efficient engine design."

The L936L is the successor to the LG936L, which SDLG stopped selling in India earlier this year. "It's a good time to launch these wheel loaders in India, especially with the government's push for infrastructure development and road development," George said. "SDLG manufactures reliable and simple-to-use machines, and we are confident these qualities will appeal to customers, allowing them to focus on getting the job done without fuss and hassle.'



The 3-ton-rated L936L and 4-ton-rated LG946L wheel loaders were unveiled during EXCON 2017.

Photo courtesy of SDLG

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"Somebody can call me and say, 'I need 50 percent topsoil, 20 percent compost, 20 percent sand.' We



A CASE 921G wheel loader loads a truck at its Philadelphia location.

can make this mixture right here for them and send it out. It all depends on the customer's needs," says John Hornor, site supervisor at Britton Industries. "We take materials from all the area landscapers, when they clean up homes and stuff like that. They can bring all that stuff to us. So not only are we recycling, we're allowing for people to come in and dump here, for them to clean up. Homeowners can come in with their own little trucks. It's a full site for everybody. Whether you're a giant contractor, or you're a little mom and pop, or you're a homeowner."

Rethinking Equipment Acquisition

In order to stay competitive, the company's prices have to remain relatively fixed, so Britton needed to find other ways to increase profitability. With over 100 employees and several hundred pieces of equipment operating across four busy locations for 12+ hours a day, six days a week, having the right equipment on site can make a significant difference in operating costs.

"You're not getting a raise [from] outside," says Jim Britton, owner, Britton Industries," it has to come from within."

New, reliable equipment with planned maintenance contracts and predictable owning and operating costs can help improve productivity and boost efficiencies for any business. Britton Industries has recently worked with local CASE dealer Groff Tractor—a company that has been serving the construction market in the Mid-Atlantic since 1958—to purchase several new CASE wheel loaders and excavators as part of a new consolidation/standardization strategy.

"In order for us to grow at this point, we need to nail the numbers and what each facility spends and earns," Britton explains. "The only way to do that is to do exactly what we did this past year with CASE. We can literally nail it to the penny. So now we can Photos courtesy of Britton Industries



Jim Britton, owner, Britton Industries. grow productively and profitably."

"We had many different brands, many different sizes. My philosophy in the past was, get good deals on used machines and just create more assets—the more the better. Within the past few years, we've wanted to consolidate things, go more of the same brand, the same sizes."

With the transition to a tighter, more specialized fleet Britton has seen improvements across several aspects of his operation — from maintenance costs all the way down to the bottom line. "From a maintenance standpoint, from a costing standpoint, it's very simple. The numbers don't lie. Just from a maintenance standpoint, and capital expense. It makes all the sense in the world to have all the same size machines. We're narrowing things down. We're doing more of the same items in business, so it requires the same size machines. You don't need ten different size pieces of equipment. We're trying to refine things."

The ability to control and predict ownership costs



The new G Series wheel loader fleet is supported by Groff Tractor.

throughout the lifecycle of a machine allows equipment owners to make smarter decisions about machine investments and allocation. All seventeen of Britton's new machines—nine 821G wheel loaders, four 921G wheel loaders, and four CX250D excavators—came standard with CASE ProCare. ProCare includes a three-year, 3,000-hour full-machine factory warranty; three-year, 3,000-hour planned maintenance contract; and a three-year Advanced CASE SiteWatch[™] telematics subscription.

Britton has seen a demonstrated difference in productivity and uptime since implementing their new equipment acquisition strategy. When every truck in and out of a facility affects the bottom line, downtime on any piece of equipment has a domino effect.

"The dilemma with us is there's a lot hinged on each and every piece of equipment," says Britton. "Several trucks per piece, so if one piece goes down, it takes up to ten trucks down with it, at any moment. At this point, we're working probably 15-hour days, so you can imagine what that would do, as far as an impact goes. From March to July is our busy time, and we can't afford any downtime. Back in the day, we'd have five extra pieces of equipment, just to make up that difference, and then rush around trying to fix what broke, or supplement what was down. We don't have that problem anymore. We have less pieces, but they're consistently running every day."

Another key advantage to CASE's ProCare is the three-year SiteWatch telematics subscription. Remote monitoring of equipment via telematics gives owners insight into the performance of their fleet, as well as the ability to analyze long-term utilization trends.

"Up to this point, we've been pretty fortunate because nothing's gone wrong," says Britton. "But through monitoring it, when something does finally go wrong, we'll understand what happened, and how it happened, and if it was employee or operator error or machine."

The three-year planned maintenance contract and the support of the local dealer is the final piece of the puzzle that assures uptime and keeps the company's operating costs low and predictable. "If ever I have a problem, I make one phone call and within a blink of an eye, I have a Groff guy here," says Horner. "Sometimes they have to do service on these machines—maybe at the 100-hour mark, 500-hour mark. I can't afford to shut my machines down during the day. Well, I'll have a Groff guy here at 4:00 in the morning working on the machines. By the time I get in at 6:30, 7:00 the machine's done, ready to go for work for the day. That, to me, is priceless. To not have to worry about having to shut down or losing business because I have machines down, and to have them up, taken care of while nobody's even here, that's fantastic."

Productivity and Fuel Efficiency

Working in a high-production environment that processes wood products, yard waste and other dusty, potentially comcreate several challenges

bustible materials can create several challenges with certain types of Tier 4 machines—particularly those that require a high-temperature regen cycle to burn off excess particulate matter.

CASE was the first manufacturer to employ SCR (Selective Catalytic Reduction) technology in heavy earthmoving equipment – and G Series wheel loaders are the second generation of CASE wheel loaders to benefit from the fuel efficiency and cooler operating temperatures provided by the technology. There is no regeneration cycle, no recirculation of exhaust gasses, and no temperature spikes to burn off particulate; all of this ensures that a greater percentage of fuel use is put towards productive work, and the lower operating temperatures greatly reduce the likelihood of dangerous thermal events in dust-laden environments.

"I do notice a gain in fuel efficiency," says Hornor. "They run at a high RPM, yet they never run hot."

All CASE wheel loaders also feature innovative cooling technologies that keep operating temperatures down, keep the engine compartment clean and provide easy access for routine cleaning. Models in the 131-225 HP range feature a CASE-exclusive mid-mounted cooling module, which pushes the engine lower and further back towards the rear of the machine, improving balance and stability.

The G Series wheel loaders provide a variety of additional features geared towards achieving optimal cycle times and productivity, including four selectable power modes, ride control, and standard automated bucket controls such as return-to-dig, return-to-travel and height control. Even simple considerations like easily exchangeable buckets (made possible by the standardization of a single loader type) can make a big difference in productivity for companies like Britton Industries.

"The way that the CASE loaders make the buckets interchangeable makes the job so much easier. I can go from loading a truck with one ton of stone to, within seconds, having a bucket on that I can load a tri-axle with 30 yards of mulch. Before, you had to get out; you had to take a bucket off. Or you had to actually switch loaders because the loaders didn't have interchangeable buckets. This is one push of a button, bucket comes off, another button, bucket goes back on, and you're ready. It's really made things so efficient and really easy. One guy can service, essentially, all the products to many different types of trucks in a single machine."

PG 5

Operator Comfort

The cab and operating environment of the G Series have been designed to provide optimal operator performance, ergonomics and engagement with both the controls and the machines' surroundings. The spacious cab features a new 8" LCD monitor providing the operator with simple control and greater insight over many loader functions and activities.

Advanced electro-hydraulic controls, and numerous seat and adjustability options further simplify operation and training. A one-piece rounded windshield and optimally placed mirrors, along with a rearview camera that feeds directly to the monitor, ensures full 360° visibility.

"Very comfortable—air ride seat—everything is right there in front of you. There's no real guesswork. Anybody can run it," explains Hornor. "I can teach somebody how to run that loader in about two minutes, and have absolutely no problems. Everything is spelled out for you."

With a large staff of equipment operators, the ability to fine-tune the cab to an individual operator is also a benefit.

"The seats have so many adjustments. I happen to be 6'3", [another operator] happens to be 5'5", 5'6". All I do is slide the seat up, adjust it a little bit... I'm comfortable within two seconds. Just one little adjustment, slide the seat up and you're good to go."

28 Years of Growth – Just the Beginning

With nearly 30 years under his belt, and several children already involved in the family business, Jim Britton feels like he's just getting started. "I'm an all-in guy. I don't know how to explain it. I love heavy equipment, love my family being in it. I have five kids—been married 25 years."

"28 years, and I feel like I'm just starting out, so we've got a lot to go. The next ten years are going to be fun. That I can tell you."



In addition to being one of the region's largest mulch producers, the company also recycles concrete and produces topsoil.



PG 6

Trucks, Trailers & Attachments

Talbert 35-ton close-couple lowbed trailer & new versatile 60-ton spread-axle trailer

RENSSELAER, IN - Talbert Manufacturing gives contractors an efficient and safe way to haul day-to-day loads with its 35CC-HRG lowbed trailer. The lowboy unit is rated at 70,000 pounds overall and 70,000 pounds within a 12-foot load base. It also features Talbert's removable hydraulic gooseneck for fast and easy equipment loading and unloading.

"Equipment is getting bigger, wider, taller and heavier," said Troy Geisler, Talbert Manufacturing vice president of sales and marketing. "We've built a reputation on accommodating that need, but contractors also have smaller equipment they need to safely transport to and from jobsites every day. This is why we also offer dependable trailers designed specifically for that purpose."

Talbert offers the 35CC-HRG with optional features such as fixed or platform goosenecks, various front and rear ramps, as well as multiple swing radiuses, deck lengths and widths. The trailer also can be equipped with a beavertail and ramp so users can drive equipment

over the rear of the trailer rather than detach the unit's gooseneck. This allows for fast equipment loading and unloading in confined areas.

"Our customers require a great deal of versatility. Each day or week could consist of moving a variety of equipment," Geisler said. "This is why we take the time to listen and design our trailers to provide the most flexibility, tailoring each unit to the specific needs of the customer."

The 35CC-HRG is part of Talbert's Close-Couple Lowbed Series. The trailer's two axles are close coupled and can be designed to accept an optional pin-on axle for loads requiring three axles in a row. The overall length of the 35CC-HRG is 43 feet. 9 inches. which includes a 24-foot long deck that is 8 feet, 6 inches wide, and a 9-foot 9-inch rear bridge section. Swinging outriggers

on each side of the deck to accommodate oversized equipment. Contractors

provide 12 inches of additional width can also remove the outriggers to minimize weight and for easy maintenance. Like all Talbert trailers, the 35-ton CC-

HRG is rated in half the deck length to safely meet concentrated load requirements as high as 70,000 pounds.



The Talbert 35CC-HRG lowbed trailer gives contractors an efficient and safe way to haul day-to-day loads.

Photo courtesv of Talbert



Talbert designed the 35CC-HRG with an 84-inch swing radius and a non-ground bearing hydraulic gooseneck. The gooseneck features four hydraulic cylinders that are parallel to the ground rather

than two vertically positioned cylinders. This eliminates the risk of the trailer sinking into soft ground as equipment is loaded. Also, because the cylinders are horizontally placed, they are easier to access for



Talbert Manufacturing's 60/65SA trailer has been designed to accommodate both tri-axle and tandem-axle jeeps. It features 2+2, 3+1 and 4 axle close coupled configurations. This innovative Talbert design gives customers flexibility to carry a variety of load options.





PG 7

maintenance and last longer due to their low-pressure hydraulic system.

Contractors can use the 35CC-HRG to haul a variety of equipment. The trailer's recessed cross members in the rear bridge allow for easy positioning of an excavator boom. The deck flooring is 1.5-inch Apitong, which provides exceptional strength for long-term durability under heavy loads. The unit has one of the lowest deck heights in the industry — 22 inches — and a six-inch road clearance to maximize headroom. Drivers can adjust the rear ride height of the Ridewell suspension system +3 or -3 inches for greater head clearance getting in and out of job sites or when traveling over uneven surfaces, such as railroad tracks.

Talbert manufactures the 35CC-HRG with heavy-duty T-1, 100,000-psi minimum yield steel for extreme durability and longevity. Like all of the company's trailers, it comes standard with Valspar R-Cure 800® paint to prevent corrosion for a long-lasting finish and better return on investment.

Talbert also introduced the 60/65SA trailer. This unit has been designed to accommodate both tri-axle and tandem-axle jeeps. It features 2+2, 3+1 and 4 axle close coupled configurations. This innovative Talbert design gives customers flexibility to carry a variety of load options.

The trailer offers a 60-ton capacity rating with its 13-foot 6-inch two-point rigid load base as a 2+2 or 3+1 configuration. Owners also can configure the trailer with four close-coupled axles with no goose-neck extension, which provides a 65-ton capacity with the trailer's 13-foot 6-inch two-point rigid load base. This versatility saves fuel and alleviates costs associated with additional permitting for maximum return on investment.

The 60/65SA features an optional 70-inch, flip-up gooseneck extension to achieve a 190-inch swing radius while its removable kingpin stations allow for 120-inch and 108-inch swing radiuses. Customers also can choose Talbert's optional hydraulic linkage, eliminating the need for manually flipping the gooseneck extension. The trailer comes standard with a 30-foot by 8-foot, 6-inch-wide deck, providing ample space for a variety of loads. Talbert also offers optional deck lengths, deck types, and widths. The 60/65SA's deck features a 22-inch deck height, one of the lowest in the industry. This offers easy loading and unloading of a variety of equipment.

This trailer is equipped with Talbert's optional East Coast-style E2NitroTM spreader. The E2Nitro uses a combination of hydraulic fluid and nitrogen to equalize axle pressures, providing proportionate weight distribution of each axle grouping. This optimizes the range of suspension movement, which minimizes stress and provides a smooth ride. In addition, the E2Nitro features a bearing pivot and pivot lockout for backing the trailer. Users also can hydraulically lock in axle loads regardless of terrain. The E2Nitro is standard with a two-speed dual landing gear for optimal stability when disconnected from the trailer. Like all its trailers, Talbert manufactures the 60/65SA with heavy-duty T-1, 100,000-psi minimum yield steel for extreme durability and longevity. Talbert trailers are standard with Valspar R-Cure® 800 paint to prevent corrosion, offering you a long lasting finish and better return on your investment. More information: sales@talbertmfg.com ; www.talbertmfg.com .

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Trucks, Trailers & Attachments

J&J Truck Equipment announces forthcoming retirement of Jim Weir

Somerset, PA - J&J Truck Equipment, a division of Somerset Welding & Steel, recently announced that Jim Weir will retire effective Feb. 2, 2018. Weir joined the company 34 years ago and held a variety of positions within the organization prior to serving as its sales manager. Before joining J&J, Jim worked at Solar Fuel and taught welding classes in the evening. He also served in the United States Army.

Jim stated, "I have enjoyed the work, the people, and the challenges during my tenure at J&J, but I am excited about beginning the next chapter in my life. I wish the company and its employees continued success." Jim was also an active member of several distributor councils where he shared his experience and expertise of the truck equipment industry. Since announcing

his retirement, he has guided the sales team to ensure a smooth transition upon his departure.

"Jim's accomplishments and commitment to our company helped to increase our profitability, expand our product lines, and allowed us to develop strong relationships with our customers and vendors. He will be missed," said Bill Riggs, President of Somerset Welding & Steel.

J&J Truck Equipment supplies field service cranes bodies, air and hydraulic operated lubrication service units, hydraulic systems, mechanic bodies, flat beds, and snow removal equipment. In addition, their service and repair department provides custom welding and fabrication, dump and trailer body repair and painting, and a wide variety of other services.



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IMT adds two new distributors, serving Saskatchewan, northern Alberta and Wyoming

Iowa Mold Tooling Co., Inc. (IMT), is pleased to announce the addition of Transform Crane and Equipment and Power Equipment Company of Wyoming to its distributor network. The dealers bring a wide range of knowledge and experience to the network and will serve Canada's northern Alberta region and the Wyoming area, respectively.

Transform Crane and Equipment provides one-source equipment solutions from their offices in Lloydminster, Saskatchewan. Founded in 2017, the partners, Emile Bourassa and Lee Steinbring, bring substantial knowledge of IMT and its product lines to the network. Transform Crane and Equipment carries a full line of IMT products, including the iconic Dominator® mechanics trucks portfolio.

Power Equipment Company brings significant market knowledge, primarily of the aggregate industry, to the network from its location in Casper, WY. With years of experience working across the aggregate industry, including quarries and ready-mix concrete applications, Power Equipment Company will now be offering the full line of IMT products to its customers. Several employees on staff have prior experience with IMT, and will serve as a primary resource for customers looking for IMT equipment solutions.

"We're excited to welcome Transform Crane and Equipment and Power Equipment Company to our distributor network, along with the new opportunities they bring to better serve the Saskatchewan, northern Alberta and Wyoming regions," said Tom Wallace, IMT sales manager. "We look forward to developing long relationships with both Transform Crane and Equipment and Power Equipment Company, and our customers in both regions will find the companies are wellsuited to provide them the right equipment for their business and first-rate service after the sale."

For more information on IMT, visit http://www.imt.com .





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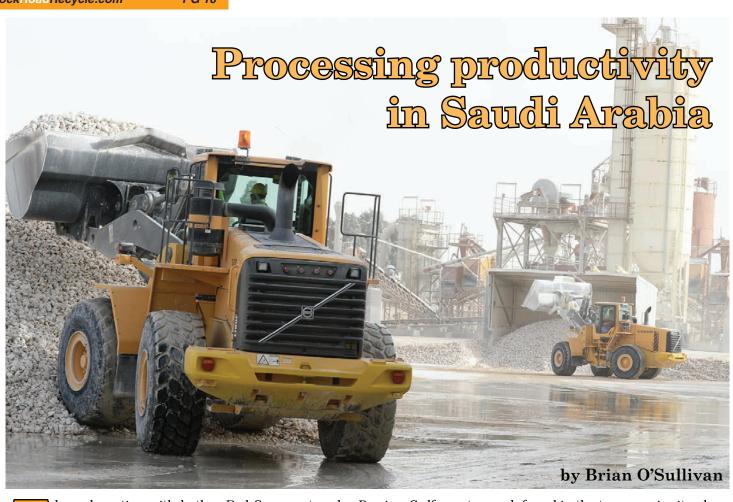


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PG 10



Family-owned company Saudi Dolomite is using Volvo Construction Equipment machines to increase productivity at its processing plant in Abqaiq, Saudi Arabia.

Left: Volvo wheel loaders are increasing productivity at a processing plant in Saudi Arabia.

Photos courtesy of Volvo

he only nation with both a Red Sea coast and a Persian Gulf coast, Saudi Arabia is the second-largest state in the Arab region after Algeria and the 13th in the world. Mostly made up of arid desert and mountains, the country is one of the world's top producers and exporters of oil but is also known for its abundance of other natural resources and raw materials. From gold to granite, zinc to zeolites, close to 50 minerals have been identified in the prosperous kingdom. Limestone is among the state's many minerals and helping to keep the supply of this material at an all-time high is longstanding company Saudi Dolomite.

Founded in 1981, Saudi Dolomite runs a processing plant in Abqaiq — which is located in the desert, approximately 50 miles (80 km) southwest of the capital of the eastern province of Saudi Arabia, Damman. Covering an area of 62 acres (250,000 m²), the plant processes 5,000 tons of raw material per day and runs its around-the-clock operation seven days a week. With a total of 280 employees, Saudi Dolomite's plant is considered a leader in terms of technology, productivity and quality, and the company attributes part of its success to its Volvo (Volvo CE) machines.

"We have a long relationship with Volvo," says Ali Al Mubarak, managing director at Saudi Dolomite. "We started out with two small BM wheel loaders over 30 years ago and due to their uptime and reliability, in what are really harsh conditions, I'd say we have grown this business together."

Smooth operation

Saudi Dolomite's crushing and calcination plant produces lime (pure calcium oxide) and dolime (calcium oxide with magnesium content) from limestone rock found in the two quarries it sub-contracts. Through a number of different kilns, the company is able to manufacture specific sized material to be used for key industrial chemicals needed in water desalination plants as well as for steel making within Saudi Arabia.

Volvo BM L150 and Volvo L180F wheel loaders are used for material handling and loading duties across the site. Required to work 12-hour shifts, the equipment has proved it's in it for the long haul with the machines passing the 50,000 hours mark. Saudi Dolomite also operates 35 Volvo on-highway trucks for shipping in addition to wheel loaders.

"The wheel loaders are strong and comfortable," says Joal Saclao, veteran operator at Saudi Dolomite. "The cabin environment protects me from the dust and heat, which makes a real difference to my work and wellbeing, as I spend up to 12-hours per day in this machine."

More than just business

Supplied by FAMCO, Volvo CE's dealer in the region, Saudi Dolomite is not only impressed with the way the wheel loaders are working, but with the service that comes alongside the equipment too. "I have no doubts about Volvo machines or Volvo as a company," says Al Mubarak. "Additionally, with FAM-CO as the dealer for construction equipment here in Saudi Arabia, I think it's fair to say that I'm happy for my business to depend on Volvo. Breakdowns are rare, the initial price when considering the overall lifetime cost is really favorable, and I firmly believe that with Volvo and FAMCO, we have a partnership rather than a basic supplier-customer relationship."



Volvo wheel loaders are used for material handling and loading duties across the site.



Required to work 12-hour shifts, the wheel loaders have clocked up more than 50,000 hours.



Construction jobs increase in 40 states between November 2016 and November 2017; 39 states added jobs between October and November

Forty states added construction jobs between November 2016 and November 2017, while 39 states added construction jobs between October and November 2017, according to an analysis by the Associated General Contractors of America of Labor Department data released in December 2017. Association officials noted that firms in most states are adding jobs amid expectations that demand will continue to grow thanks to new tax cuts and regulatory reforms.

"There were robust construction gains in most parts of the country as the economy continues to expand," said Stephen E. Sandherr, chief executive officer for the association. "Demand should continue to grow as newly enacted tax cuts and regulatory reforms stimulate even more widespread economic growth."

California added the most construction jobs (48,400 jobs, 6.2 percent) during the past year. Other states adding a high number of new construction jobs for the past 12 months include Florida (41,800 jobs, 8.7 percent); Texas (23,900 jobs, 3.4 percent); New York (12,600 jobs, 3.4 percent) and Pennsylvania (12,000 jobs, 4.6 percent). Nevada (13.8 percent, 10,900 jobs) added the highest percentage of new construction jobs during the past year, followed by Rhode Island

(13 percent, 2,400 jobs); New Hampshire (10 percent, 2,600 jobs); Oregon (9.7 percent, 9,100 jobs) and Florida.

Ten states shed construction jobs between November 2016 and November 2017 while construction employment was unchanged in the District of Columbia. Missouri lost the highest number of construction jobs (-6,500 jobs, -5.3 percent), followed by Iowa (-6,100 jobs, -7.5 percent); North Carolina (-3,100 jobs, -1.5 percent) and North Dakota (-1,600 jobs, -4.8 percent). Iowa lost the highest percentage for the year, followed by Missouri; North Dakota; Montana (-3.5 percent, 1,000 jobs) and South Dakota (-1.7 percent, -400 jobs).

Among the 39 states that added construction jobs between October and November, Texas added more than any other state (8,200 jobs, 1.1 percent), followed by Florida (6,200 jobs, 1.2 percent); New York (5,300 jobs, 1.4 percent); Indiana (4,900 jobs, 3.6 percent) and Pennsylvania (3,400 jobs, 1.4 percent). Alaska added the highest percentage of construction jobs for the month (4.5 percent, 700 jobs), followed by Indiana; Nebraska (2.6 percent, 1,300 jobs); Rhode Island (2.5 percent, 500 jobs) and West Virginia (2.5

percent, 800 jobs).

Eleven states lost construction jobs between October and November, while construction employment was unchanged in D.C. Maryland lost the most construction jobs for the month (-1,900 jobs, -1.1 percent), followed by Oklahoma (-1,400 jobs, -1.7 percent) and Connecticut (-1,300 jobs, -2.2 percent). Vermont (-3.2 percent, -500 jobs) lost the highest percentage of construction jobs, followed by Wyoming (-2.9 percent, -600 jobs) and Montana (-2.2 percent, -600 jobs).

Association officials noted that many construction firms have high expectations for the coming year. It is clear many firms expect the administration's efforts to reduce needless regulatory burdens and newly enacted tax cuts will further improve market conditions.

"This is one of the best business climates many firms have experienced in over a decade," Sandherr said. "While Washington needs to address infrastructure funding, workforce shortages and multi-employer retirement reforms, 2018 looks to be a strong year for the industry."

View the state employment data by rank and state. View the state employment map.



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PG 12

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New John Deere L-Series compact wheel loaders tackle toughest job site tasks

MOLINE, IL — Built for construction contractors, landscapers and rental center operators, the new John Deere 204L and 304L compact wheel loaders deliver higher productivity, increased uptime and lower daily operating costs. An evolution of the 204K and 304K models, the L-series models are built for tasks that require peak productivity in small spaces and over rough terrain.

"We're packing more productivity and efficiency into the wheel loader with the release of our L-Series models," said Drew Miller, product marketing manager, compact wheel loaders, John Deere Construction & Forestry. "Perfect for year-round use, these workhorses were designed to take on tough jobs from warmer summer months to snowy winter conditions, while enabling the use of a versatile attachments portfolio when you need them." The 62 horsepower (46 kW) 204L and 67 horsepower (50 kW) 304L models are equipped with Final Tier 4 Yanmar engines and fuel-efficient hydrostatic transmissions to keep noise to a minimum while still providing the productivity needed on the job. An optional ride control is now available, which reduces material spillage and makes for a smoother ride over rough and uneven terrain. Automatically activated front and rear differential locks provide increased traction in harsh conditions. The machine height of the 204L is also configurable to less than 8 feet, ideal for jobs with overhead space constraints.

The L-Series compact wheel loaders are equipped with features to minimize maintenance. Hydraulically released, self-adjusting park and service brakes, ground-level maintenance points accessibility and excellent cooler access provides safer and easier means of machine





The L-Series compact wheel loaders are equipped with features to minimize maintenance.

Photo courtesy of John Deere

upkeep. The new models also offer extended service intervals for engine oil/filter, final drives oil and hydraulic oil.

Creature comforts on the new 204L and 304L increase operator comfort and efficiency. Owners have the option of selecting an enclosed cab or open station, providing unmatched 360-degree attachment visibility. An improved interior cooling system keeps the operator comfortable in warmer temperatures.

Providing superior versatility, the L-Series compact wheel loaders are compatible with over 100 John Deere Worksite Pro attachments. Redesigned as a result of extensive customer and dealer feedback, the auxiliary hydraulic control used for attachments has been moved to the primary joystick to increase attachments productivity and ease of use. An optional LED lighting package provides a more reliable light source to increase productivity in low light conditions.

To learn more, visit <u>www.johndeere.com</u> or contact your local John Deere dealer.

Volvo L260H: Two full buckets for one full truck

The new L260H wheel loader from Volvo CE is a true global two-pass loader that is purpose-built to take on the toughest jobs, ensuring optimum performance, profitability and a 10 percent fuel efficiency improvement.

The latest addition to Volvo Construction Equipment's H-Series range is designed for heavy-duty applications. At 34-tonnes, the machine is purpose-built to load on-highway trucks in just two even passes.

When compared to previous models, the numbers speak for themselves. The L260H boasts 5 percent more horsepower and torque, 15 percent increase in payload and features larger bucket sizes. Add the revolutionary Volvo Co-Pilot with Load Assist, and intelligently redesigned lifting-arm system

and frame, and the result is greater fuel efficiency, faster cycle times, increased on-site productivity, maximum operator comfort and simpler serviceability.

Engineered for efficiency

Fitted with the latest 310 kW (416 hp) Volvo D13J engine, the H-Series wheel loader delivers a powerful and efficient performance. The Stage IV/ Tier 4 Final-compliant engine produces high torque - 1,728 ft lbf (2,343 Nm) — at low engine speeds to minimize emissions and fuel consumption. The passive regeneration automatically cleans the Diesel Particulate Filter during normal operation, without input from the operator or negatively impacting performance. The new-generation machine is also equipped with an efficient cooling fan that draws power only when needed. Lower fan speeds reduce noise, resulting in greater operator comfort and a lower total cost of ownership.

Fuel efficiency is enhanced by the Volvo-patented OptiShift technology, which integrates the Volvo Reverse By Braking (RBB) function and new torque converter with lock-up to reduce fuel consumption significantly.

Ideal for short cycle or truck loading applications, the RBB senses the loader's direction and slows the machine by automatically applying the service brakes instead of the torque converter, thereby increasing fuel efficiency, operator comfort and machine lifetime. The driveline lock-up, meanwhile, improves drive response, rim pull, incline performance and fuel efficiency.



The latest addition to Volvo Construction Equipment's H-Series range is designed for heavy-duty applications.

Photo courtesy of Volvo CE

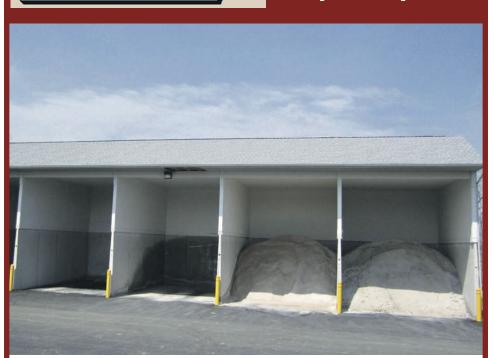
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Lift more, do more

Not only is the Volvo L260H one of the most efficient large wheel loaders on the market, it is also one of the most productive. The new load-sensing hydraulic system supplies power to the hydraulic functions only when required, resulting in greater on site productivity. Combined with features, including the new transmission, new converter and new rehandling bucket, the hydraulic system increases fuel efficiency by up to 10 percent, and offers better control over the load and attachment. Unlike previous models, the L260H does not use hydraulic pumps to lower the boom, but rather the combined gravitational effect and weight of the boom and the bucket - a feature that appears only on the L260H wheel loader.

The high pressure hydraulic system allows for faster cycle times and increased lift force, demonstrated by the lifting-arm system, which yields 66,453.5 lbf (295.6 kN) lift capacity. The lift arm has been redesigned to feature a lighter, stronger arm, capable of handling 15 percent more payload. The L260H features the proven Z-bar linkage for strong, powerful digging in hard materials, and delivers a high breakout force of 63,778.3 lbf (283.7 kN). The L260H also offers a dump height of 10.2 ft (3.1 m), aiding loading efficiency, as well as a 2 in (50mm) longer wheel base, further increasing stability.

The L260H can be specified with the optional Boom Suspension System (BBS) to enhance productivity by up to 20 percent. By absorbing shock and reducing the bouncing and bucket spillage when operating on uneven terrain, the BSS enables faster and more comfortable cycle times and extends the lifetime of



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the machine.

Profit in every bucket

PG 15

The L260H comes with two new buckets that are specifically designed to fit the machine - Volvo Rock bucket and Volvo Rehandling bucket. Optimized for the application, Volvo Rock and Volvo Rehandling buckets enable the wheel loader to perform at maximum capacity, helping customers save time, money and effort. The new buckets provide faster and more efficient bucket fill - and up to 10 percent better fuel efficiency.

With a 9.51 vd3 (7.3 m3) Volvo Rehandling bucket, the L260H quickly fills the truck in only two passes - two full buckets for one full truck. The new Volvo Rock bucket is larger than the model it replaces. The Rehandling kit optimizes the loader for stockpiling and loading processed material, such as sand and other aggregates.

Greater comfort, greater productivity

Built to work hard, the L260H is also designed to deliver a productive and comfortable work environment. The industry-leading Volvo Care Cab provides good visibility, comfort and features logically-grouped ergonomic controls, helping the operator achieve an efficient and productive operation. The spacious air conditioned interior is insulated from noise and vibrations - the latter thanks to viscous cab mounts and air suspended seat. And with state-of-the-art hydraulic controls, the operator is better able to customize the operation according to their preferences.

With a large expanse of glass, the ROPS/FOPS protected cab provides an unhampered view of the jobsite. Visibility can be further improved, thanks to the rear-view mirrors displayed on the revolutionary onboard Volvo Co-Pilot display, that when fitted with the optional Load Assist, provides operators with real-time insight into the operation.

Locked and loaded

The L260H wheel loader offers simple service and maintenance requirements that promote high uptime. The new frame provides easy access to conveniently grouped checkpoints. The tilting cab can be operated hydraulically - the first of its kind in its size class - and convenient ground-level access to the engine compartment. Accumulators are located on the exterior of the BSS for easy maintenance repairs. These features combine to help operators conduct maintenance and inspections more efficiently with less downtime, increasing productivity and performance.

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PG 16

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PG 17 RockRoadRecycle.com

CASE announces call for entries for third annual Dire States Equipment Grant

RACINE, WI — CASE Construction Equipment has issued a call for entries for the 2018 Dire States Equipment Grant. Originally launched in 2016, this is the third year that CASE has offered the grant, which provides one winning community with \$25,000 in free equipment use to help offset the costs of building or repairing a critical piece of local infrastructure. Representatives of municipal, county and other local governments are eligible to apply for the grant. Entrants will be asked to describe the project and provide a detailed assessment of how that local piece of infrastructure will benefit the community.

Submissions can be completed at <u>DireStates.com/</u> <u>Grant</u>. The deadline for entry is March 30, 2018, and winners will be announced in April.

Examples of suitable infrastructure projects include: road/bridge repair or construction, utility pipe replacement, erosion control along lakes and rivers, wastewater system improvements and park/recreational construction. All projects that fall within the 16 core categories of infrastructure, as identified by ASCE in its Infrastructure Report Card, will be considered.

Past Winners

Since its inception, this community-building grant has been awarded to two important infrastructure projects that have made a direct impact on the people of those communities — a bridge replacement in Pennsylvania and a crucial flood mitigation program in New York.

CASE 21



Examples of suitable infrastructure projects include: road/bridge repair or construction, utility pipe replacement, erosion control along lakes and rivers, wastewater system improvements and park/recreational construction.





2018 Hard Hat Expo: A favorite reminder of spring

by Jon M. Casey

Attendees are able to inspect equipment up close during the two-day show.

or construction contractors and industry professionals throughout New York and New England, one of the first signs of spring is the opening of the New York Hard Hat Expo. This year's 32nd annual event will be held April 4 & 5 at the New York State Fairgrounds in Syracuse, NY. With more than 100 exhibitors expected to fill the Center of Progress building and surrounding outdoor spaces, the Hard Hat Expo is designed with the construction contractor in mind. Show hours for the two-day event run Wednesday 8 a.m. to 4 p.m. and Thursday 8 a.m. to 3 p.m. Parking is free.

The history of the New York Hard Hat Expo dates back to a time when there were a number of similar events hosted throughout the Northeast every year. Over time, these other events eventually discontinued their activities while the Hard Hat Expo continued to grow. Today, it has become one of the largest springtime heavy equipment shows in the East.

The Hard Hat Expo, produced by the trade show division of Lee Newspapers, Inc., publishers of RockRoadRecycle.com (formerly Hard Hat News), began as a much smaller show. According to one company official, the first shows displayed 50 or so exhibitors. The Hard Hat Expo grew as exhibitors and contractors learned of the casual yet informative environment. One that gave them the time and ability to get together and discuss the features and benefits of the exhibitor's products and how they could help make the contractor's jobs more profitable and safer. Additional building venues and outdoor exhibits were added to accommodate the growth. Through the years, the numbers of exhibitors increased, hitting around 200 at the peak of the construction cycle in the mid-2000s.

Since then, the show has weathered a couple of recessions, and it continues to attract vendors from

across the U.S. National companies exhibit at the Hard Hat Expo as a way to acquire new dealers and customers alike. Often, companies introduce new products at the show. This year, with the strongest business economy in more than a decade, construction projects in both the public and private sectors offer new excitement to the industry overall.

Organizers say the early spring show dates have remained pretty much the same since the show's inception. More recently, dates have been locked in for the first week of April. This regular timeframe helps exhibitors and attendees to schedule their calendars for the big event.

Hard Hat Expo draws between 4,000 to 8,000 attendees depending on the

Photos by Colleen Suo

weather. Many of them often are in the position to make buying decisions for their companies or municipalities. "Sold" signs will often appear on equipment displayed at the Expo.

The Championship Skid Steer Rodeo is an attendee favorite. The popular rodeo event began between eight and 10 years after the first Hard Hat Expo. In the early days, this event was held as a backhoe rodeo.



Trophies and prizes for the Skid Steer Rodeo will be awarded at 2 p.m. in the ADMAR Supply Booth A1.



From signs to equipment, JC Smith has got you covered.







PG 19

Robert Tedesco, vice president of Gorilla Hydraulic Breakers discusses the advantages of his product with an attendee.

Within a couple of years, organizers added the skid steer rodeo as a second event, that took place on the second day of the show. Because of its popularity, the skid steer rodeo became the feature event and the backhoe rodeo eventually was discontinued.

The quick action and precision operation of the skid steers makes this event more popular with operators and spectators alike. Adverse weather conditions, when present, add to the excitement. This year, the Skid Steer Rodeo, sponsored by ADMAR Supply and RockRoadRecycle, will be held on Wednesday from 9 a.m. to 1 p.m. Trophies and prizes will be awarded at 2 p.m. in the ADMAR Supply Booth A1.

The New York State Fairgrounds is easily accessible from I-690 and is located at 581 State Fair Boulevard, Syracuse, NY 13209. For video clips of past events, visit the show website at www.hardhatexpo.com. Additional information is available from Show Manager Ken Maring at 1•800•218•5586.



Chris and Marty Caron (L-R) of American Safety and Supply, Inc. come loaded for bear every year and do a brisk business throughout the two-day event.



The Hard Hat Expo is a great experience for young and old alike.



Automation, Inc.'s Bob Dodge and SKF Lubrication Business Unit District Manager, Jason Sperry offer assistance to a customer at the Automation booth.

New roll out bucket helps operators reach new heights

MOLINE, IL — John Deere continues to grow its ever-expanding lineup of Worksite Pro attachments with the introduction of its new roll out bucket offerings. The RB72, RB84 and RB96 models are designed to best match the attachment to the machine. Optimized for G-Series Compact Track Loaders and K-Series Compact Wheel Loaders (RB84 and RB96 only), these buckets provide an additional 34 inches of dump reach when fully extended.

"Our new roll out buckets allow customers to lift higher and get more done in a workday," said Jessica Hill, program manager, global attachments at John Deere. "Our unique hydraulic design is ideal for customers loading light materials when a machine's lift height is limited."

The buckets utilize the compact wheel loader or compact track loader's auxiliary hydraulics to roll out and dump material in order to achieve a significantly higher dump height. Rather than requiring the machine hinge pin to be raised higher than the hopper for dumping, the roll out bucket pivots near its cutting edge for additional dump height. One hundred fourteen degrees of roll out provides for excellent material spillage control.

For added durability, the buckets incorporate highstrength, large-diameter pivot pins. To further enhance ease of use, the universal, self-cleaning Quik-Tatch[™] easy-attachment system allows operators to switch from one type of attachment to another within seconds. Three bucket widths are available: the 72-inch (1,829 mm) RB72, 84-inch (2,134 mm) RB84 and 96-inch (2,489 mm) RB96.

The new roll out bucket attachments are backed by John Deere parts, service and warranty coverage. To learn more, visit <u>http://www.JohnDeere.com</u> or contact your local John Deere dealer.



Rather than requiring the machine hinge pin to be raised higher than the hopper for dumping, the roll out bucket pivots near its cutting edge for additional dump height.



Optimized for G-Series Compact Track Loaders and K-Series Compact Wheel Loaders (RB84 and RB96 only), these buckets provide an additional 34 inches of dump reach when fully extended. Photos courtesy of John Deere

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John Deere adds SmartGrade[™] capabilities to the 650K crawler dozer and expands track configurations on multiple models

MOLINE, IL — John Deere Smart-GradeTM is now available on the 650K crawler dozer, joining the 700K, 750K and 850K models equipped with the technology. The integrated Topcon 3D-MC2 Grade Control System improves job site accuracy and work quality — delivering precise grading performance while eliminating vulnerable external masts and cables.

"The John Deere lineup of Smart-Grade dozers are generating buzz in the industry, and many customers were vocal about their need for a smaller dozer with the integrated grade control technology," said Andrew Kahler, product marketing manager, John Deere WorkSight[™]. "The introduction of the 650K SmartGrade answers those calls with all the same features and benefits as its larger dozer siblings. Customers also asked for multiple track configurations on all SmartGrade offerings, and we answered with the availability of low ground pressure (LGP) or the extra long track (XLT) configurations on all four models."

The 650K SmartGrade boasts a 104 horsepower (78 kW) EPA Final Tier 4 John Deere engine. The model's cab-forward designs make visibility, safety, and precise grading a priority. Exclusive Total Machine Control comes standard with this model, providing customers with personalization options and optimal comfort.

Since SmartGrade is integrated into the machines, it removes the need to install blade-mounted sensors and components daily, reducing setup time and allowing operators to get to work. Eliminating external cables to the masts reduces breakage, and the removal of the masts from the blade eliminates vulnerability to damage and theft.

The Auto SmartGrade feature, which is ideal for novice and expert operators alike, identifies the soil type and easily adjusts the machine to new terrain, without operators having to adjust the blades manually. Operators can easily select the application type (grading, cutting, spreading), load setting (high, medium, low) and soil conditions (hard, packed, loose). This feature stops slippage before it occurs by automatically lifting the blade. It also reduces the number of passes required to complete a job, reducing the wear of the undercarriage over time. John Deere dozers equipped with SmartGrade technology are approximately seven percent more accurate, than those with conventional masted systems.

All SmartGrade machines are now available in LGP or XLT track configurations. The LGP configuration is ideal for customers who operate on low ground pressure conditions, such as damp or wet terrains, or on a steep slope. LGP models contain a wider than usual track gauge that provides excellent stability and blade control for light grading jobs. In contrast, the XLT configuration is best for rocky terrains and can withstand heavier loads.

Fleet managers looking to get the most out of their SmartGrade dozers can rely on their John Deere dealers to provide Ultimate Uptime, featuring John Deere WorkSight. With Ultimate Uptime, owners receive predelivery and follow-up inspections that include five years of JDLink[™] telematics, machine health prognostics, remote diagnostics, programming capabilities and the ability to add dealer-provided uptime solutions to create a customized package.

For additional information and model-specific specifications, visit <u>www.</u> <u>JohnDeere.com</u> or contact your local dealer for a demo.



Since SmartGrade is integrated into the machines, it removes the need to install blade-mounted sensors and components daily, reducing setup time and allowing operators to get to work. Photo courtesv of John Deere

CASE from 17

In 2017, the grant was awarded to Quincy Township, Pennsylvania for use on replacement/repair work on the Old Forge Bridge — a deteriorating bridge in an important location that risked access to residents, as well as fire departments, ambulances, police, school busses and other essential components of the community. See the following video for more information: North America - 2017 Dire States Grant Winner.

In 2016, the grant went to Tioga County Soil and Water Conservation District (SWCD) in Tioga County, New York. The SWCD used the grant to supplement their Environmentally Sensitive Stream Maintenance Program to mitigate damages from flooding events, which have had considerable impact on the local infrastructure and community in recent years.

The grant is named for CASE's infrastructure awareness and advocacy initiative, Dire States, which evolved from a national tour in 2013 that focused on raising awareness of America's ailing infrastructure into active campaigning for specific programs and legislation.

All local governments in the United States are eligible to apply. A full list of rules and submission criteria are available at <u>DireStates.com/Grant</u>. For more information on Dire States, <u>visit</u> <u>DireStates.com</u>. For more information on CASE, visit <u>CaseCE.com</u>.



RockRoadRecycle.com

PG 22



AR/VR allows workers to visualize what they're learning instead of just reading it in a booklet.

by Todd Imming

onstruction has thrived on innovation and technological breakthroughs for millennia. Now is no different. Firms that embrace today's cutting-edge technology and techniques can shorten project timelines, cut construction costs, and promote a cleaner, more sustainable industry. The search for efficiency in terms of labor, materials and timelines has come with the territory in the construction industry from the moment someone first made a brick out of mud and then wondered if there was a better way.

We're way beyond that now, but the spirit remains the same. How can we speed up construction? What materials can we develop that make structures stronger? How can we incorporate increased sustainability into the work we do? How can we use the virtual world to our advantage? Here are some of trends we're seeing that are making a big impact on the industry.

Prefabrication

Building things elsewhere prior to their installation on a project site isn't necessarily new, but it's come a long way and is gaining in popularity as pressure ratchets up on project budgets and timelines.

You see this happening most on structures designed to contain repetitive elements. Think hospitals, hotels, jails, nursing homes—anything institutional. The technique has a few big advantages: Building elements in a factory before on-site assembly keeps more of the job out of the elements that could potentially delay construction.

With external conditions well-controlled, fewer workers are needed to build prefabricated parts compared to what would be needed on site.

It's safer to build these components prior to assembly, as workers aren't needed in dangerous positions or conditions.

Fewer workers are needed on site, too, because assembly is much easier than building piece by piece from the bottom up.

Expect to see more projects use prefabrication techniques—especially those on strict deadlines with tight budgets.

Building Information Modeling (BIM)

BIM has also been around a few years, but the technology improved to the point where contractors and owners are finding it extremely useful.

In fact, BIM is required as a cost- and time-saving element of all government-funded structures in the

Six new technologies for the construction world

United Kingdom. It's against the law there not to use BIM.

BIM software allows designers to produce 3D mockups of a planned structure that also incorporate cost and time information. Variables—such as construction methods or different materials—can be manipulated in the software to compare the costs over time of differing techniques or materials used.

Virtual Reality / Augmented Reality It's not just for video games.

Construction companies have begun using VR/ AR tech to enhance worker safety training. It allows workers to visualize what they're learning instead of just reading it in a booklet. That reinforces how serious construction site hazards can be, and has made work sites safer.

Firms also use apps that tie VR/AR tech to their BIM software. This allows contractors and owners to do virtual walkthroughs of a structure long before it's complete. That allows owners to make more informed design decisions earlier in the construction process, saving time and cutting costs.

Permeable Concrete

You've heard the term "concrete jungle," and it's more than just unsightly. Urban areas have long dealt with the negative effects of concrete structures that change the way the land handles rainwater.

Overuse or inappropriate design of roads or other concrete structures has taxed municipal sewer systems and forced local governments to spend precious public resources on runoff mitigation. It can be avoided.

Permeable or porous concrete uses larger stones and less sand. It's just as strong as traditional concrete but contains between 15 and 20 percent empty space. The concrete allows rainwater to seep down into the ground as it normally would instead of pooling or running off. That's shown to take the burden off municipal sewer systems, extending their life, saving repair costs, and eliminating the need for costly upgrades.

Fly Ash Bricks

If you've driven past a coal-fired power plant, you're likely to see two kinds of piles: Heaping mounds of

coal ready to burn, and heaping mounds of waste ash from fuel already used.

Waste ash is typically stored in "ash ponds" that do nothing but sit, posing serious risks to groundwater. That was the case in India, where the rapid expansion of coal-fired plants prompted concerned locals to wonder whether there was a way to use the mountains of coal ash quickly rising across the country.

Fly ash bricks are lighter and stronger than traditional bricks or cinder blocks. They're also cheaper to make. It's helped mitigate the fly ash problems in India while also making it cheaper to build dwellings for a rapidly increasing population.

The idea is catching on in the U.S., too, as firms are capitalizing on the chance to produce better-quality building materials while lessening the environmental impact of ash ponds.

Solar Roads and Materials

Pilot programs underway throughout the world show that roads made of extra-tough solar panels can work.

The technology is expensive and has yet to be perfected, but the potential benefits of dual-use materials such as solar roads has proved too attractive to abandon. The maturation of technology that allows electric vehicles to charge up while in contact with solar roads sweetens the pot.

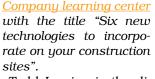
And it isn't just about rights of way. Roof-mounted solar panels are great, but if an entire structure can also generate electricity, it's that much more clean, free energy pumped into the grid. Solar-capable building materials may put the enterprising fly ash brick makers out of business, but they may also help end our reliance on fossil fuels for power generation.

The Future Favors the Bold

Some of these technologies are widely in use. Some remain largely experimental. Your next building might not be made entirely of solar panels.

But it's important to keep a keen eye looking forward. It will put you—and your customers—in prime position to take advantage of a future where anything is possible.

This article was originally published on The Korte



Todd Imming is the director of marketing for The Korte Company.

Pilot programs underway throughout the world show that roads made of extra-tough solar panels can work.

Photos by Colleen Suo





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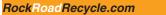




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Jennifer Sturm (center) flanked by her parents, Maria and Jay, is poised to expand operations after a recent transition of ownership.

Photo by Brian Johnson



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Monstrous undertaking: making the Monster Truck Jam



Having the right equipment is critical. The John Deere 544K loader is a prime mover that's used to spot dirt and knock down piles. Photos courtesy of John Deere

This article originally appeared in the Winter2017 issue of John Deere's The Dirt.

Preparations for the Moline, IL weekend event at the iWireless Center® began in a late-April downpour. For nearly six hours, 12 dump trucks deposited 1600 cu yards of wet Midwest clay on the concrete

arena floor where a dirt crew of four laid down the track and sculpted the ramps and jumps that form the center stage. It's a unique undertaking that'll be repeated numerous times at indoor arenas and outdoor stadiums in more than a dozen countries. A division of FELD Entertainment®, the Tour's 44-truck stable is the worlds largest racing fleet. With names such as Zombi[™] Gravedigger©, Max-D[™], and El Loco Toro®, the caricature-like vehicles and their personable drivers are the stars of the show — each with their own dedicated fan following. Their on-track prowess is undeniable, but if you're a "dirt guy", you'd be equally impressed by the behind-the-scenes prepara-

tion and mad skills of the people who put it all together.

Watching the construction crew do their thing, it's obvious this isn't their first rodeo. Resembling another [one-time] well-choreographed FELD event (can you say Ringling Bros. and Barnum & Bailey © Circus?), there's something going on everywhere. Dump trucks are coming and going, piling their payloads before a 544K loader and 550K dozer that are building the jumps and track base. A 333E CTL positions steel ramps for the jumps, and they do earthmoving for a living, and they come along on the tour. They work well together, can run anything, and are very efficient at it."

Having the right equipment is critical. The John Deere 544K loader is a prime mover that's used to spot dirt and knock down piles when building the track, stack dirt for jumps and table tops, and load-out trucks during cleanup. "Its reach, stability, power, and speed make it ideal for our kind of work," explains Carmack.

Visibility is also a big deal. "There's usually four of us working together, and we need to know where everyone is at all times," says Carmack. "Mirrors are well placed and rear visibility is really good. And with the booms up, the view ahead is just as clear, letting you easily see to the right or left."

Takin' it easy

Every venue has its own unique challenges. For example, in outdoor stadiums the playing surfaces have to be protected. On natural-grass fields, work begins in the cool of the night. To help preserve the turf, a geotech material is placed, followed by thousands of sheets of half-inch plywood, and then the dirt. After the show, everything is removed as quickly as possible. "We have a small window of opportunity, because you can kill the grass," explains Carmack.

Taking the event indoors eliminates the turf issue but often creates others. Surprisingly, the one common obstacle is the weather. "Inside or out, we need dry dirt, which isn't what we have this weekend," says Carmack. He and his crew put in extra hours at the iWireless Center, setting up large fans around the floor and working the wet dirt to help dry it out.

Speed's the need

We've got to get these arenas ready as soon as we can, and when the show's over do the cleanup just as quickly," explains Carmack. "We push the machines to the max and prefer equipment that runs smooth and cycles fast." Comfortable cabs help make long days more tolerable. "Especially when we're loading out," concurs Carmack. "Eight-to-15-hours are typical, and the 544k's cab is super comfortable, with good armrests and great back support. Even the 333E's interior is roomy, so we don't feel claustrophobic." FELD also employs a 544K loader and 333E CTL to set-up and maintain the track at their Paxton, IL training facility. As at numerous Monster Jam events throughout the Midwest, John Deere dealer Martin Equipment supplies and maintains the equipment. "They do a fantastic job of supporting us," says Carmack.

The former paramedic and motorcycle racer considers himself fortunate to have been orchestrating events such as Monster Jam for 23 years. "I never really saw myself doing this," he says. "Like many of my crew, I grew up playing with Tonka ${\ensuremath{^{\text{TM}}}}$ trucks. We're still a bunch of kids playing in the dirt – except now we have really big toys and sandboxes."

FELD Entertainment is serviced by Martin Equipment of Illinois.



The caricature-like vehicles and their personable drivers are the stars of the show — each with their own dedicated fan

All-star lineup "My team of operators is amazing," says Senior Event Supervi- following. sor Steve Carmack. "Most of them have their own companies or

and compact the structures. Dirt and props are moving, machines are flying and everybody is "locked in" - fully aware of their part in the process, as well as the equipment and arena around them. It's almost as if they can read each other's minds.

Modest growth for 2018 transportation construction market, ARTBA forecast finds

WASHINGTON, DC — The U.S. transportation infrastructure market is anticipated to rebound slightly next year, following a 2.8 percent drop in 2017, according to the American Road & Transportation Builders Association's economic forecast released Nov. 30.

Total domestic transportation construction and related-market activity is forecast to reach \$255 billion in 2018, a year-on-year increase of 3.2 percent after adjusting for project costs and inflation. The 2017 market performance is expected to come in at \$247.1 billion.

The 2017 market drop was largely driven by the overall national decline in state and local highway and bridge spending, which is expected to be down 6.4 percent and 7.7 percent, respectively.

ARTBA Chief Economist Dr. Alison Premo Black shared the findings in her multimodal forecast during a webinar for analysts, investors, transportation construction market executives, and public officials.

Although the overall U.S. transportation infrastructure market will see modest growth in 2018, the situation will likely vary significantly by state and region, according to Black. The market is forecast to grow in 20 states and Washington, D.C., and slow in 23 states, with the remaining seven expected to be relatively flat.

The largest growth is anticipated in California, Florida, Hawaii, New York, Virginia and Washington, ARTBA says. The association anticipates a slowdown in new work in Arizona, Colorado, Delaware, Maryland, Nevada and Oklahoma. The Minnesota, New Jersey, Ohio, Texas and Iowa markets are anticipated to be steady.

Federal highway funding of state DOT programs provided by the 2015 FAST Act will continue to show inflationary growth in 2018, providing a degree of market stability in every state. increases in state and local revenues for transportation purposes in a number of states over the past several years, some of that revenue is dedicated to debt reduction or has been delayed from reaching the transportation market due to state budget issues. These factors, combined with receding state markets due to completion of bond programs or declining or inflation-eroded state revenues, continue to cause a drag on the overall U.S. transportation infrastructure market.

The bright spots in the market continue to be airport terminals, public transit, Class 1 railroads and private driveway, street and parking lot construction associated with residential and commercial developments. Among the findings in Black's forecast:

Public & private highway, street & related construction

The real value of public highway, street and related work by state DOTs and local governments — the largest market sector — is expected to increase a modest 2.4 percent in 2018 to \$58.1 billion after falling 6.4 percent to \$56.8 billion in 2017.

Six highway-related public-private partnership (P3) projects came to financial close in 2017, totaling over \$7.5 billion in investment.

Work on private highways, bridges, parking lots and driveways will increase from \$62.4 billion in 2017 to \$63.3 billion in 2018, and will continue to grow in the next five years.

Bridges and tunnels

With some major projects, such as the New NY Bridge and Ohio River Bridge reaching conclusion, the pace of bridge work has slowed. The public bridge and tunnel construction market is expected to increase slightly in 2018, to \$31.3 billion. Work in 2017 is expected to be \$30.5 billion, down from \$33.1 billion in 2016.



Railroad, subway & light rail

Public transit and rail construction is expected to grow from \$20.3 billion in 2017 to \$21.3 billion in 2018, a 4.6 percent increase.

Subway and light rail investment is expected to reach a new record level, increasing from \$7.7 billion in 2017 to \$8 billion in 2018.

Airport terminals and runways

Airport terminal and related work, including structures like parking garages, hangars, air freight terminals and traffic towers, is expected to increase from \$11.7 billion in 2017 to \$13.4 billion, a 14 percent increase.

Runway work, which has been down the last few years, is forecast to increase from \$3.6 billion in 2017 to \$4.1 billion in 2018.

Ports and waterways

The value of port and waterway investment is expected to remain flat at the \$1.8 billion level. Construction activity in 2017 was down from \$2 billion in 2016 and \$2.4 billion in 2015.

The full forecast can be purchased at www.artbas-tore.org .

ARTBA's proprietary econometric model takes into account a number of economic variables at the federal, state and local level. The forecast measures the public and private value of construction put in place, published by the U.S. Census Bureau. The ARTBA estimate for the private driveway and parking lot construction market are separate.

Established in 1902, Washington, D.C.-based ARTBA is the "consensus voice" of the U.S. transportation design and construction industry.

Black notes that although there have been significant

Crane Industry Services announces simple crane operator evaluation and documentation process

To assist employers in evaluating and documenting crane operator competency, Crane Industry Services, LLC introduces a new and efficient process called Qualified Crane Operator Evaluations[™] (QCOE). The process gives employers valuable insights not available in certification testing by identifying specific operator strengths and skills that need to be improved.

Competency is defined as one who is capable of identifying existing and predictable hazards in the surroundings or working conditions, and who has authorization to take prompt corrective measures to eliminate them. When it comes to crane operation that may entail familiarity with the type and configuration of the crane, hand signals, rigging and ground conditions, among other factors.

The QCOE process graphs areas where knowledge and skill are strongest and where the operator and supervisors would benefit from more training or experience that the employer can provide or can be obtained through a reliable source. Employers receive recommendations for improved performance and documentation for current compliance requirements. The process lowers costs and hassles associated with certification testing. Crane Industry Services travels to the crane and operator's location to conduct tests and documents each operator's qualifications. "Excuses don't work when an employer is behind on a job schedule or over budget due to skill levels that are lower than needed to complete timely, quality, safe work. QCOE also helps employers fulfill the 'employer duty' to provide documentation to OSHA regarding qualification of operators, but the main benefit is safer, higher quality work," said Debbie Dickinson, CEO of CIS. For more information: www.centeredonsafety.com

or 770•783•9292.



Sample results tracking an individual's record from novice to qualified crane operator. CIS has developed more than 200 exercises, many of which can be performed on a simulator, for demonstrating skills related to crane and lifting equipment operation.

Graphics courtesy of Crane Industry Services

Skill Domains: Depth, load control following designated path, load movement and placement accuracy

Skills	Minus Points	Total Deductions	100 (-) Deductions	
Connect to load	5 for two or more attempts to place hook			
Move load through designated course(s)	10 each time load travels outside designated lanes; 50 if load makes contact with planned obstacles			
Load Placement	10 each time pipe travels outside the lane and/or 5 each time pipe makes contact with cone			
Minor Contact	10 each			
Major Contact	30 each			

ough Terrain Unload Trailer: Hook onto each target on first attempt and place in esignated spot in one attempt. 100.

Unload trailer contents: 8 concrete blocks, 4 pallets and 1 power generator. 8 at same depth, 4 at carrying depth and 1 confined space.

Skills Domains: Receptive accuracy, speed, operations (boom up, hoist down, swing, lower load, raise boom, swing and stop)

CIS

Example of a Skills Evaluation report produced for the QCOE. Exercises, written tests and practical exams are used to evaluate the qualification of a crane operator. CIS tracks the individuals and maintains records with recommendations for the organizations to improve ability and safety.

February 2018

PG 27

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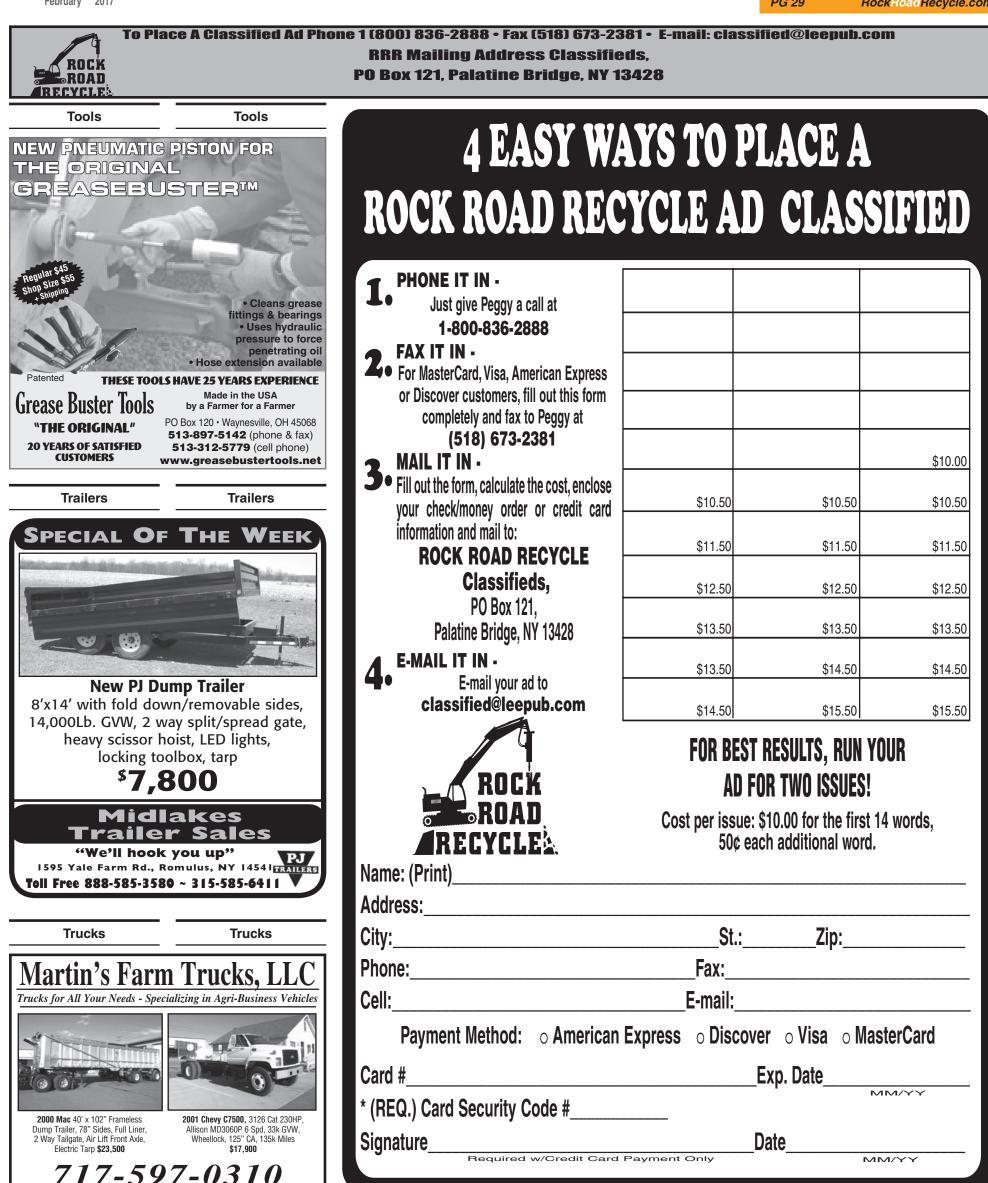
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PG 28



PG 29

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APRIL 4-5, 2018

Wed. 8AM-4PM • Thurs. 8AM-3PM NYS Fairgrounds • Syracuse, NY

PG 30

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In August of this year, Caterpillar

communicated a new corporate strategy to its global dealer network - a

strategy led and defined by a new pur-

pose statement, "Our solutions help

our customers build a better world."

Through partnerships with Cat® deal-

ers and investment in digital-enabled

solutions and services for the after-

market, Caterpillar is one step closer

With the objective of being the low-

est lifecycle cost provider, Caterpillar

is committed to offering a full range of

options and solutions to serve different

customer needs. This includes height-

ened focus on improving customers' online experience, expanding Custom-

er Support Agreement (CSA) services

and digital connectivity to improve up-

time, asset utilization and machine life

management, and the launch of the

new parts offering, Yellowmark[™], A

"We are taking steps to build on the

to fulfilling this purpose.

Caterpillar Brand.

Caterpillar grows service and repair choices, including the launch of **YellowmarkTM parts**

dealers to deliver a step change in our

aftermarket offering," said Nigel Lewis,

chief marketing officer & vice president

of Caterpillar Inc. "By providing cus-

tomers with expanded technology, ser-

vices and repair/rebuild solutions, we

are able to present them with a grow-

ing suite of solutions aimed at provid-

ing not only a broader selection, but

affordable options to maintain their

equipment and keep it at work. That's

important to them and central to what

Introducing Yellowmark,

a Caterpillar brand

Caterpillar announced plans to intro-

duce a new tier of repair and replace-

ment parts to support the small- and

medium-sized equipment under its

Construction Industries umbrella. Yel-

lowmark, A Caterpillar Brand, parts

will offer an alternative for customers

we strive to do on a daily basis.'

Caterpillar experience. Whether onlooking for reliable, value-priced parts, line, through our new services or new conveniently available from their local products, we are working with our Cat dealer.

> "Many of our Building Construction Products (BCP) and Global Construction & Infrastructure (GCI) equipment customers have given us feedback that their operations need more options on repair and replacement parts as they seek the right balance between convenience and reliability at a lower cost, especially for older equipment," said Lewis. "We listened, and through Yellowmark we will provide a range of products that respond to these needs. Developed by Caterpillar and sourced conveniently through the Cat dealer, Yellowmark repair and replacement parts build on the current range of Caterpillar new and remanufactured solutions to provide more options to customers as they work to optimize the owning and operating costs of their fleets."

> Yellowmark parts will encompass and expand on Cat Classic Parts line.



From skid steer loaders and compactors to wheel loaders, excavators and articulated trucks, the Caterpillar BCP and GCI lines provide the machine solutions companies need to build successful businesses. When they want aftermarket solutions, Cat equipment customers need look no further than their Cat dealer for a range of parts to fit their needs — whether it's premium Cat Genuine or Cat Reman parts lines or the new Yellowmark brand for customers looking for a balance between reliability, affordability and convenience.



Caterpillar announced plans to introduce a new tier of repair and replacement parts to support the small- and medium-sized equipment under its Construction Industries umbrella. Photo courtesy of Caterpillar



the industry

People in

PG 31

the industry

People in

E-Z Drill VP of Sales, Randy Stevens retires

PERRY, OK — E-Z Drill, a leading manufacturer of concrete drilling and doweling equipment, announces the retirement of Randy Stevens, vice president of sales. Stevens has been with the company for more than 28 years, joining just two years after E-Z Drill was founded.

"It's been fun to watch E-Z Drill evolve from the small startup it was when I joined into the well-known and respected business it's become today," Stevens said. "It's also an honor to have had a hand in making that happen."

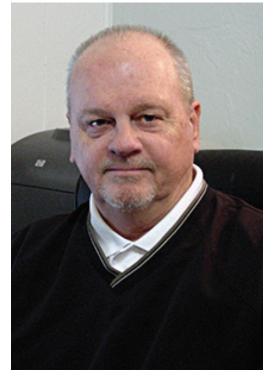
Since day one, Stevens has maintained a sales role within the business, helping dealers and contractors across North America and abroad achieve solutions to their concrete drilling challenges. He's seen the company's line of drills grow from just a couple of standard drills to a complete line of drilling solutions, including on-grade and slab-rider drills with one to five gangs as well as self-propelled machines and vertical drills.

"It's not easy to make a name for yourself in this industry," said Rick Walstad, E-Z Drill president and CEO. "But keeping our customers the key focus is what has driven our success, and we credit Randy for a huge part of that." Stevens especially enjoyed seeing E-Z Drill units succeed on high-profile projects, from U.S. Steel in Pittsburgh to the Indianapolis Speedway to San Diego's Coronado Bridge. He also helped contractors secure the equipment they needed to quickly complete large-scale airport and air base projects around the globe.

"The needs of the industry are always changing, but E-Z Drill is a proactive company. We do what needs to be done to help contractors finish their jobs quickly and cost-effectively. That's the culture," Stevens said. "I'm excited to sit back and see what the future holds for E-Z Drill."

E-Z Drill, Inc. announces the retirement of Randy Stevens, vice president of sales.

Photo courtesy of E-Z Drill



Northern Virginia construction exec elected National Chair of ABC

WASHINGTON, DC — George R. Nash Jr., director of preconstruction for Branch & Associates in Herndon, VA, began his one-year term as chair of Associated Builders and Contractors (ABC) on Jan. 1, 2018. He leads the 21,000-plus member association's executive committee and board of directors, guides its national initiatives and serves as its spokesperson.

Nash has more than 35 years of experience in the construction industry and has worked in every facet of commercial construction, including estimating, procurement, operations, preconstruction and business development. He has managed a multitude of projects ranging from small and large commercial buildings to public stadiums.

"George's experience has prepared him to lead the industry as we cultivate the construction workforce of the future, defend the principles of free enterprise and deliver high-quality, safe construction projects," said ABC President and CEO Mike Bellaman. "George understands the critical role of commercial and industrial construction companies in growing the economy and creating jobs as our members begin to see the benefits of recently passed tax reform legislation and regulatory relief from the Trump administration."

Previously, Nash served as ABC chairelect in 2017 and as the Mid-Atlantic region vice chair in 2016 and 2015. The Mid-Atlantic region includes members and chapters in Delaware, the District of Columbia, Maryland, Virginia and West Virginia. He was the 2014 chair of the ABC National Political Action Committee and the chair of the ABC Metro Washington Chapter in 2010.

Nash has also held prior positions in a variety of construction and community groups, including being a member of the Town of La Plata Green Building Committee, a mentor and advisor for the ABC Metro Washington Leadership Development Program, a member of the Charles County Chamber of Commerce Legislative Committee and a board member of the Northern Virginia Transportation Alliance.

Nash earned a bachelor's degree in business administration from Towson University.

George R. Nash Jr.; director of preconstruction for Branch & Associates in Herndon; VA; began his one-year term as chair of Associated Builders and Contractors (ABC) on Jan. 1, 2018.



CALENDAR OF EVENTS

Feb 1, 2018 **MSHA Annual Refresher** Lake George, NY. \$99 pp. For more information visit www.catamountconsultingllc.com or call 855-861-7866. Feb 1, 2018 NYC Buildings Update program (sponsored by AGC NYS and NYC Buildings Dept.) Downtown Assoc., 60 Pine St., NY, NY Register online: https://tinyurl.com/ya9k7ano Feb 3, 2018 **Continuing Education 2A/1C** Call Angela at 508-966-4100 or email angela@cranes101.com to register. Feb 7, 2018 **Paving Professionals Workshop** NYS Fairgrounds Science & Tech Bldg, 581 State Fair Blvd, Syracuse NY Schedule and Registration: http://www.traceyroad.com/paving/ Feb 7-10, 2018 National Pavement Expo Huntington Convention Center, Cleveland, OH. (https://www.nationalpavementexpo.com) Feb 10, 2018 License Prep 2A/1C/3A Call Angela at 508-966-4100 or email angela@cranes101.com to register. Feb 11-14, 2018 NAPA 2018 Annual Meeting Hilton Bayfront Hotel, San Diego, CA. For more information visit http://tinyurl.com/y9ngaqj8 Feb 12-14, 2018 National Crane Certification/Truck National Crane **Operator Certification** Call Angela at 508-966-4100 or email angela@cranes101.com to register. Feb 17, 2018 License Prep 2A/1B Call Angela at 508-966-4100 or email angela@cranes101.com to register. Feb 18-20, 2018 IEDA 2018 Annual Meeting & Expo Omni Orlando Resort at ChampionsGate Registration information and forms at: http://iedagroup.com/orlando-annual-meeting/ Feb 20-24, 2018 LICA 2018 National Winter Convention Charleston, SC. For more information visit www.licanational.com/files/Charleston-Agenda.pdf Feb 21-14, 2018 NAPA 2018 Annual Meeting San Diego, CA. Visit http://tinyurl.com/ydhastfv to register or for more information. Feb 22-23, 2018 The 2018 Horizontal Directional Drilling Academy Tempe, AZ. For more information visit www.hddacademy.com Feb 22-24, 2018 **Demolition 2018** Austin Convention Center, Austin, TX. For more information visit www.demolitionassociation.com/convention Feb 26-28, 2018 2018 AGC Equipment, Technology & Construction Solutions Expo Hyatt Regency, New Orleans, LA. For more info email exhibitsales@agc.com or call 202-768-7917.

Mar 3, 2018 Continuing Education 2A/1C Call Angela at 508-966-4100 or email angela@cranes101.com to register. Mar 5-6, 2018 NYS HMA Density Testing Inspector **Certification course** Newburgh, NY. For details https://www.agcnys.org/ wp-content/uploads/2018-AGC-DTI-Brochure.pdf Exam held second day of course. Mar 6, 2018 **MSHA Annual Refresher** Bluestone Association TBD. \$99 pp. For more information visit www.catamountconsultingllc.com or call 855-861-7866. Mar 6-8, 2018 AGG1 - Aggregates Academy and Expo George R. Brown Center, Houston, TX. For more information call 703-526-1071 or email mnercesian@nssga.org. Mar 6-8, 2018 World of Asphalt Show and Conference Houston, TX. For more information call 800-867-6060 or email sales@worldofasphalt.com Mar 6-9, 2018 The Work Truck Show Indiana Convention Center, Indianapolis, IN Mar 7, 2018 **MSHA Annual Refresher** Malta, NY. \$99 pp. For more information visit www.catamountconsultingllc.com or call 855-861-7866. Mar 8, 2018 **MSHA Annual Refresher** Turning Stone Casino, Verona, NY. \$99 pp. For more information visit www.catamountconsultingllc.com or call 855-861-7866 Mar 9-11, 2018 Masonry Educators' Workshop University of South Florida : details at https://masonrysociety.org/2018mew/ Mar 10, 2018 License Prep 2A/1C/3A Call Angela at 508-966-4100 or email angela@cranes101.com to register. Mar 14-16, 2018 National Crane Certification/Knuckle/Boom Truck **National Certification** Call Angela at 508-966-4100 or email angela@cranes101.com to register. Mar 14, 2018 **MSHA Annual Refresher** Newburgh, NY. \$99 pp. For more information visit www.catamountconsultingllc.com or call 855-861-7866. Mar 15, 2018 **MSHA Annual Refresher** Castleton, NY. \$99 pp. For more information visit www.catamountconsultingllc.com or call 855-861-7866. Mar 17, 2018

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Mar 22, 2018 MSHA Annual Refresher Plattsburgh, NY. \$99 pp. For more information visit www.catamountconsultingllc.com or call 855-861-7866.

Mar 24, 2018 Signal person & Rigging Training Call Angela at 508-966-4100 or email angela@cranes101.com to register. Mar 25-29, 2018 North America No-Dig Show / Trenchless Technology **Exhibition and Congress** Palm Springs Convention Center. For more information call 330-467-7588 or visit www.nodigshow.com Apr 7, 2018 **Continuing Education 2A/1C** Call Angela at 508-966-4100 or email angela@cranes101.com to register. Apr 12, 2018 **MSHA Annual Refresher** Albany, NY. \$99 pp. For more information visit www.catamountconsultingllc.com or call 855-861-7866. Apr 14, 2018 Licensing Prep 2A/1C/3A Call Angela at 508-966-4100 or email angela@cranes101.com to register. Apr 18-20, 2018 **National Crane Operator Certification Medium** Call Angela at 508-966-4100 or email angela@cranes101.com to register. Apr 21, 2018 License Prep 2A/1B Call Angela at 508-966-4100 or email angela@cranes101.com to register. Apr 24-26, 2018 Waste Expo Las Vegas Convention Center. For more info call 303-998-9068 or visit www.wasteexpo.com . April 26-27, 2018 **NYS HMA Density Testing Inspector Certification course** Newburgh, NY. For details and registration https://www.agcnys.org/wp-content/uploads/2018-AGC-DTI-Brochure.pdf Exam held second day of course. May 15-16, 2018 **TCC Fly-In** Grand Hyatt Washington, Washington, DC. For more information visit http://tinyurl.com/ybzxgys5. May 17-18, 2018 NYS HMA Density Testing Inspector Certification course Newburgh, NY. For details https://www.agcnys.org/ wp-content/uploads/2018-AGC-DTI-Brochure.pdf Exam held second day of course, June 18 & 19 **Tower Cranes North America conference** Miami Marriott Biscayne Bay For complete schedule and registration visit: http://www.khl-tcna.com/ Jul 8-11, 2018 **NAPA Midyear Meeting** The Fairmont Copley Plaza, Boston, MA. For more information visit www.asphaltpavement.org Aug 13-14, 2018 **NYS HMA Density Testing Inspector Certification course** Newburgh, NY. For details https://www.agcnys.org/ wp-content/uploads/2018-AGC-DTI-Brochure.pdf Exam held second day of course.

Oct. 17-19, 2018

GIE+EXPO (Green Industry & Equipment Expo) Kentucky Exposition Center. For details : http://www.gie-expo.com/ RockRoadRecycle.com

PG 34



Senn Blacktop: solving the puzzle of RAS

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February 2018

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Volume 27 No. 4

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PG 2



Darrin Senn and dad, Steven with a few of their many pieces of asphalt machinery. The operation owns enough duplicates of each type of machine to supply all 5 of their paving crews when they are working simultaneously, as they frequently are at this busy company whose paving services are in high demand. Photos by Bill Weaver

hile RAP is a widely used ingredient in new asphalt mixes, the use of Reclaimed Asphalt Shingles (RAS) can pose problems for the asphalt producer. Far too many ripped asphalt shingles end up in landfills, instead of becoming a valuable resource for new asphalt mixes. RAS contains a significant amount of asphalt, averaging around 20 percent, reducing the need for new AC, and is a source for sand and fiberglass fibers, which some believe strengthens the asphalt made with them.

Some asphalt producers have successfully worked through the difficulties of using RAS, which with care, are not insurmountable. Senn Blacktop in Chippewa Falls, WI is one such producer. Wisconsin approved the use of RAS in 1999, and Senn Blacktop jumped in on the "ground floor," working with the DNR and area roofers in the early 2000's to solve RAS's inherent problems. RAS is abrasive to grind and difficult to size accurately. Once ground, it tends to become sticky and clump together in summer heat, and to compact if piled, stymying loading and conveying in the asphalt plant. Ground shingles also tend to absorb moisture when exposed to rain. Drying that moisture can consume extra fuel.

Father and son, Steven and Darrin Senn, co-owners of Senn Blacktop at that time, put a lot of time and thought into solving the problems posed by RAS. Both were committed to using recycled materials as much as possible, and they stuck with the job until they got it right.

When we visited the company in May of 2017, their RAS that

asphalt plant, far from being clumped and sticky and containing off-size pieces, was as friable as good garden soil, a most impressive achievement. "It takes a lot of money to get it to that state," commented Darrin, now owner and President, "but it is worth it. It's the only way to get the RAS through the asphalt plant without problems." As we watched him sift handfuls of RAS through his fingers, it had the appearance of garden loam.

The Senns arrived at their process in a series of steps. One of the most important was the choice of a purpose-built asphalt shingle grinder. The Senns chose a Rotochopper, and have been very pleased with its ability to handle and to accurately and consistently size (to 3/8 inch minus), the tough, abrasive material.

"The paving crew didn't like it at all," commented Steven, "when they found little pieces of shingle --little

chunks that were not powdered - from our previous grinder showing up in the asphalt. They said, 'This just doesn't work.' Now, with the Rotochopper, this is no longer a problem.

The Senns solved another piece of the RAS puzzle, its stickiness, by putting the ground RAS under roof, protected from the weather and heat of the sun. They also decided on a second step to minimize stickiness: they grind fresh RAS every two weeks, grinding only the amount they expect to use before the next grinding, rather than grinding a larger pile to last longer. The frequent grinding of fresh product is helpful, they have found.

Some asphalt producers avoid dealing with all the problems of preparing RAS by buying their RAS ready-to-use from a subcontractor. One such company, Southwind RAS, with many outlets for their RAS in Illinois, also now routinely stores their ground RAS under roof, using ClearSpan structures for this purpose. The use of under-roof storage for ground RAS helps cut down on both stickiness in the asphalt plant and water absorption, as more and more processors of RAS are discovering.



was ready for use in their own Jeff Novak, Quality Control Manager, and Darrin Senn, owner, beside a stockpile of torn off asphalt shingles. Darrin Senn accepts shingles without charging a tipping fee. "We can use all we can get," he commented.

PG 3

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In addition, the Senns invest the time and labor to handle the RAS one more time before it is used in their asphalt plant. They load the freshly ground material and run it through their Terex Finlay 790 Single Screen Trommel, using a ¼-inch screen, then convey it under roof again for very brief storage before it is transported to its bin at their own asphalt plant on site. "We no longer have issues with clumping or bridging. The RAS meters smoothly onto the conveyors."

Senn's fully computerized, energy efficient, continuous flow asphalt drum plant, new in 2011, is designed for the use of recycle. "The covered conveyors for the RAS and the RAP enter the barrel at the collar so their asphalt content is not burned off."

Darrin has solved another problem connected with the use of RAS and RAP, the potential stiffness and poor coating ability of the oxidized AC in these recycled materials. "I use various polymer enhanced binders and rejuvenators to soften the AC so it better coats and adheres to the induvial pieces of aggregate," he explained.

"Making asphalt can be somewhat like chocolate milk. Milk with chunks of chocolate floating in it isn't chocolate milk. It only becomes chocolate milk when the chocolate is liquefied and dispersed through the milk. With asphalt, the AC must become soft enough to coat each particle of aggregate and adhere to those particles," explained Senn. This process is enhanced with the use of additives, which are metered automatically into the AC in Senn's computerized asphalt plant.

Senn's asphalt plant produces thousands of tons of asphalt, both HMA and WMA, per day during paving season, using RAS and RAP whenever possible to promote a green environment. Senn's state-certified asphalt mixes are developed and tested by Jeff Novak, quality control manager, in Senn's company lab, following WisDOT specs.

Novak also frequently tests the amount of AC in RAS and RAP that will be used in mixes in their plant. This is necessary, because with RAS, the percentage of AC in the shingles can contribute to an asphalt mix varying from about 18 to as much as 25 percent — with an average of 20 percent.

To determine the AC content of a batch of torn off shingles, instead of using a more cumbersome chemical process, Novak simply weighs a dry sample, then puts the sample in their recent-manufacture NTO Troxler oven for about 20-30 minutes, during which time the oven's radiant energy will burn off all the asphalt. Then he weighs the same sample a second time. It is not difficult to calculate, from the before and after weights, the percentage asphalt in the sampled shingles.

A Troxler gyratory determines the density of the mix samples, as well as the WisDOT-mandated air void percentage of the mix. WisDOT had mandated a 4 percent air void until 2016, when, in an attempt to add more AC to



mixes, they decided to Jeff Novak, Quality Control Manager, with the Troxler Oven NTO in Senn's Company lab, where switch to an air void he develops and tests new HMA mixes to meet regression. Now, after WisDOT specs.

achieving the 4 per-

cent air void, enough additional virgin asphalt binder must be added change that 4 percent air void to 3- 3 $\frac{1}{2}$ percent. This air void regression increases the impermeability and durability of the asphalt, and also increases the film thickness.

Novak also uses a Geotest compactor with a compressed cylinder of a given asphalt mix to check whether the mix will be susceptible to water infiltration and damage, and to determine the proper blends of aggregate and binder to complete the mix for its expected traffic level. It's important that mix designs are able to resist rutting and fatigue under the expected traffic load, measured in ESALS.

In addition, Novak does a sieve analysis using a stacked set of screens in graduated sizes with a sample of dry aggregate in the top screen. The stacked screens are placed in a vibratory chamber to determine the size gradations of the aggregate. Then each screen's contents are weighed. The distribution of aggregate particles sizes affects all the important properties in an asphalt mix, and is vital to good performance.

Performance Grade specifications appropriate for Wisconsin, depending on project type (number of ESALS), are 58 degrees C. and -28 (or -34 degrees C. in the northern asphalt zone of the state). These are the limits within which the binder is designed to retain rigidity and resist rutting at the upper edge of the temperature zone, and to retain sufficient flexibility to resist thermal cracking on the lower end.

Despite the fact that landfills in Chippewa County, WI charge a tipping fee to dispose of torn off asphalt shingles while Senn blacktop will accept them at no charge and recycle them, over 10,000 tons of these used shingles are dumped into Chippewa Valley landfills each year.

Senn Blacktop is working to change that. We can put to good use all the shingles we can get," stated Senn, who views using recycled materials in asphalt as a "Win-win" mission. "The roofers who don't have to pay tipping fees to the landfills can pass on the savings to homeowners. The RAS used in asphalt lowers the cost of the asphalt we sell, and makes it a stronger product. Diverted from landfills to a productive use, recycling the shingles leaves more space in landfills.

According to the 2016 Asphalt Pavement Industry Survey (the most recent currently available), RAS usage alone was estimated to have reduced the need for 1.5 million barrels of asphalt binder (oil) and nearly 695,000 tons of newly quarried aggregate.



The Terex Finlay 790 Single Skin Trommel with ¼-inch trommel screen used to further size already-ground asphalt shingles (RAS) for use in new asphalt mix at Senn Blacktop.

RockRoadRecycle.com

Der ine



Tips for preventing common rubber track problems and prolonging wear life

A big consideration when choosing a CTL track is whether the track is coming from the original equipment manufacturer or an aftermarket supplier. Customers are guaranteed quality and after-sale support when they buy from the OEM. Photos Courtesy of ASV

reat equipment design is the first step toward more uptime and ROI, but ultimately a machine is only as good as it's treated. Contractors want the greatest bang for their buck, so it's in their best interest to train equipment operators on operation and cleanliness to optimize equipment longevity. It's also a good idea to closely monitor equipment to prevent potential problems.

Buck Storlie, ASV Holdings Inc. testing and reliability leader

Compact track loaders are one of a jobsite's most versatile pieces of equipment, so when it comes to the machines' rubber track undercarriages, these tips couldn't be more applicable. Simply taking the time to implement these steps can help contractors get a lot more mileage from their machines. That saves money in service and replacement costs and reduces downtime.

How is the equipment being used?

Improper or aggressive operation is a major contributor to excessive wear. In addition, certain applications result in much higher wear than others.

To minimize damage, train operators on proper operation before they use the equipment.

Counter-rotations, or sharp changes of direction, are a big cause of premature undercarriage wear. This is especially true when driving over highly abrasive material, such as shale, granite or ragged materials commonly found on demolition sites. Not only do counter-rotations often lead to cuts in the track, they also result in material build-up on the tracks' outer edge that gets into the undercarriage. Track systems with rubber wheel designs have the advantage of being open, compared to closed steel designs, allowing material to spill out. But it's still possible for the abrasive material to get stuck among the roller wheels, lugs and track. Although the mostly rubber components are more forgiving to each other than steel-on-rubber designs, materials can cause chips and cuts. To reduce the risk, encourage operators to use three-point turns.

Operators should also avoid spinning the tracks,

especially on abrasive surfaces. Like counter-rotations, spinning can result in cuts in the rubber and unnecessary undercarriage wear.

It isn't always possible to choose the types of jobs and conditions machines will be used in, but it is important to be aware of the toll different applications can have on track life. Jobs involving a lot of abrasive material, such as demolition, scrap and quarry applications, usually cause extra wear. The potential damage is much greater so it's especially important to avoid counter-rotating and spinning in these applications. On the other hand, tasks such as landscaping or golf course work that involve sand, soft dirt or turf, result in minimal wear.

More clean, less wear

clean a compact track loader's undercarriage since its cleanliness directly

impacts the wear rate.

The cleaning frequency depends on the applications and materials operators use the machines in, but daily cleaning is usually sufficient. Remove cohesive and abrasive material, such as mud, clay and gravel, as often as possible, even several times a day. This limits wear to undercarriage components or material buildup that can increase track tension. Remind operators that cleaning off materi-



Rubber track treads accumulate cuts and missing chunks over a lifetime, but these are often cosmetic and may not affect performance. Watch for deep cuts, about 4 inches or larger, that dig into the core of the track where the inner cords are embedded. As an example, this track is still usable but should be monitored because the damage may worsen.



Daily cleaning is usually sufficient for rubber tracks, but operators should adjust the frequency based on the challenges of the application. Remove Aside from using proper operating cohesive and abrasive material, such as mud, clay and gravel, as often as techniques, drivers should regularly possible, even several times a day.

als such as mud at the end of the day is easier than trying to remove it the next morning after it has dried.

Pay close attention to cleaning around the front and rear roller wheels, where material can accumulate. Use a pressure washer, if available, otherwise a small shovel or similar tool is sufficient. The most important items to remove are highly abrasive objects, such as sharp rocks and demolition material, including rebar, concrete and scrap metal. All of these can damage the inside of the track and undercarriage components. Also, look for strands of material, such as metal wire, that can wrap around components.

Achieving the best track life

Contractors should closely inspect rubber track undercarriages regularly. First look at the track, the part of the compact track loader that gets the most abuse. The average rubber track life is about 2,000 hours but can be as high as 5,000 if maintained well. On the other hand, neglecting a rubber track can result in a wear life as low as 500 hours. To get the longest track life, check track tension and condition daily, conduct visual checks for damage and lubricate grease points.

The track tension should match what is listed in the equipment manual. A loose track can result in ratcheting — lugs skipping over sprocket rollers — which accelerates wear or damage to the lugs. A loose track also increases the risk of derailment. Alternatively, a track that's too tight can accelerate wear on bearings, wheels and sprockets.

Examine the outside of the track for damage. Rubber track treads accumulate cuts and missing chunks over their lifetime, but these are often cosmetic and may not affect performance. Watch for deep cuts, about 4 inches or larger, that dig into the core of the track where the inner cords are embedded. Bad cuts, such as this, may get worse and make track replacement necessary. Also, check the tread depth. Rubber track manufacturers generally produce tracks to be usable until there is no tread left. When wear makes it difficult or impossible to properly tension tracks, then it's time to replace them.

Next, look at the drive lugs. Like the track, lugs encounter wear over time, especially when working in abrasive materials. Side slopes can also be hard on lugs, resulting in one side of the lugs wearing more than the other. Check that the lugs still fit well with the sprocket rollers. A track isn't usable if lugs are worn down so far that they continually skip over rollers when the track is properly tensioned. This usually happens when about 50 percent of the lug is gone.

Look at individual components next. Drive wheels wear similarly to the tracks and lugs. Replace a wheel when two-thirds of its rubber is gone. Also, look at the sprocket rollers about every 50 operating hours. Rubber track undercarriages use steel outer roller sleeves that cover steel pins on the sprocket and engage with the lugs. Replace sleeves when they are 50 percent worn or when they show signs of cracking. The steel sprocket pins can be rotated 180 degrees during sleeve replacement to prolong their service life, as the pins are stationary and



One of the first areas to look when faced with excessive rubber track wear is how the compact track loader is being operated and where. Improper or aggressive operation is a major contributor to excessive wear.



The average rubber track life is about 2,000 hours but can be as high as 5,000 hours with proper maintenance. Neglecting rubber track maintenance, however, can result in a wear life as low as 500 hours. The tread in this track is gone so it is at the end of its serviceable life.

typically only wear on one side. When available, it's best to have inspections and replacements completed by a rubber track compact track loader dealer.

Achieve high ROI from good service

Gaining the most out of a rubber track undercarriage requires proper operation, knowledge of how different applications affect wear, and regular cleaning and inspections. In addition, contractors should inform operators of proper operation tips and ensure they clean and inspect the tracks regularly.

Proper care can prevent problems and lengthen track life, which keeps costs low. Teach and practice careful operation and take a few minutes every day for cleaning and inspection — small tasks that will often result in a high return on investment.

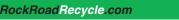
About the author

Buck Storlie is the testing and reliability leader at ASV Holdings Inc. His 22 years with the company give him the expertise to manage product testing, reliability and field issue resolution. He focuses on ensuring customers receive maximum productivity, durability, ROI and comfort out of their ASV machines.

For more information: ASV Holdings Inc., 840 Lily Lane, Grand Rapids, MN 55744; call 1-800-205-9913; fax 218-327-9122; <u>sales@asvi.com</u>; <u>www.asvi.com</u>; <u>www.positrack.com</u>; Facebook.



A big consideration when choosing a CTL track is whether the track is coming from the original equipment manufacturer or an aftermarket supplier. Customers are guaranteed quality and after-sale support when they buy from the OEM.

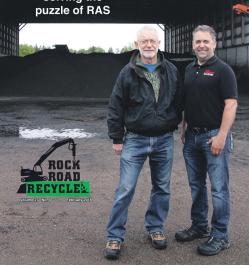


PG 6



- Asphalt shingle recycling
- Shingle Grinders
- Wear parts

Senn Blacktop: solving the puzzle of RAS



Senn Blacktop: solving the puzzle of RAS

by Bill and Mary Weaver

On the Cover:

PG₂

Darrin Senn and dad, Steven, with ready-to-use ground and trommeled RAS. They use a Terex Finlay 790 Single Skin Trommel with a ¹/₄ inch screen, and store it briefly under roof.

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Classifieds

4

rubber track

by Buck Storlie

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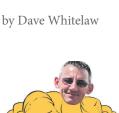
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shingles for Greenup by Keith Loria

8



ized grinding asphalt

The perfect tool A look at how the Morbark 6600 revolution-







Ask the Grinder Guy:

by Dave Whitelaw

Hey Grinder Guy readers, do you want some "*free*" wear parts?

I have had many questions over the years regarding who makes the best wear parts. There are several companies supplying the industry — some better than others — but most use nearly the same materials. You need to find the best tip for the money. One that wears well, costs reasonable and with timely delivery.

The GrinderGuy has decided to have some wear parts made with the GrinderGuy label. Do I want the greatest long lasting tip? Not necessarily. I want the best tip for the money. So I am making a few sizes for customers to try at cost (not free) on a limited basis, and see if I can save you some money.

I need a few companies to try these tips, run them in a few different applications and then give me a review of hours and wear life. I am looking for different applications and a few different machine types — then see what common areas wear the most for like machines. If you are interested in trying these tips, call me at 813•421•2757.

My goal is to produce the most economical tip. Rea-

sonably priced, that wears well, and doesn't leave any of the carbide you are paying for on the tip when you need to replace it. That is actually a big challenge. Read on and you will see why.

All wear parts are different, but most everyone uses some sort of replaceable tip that is impregnated with tungsten carbide chips for longer wear life.

According to Wikipedia, tungsten carbide (or carbide as it is commonly called) is a combination of tungsten and carbon.

Tungsten, a mined natural element, is in limited supply on Earth and the supply is decreasing rapidly as its use on new and old wear applications is increasing. There are currently no manmade substances that provide the same wear resistance for a comparable price. Therefore the price of tungsten carbide is sky rocketing, which is directly affecting the cost of your wear parts. You probably have taken notice of the increase in price this past year.

A carbide impregnated surface (or coating) provides a greater wear resistance than the base steel that the wear parts are made of, but carbide is more brittle, and will break or chip off wear part surfaces when it impacts solid objects like rock or steel.

Limiting the number of edges or surfaces the carbide is placed on can reduce your costs. What to do:

• Review your old tips that have already been replaced.

• Determine which surfaces are wearing and which are not using YOUR grinder on YOUR material.

Why pay for carbide that you are throwing away?Only pay for what you are using and it is possible

to save \$5 per tip.

Need help figuring out what to do?

Send a photo of your used tips to <u>grinderguy@ask-</u> thegrinderguy.com .

Have a question or need more advice? Call me at 813•421•2757.

Dave Whitelaw, The GrinderGuy grinderguy@askthegrinderguy.com



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cle.com PG 8



Strong is currently running a used 2006 model, which he says runs perfectly. Photos by Rian Strong

by Keith Loria

The Greenup family has owned Greenup Enterprises (the former Jon Greenup Logging Inc.) in Estacada, OR for exactly three decades. The company began in 1988 and Jon's son, Jon, and his wife Jill took over in 2004.

Today, the company has over 40 full-time employees and is one of the largest logging companies in Oregon or southwest Washington. In 2018 it expects to log more than 50 million board feet.

Rian Strong, superintendent of Greenup Enterprises' grinding division, has been running grinders for 17 years. He began his career with McFarland Bark, where he started the land clearing and grinding division. From there, he went into business for himself (WS Forestry) and fi rst met Jon Greenup.

"Jon purchased my company because he wanted to expand and diversify his logging company," Strong said. "He felt that the grinder and recycling capabilities of the wood product and shingles would be a benefit for his logging company."

Over his career, Strong estimates that he has run just about every brand and style of grinder on the market, and the one he utilizes for Greenup is the <u>Morbark 6600</u> aka the "Wood Hog."

"Initially, I ran Peterson-specific grinders. In 2006 we were ready to purchase a new grinder and we had a massive 'grind-off" between Diamond Z, Morbark, Peterson and Vermeer," Strong said. "We set up this big grinding competition in our yard and we had piles of material and we timed all the grinders and how they could best go through each material. In the end, the Morbark 6600 was the fastest."

Papé Machinery was the west coast Morbark dealer and brought Strong to Michigan, where the machines are made. Once he went through the factory tour, he knew this was definitely the machine he wanted to work with.

Some of its features include a magnetized end pulley with collecting slide tray for ferrous metal removal, different grate sizes, a hydraulic reversing fan, hydraulic rod puller, air compressor, ESPAR heater and more.

However, to grind shingles, Strong has had to modify the machine several times to get things just right.

"We implemented air nozzle sprayers in specific lo-

cations in order to clean out the ducts and small particles of shingles," Strong continued. "We don't build up melted foil that could cause damage."

This was a lesson he learned from trial and error. He admitted the first season Greenup used the machine to grind shingles, in 2010, things were a disaster.

"Until we started modifying the machine, making notes on what was causing issues and fine-tuning it, it took about two months to get things right," Strong explained. "Another thing we've done through the years is we use a protective cloth to keep things out of the radiator."

The company has gone through three machines over the last dozen years, and Strong is currently running a used 2006 model, which he says runs perfectly.

"The thing that makes grinding asphalt shingles with a wood grinder tricky is a couple of things," he said. "Number one, you have a very high-speed motor and there's a lot of abrasion and wear that goes on your tip, rakers, anvil and screen. You have to finetune your screen size to get longevity."

Another major issue of using wood grinders for asphalt, he noted, is the amount of dust.

"These conveyer belts were initially not designed for this tar dust. The friction and heat of the conveyer belt goes along the bedpan and melts the oil and forms what we call "stalagpipe" or hard chunks of tar, which can break loose or roll over your belt, which causes buildup, which can shut down your grinder."

To keep things running smoothly and reduce downtime, Strong keeps an extensive amount of wear parts on hand, including nuts and bolts for rotor, extra screens, digging teeth for the excavators and filter cloth for radiators.

"Our system is set up now so we can successfully grind shingles and produce a mean average production rate of about 72 tons an hour," he said.

Strong also said that he has been helping Papé Machinery with one of its new customers Kerr Contractors. They want to follow the same protocol and have just purchased a brand-new Morbark 6600 to grind asphalt roofing shingles to implement in road production.

"I have been a helping part in setting his machine

up," he remarked.

Early in his career, before coming to Greenup, Strong had a bustling business supplying asphalt.

"I supplied asphalt to almost every asphalt plant in Oregon and we ground all of the Knife River, Oldcastle, Baker Rock road and driveway. My operation consisted of two men, a 200-size trackhoe, a Morbank 6600 and we used a 6x16 DEC screen deck and a 624 John Deere loader," he explained. "I was doing about 30,000 to 35,000 tons a year and our operation was portable, so we could set up at the asphalt plant's location. They would place the order of what they thought would get them through that season, and we would grind and screen out and produce the finished product for them and then move to the next plant."

His favorite part of his career is being a part of the team that could successfully figure out how to best continuously grind the asphalt, keep material out of the landfill, and add this new service to the land clearing and wood grinding aspects.

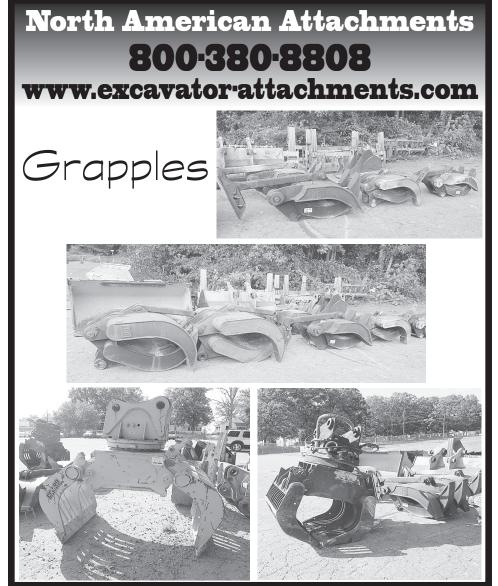
"In my opinion, the top three things to make this work and being successful using a wood grinder is being able to manage your conveyer belt so it does not build up with material, to be able to figure out a way to clean out dust and grit so it doesn't form into tar-balls," Strong said. "Number two is managing your wear parts as far as your rotor and your screen. The final thing is figuring out a way to manage your radiators, because of the amount of tar dust and shingle dust floating in the air. That could cost someone a motor."



In order to go from grinding wood to asphalt shingles, Strong had to modify the machine several times.

Asphalt Drum Mixers' SPL asphalt plants boast low setup and production costs





The SPL series includes all necessary components for drum-mixing asphalt production yet fits on a single trailer frame.

Photo courtesy of ADM

HUNTERTOWN, IN — Asphalt Drum Mixers Inc. offers its line of SPL hotmix asphalt plants as an affordable option for contractors with low production requirements. The SPL series includes all necessary components for drum-mixing asphalt production yet fits on a single trailer frame. The plants provide high reliability while producing asphalt at a minimal cost per ton.

Asphalt Drum Mixers is highlighting the SPL Series March 6–8 in booth 2636 during World of Asphalt 2018 in Houston.

ADM's SPL asphalt plants are available in 60-, 100- and 160-ton-per-hour production rates and come standard with a drying/mixing drum, wet wash, cold feed bin and surge system. ADM offers all models in portable or stationary configurations with the option of automated or manual operation.

SPL plants' compact design allows cost-efficient shipping worldwide. Like all equipment manufactured by ADM, the SPL series is pre-wired and pre-tested at the factory to ensure fast installation and setup. The plants' highly efficient operation keeps fuel usage and costs low. ADM engineers SPL plants for user-friendly operation and low maintenance. The plants only require one plant operator and one load operator for operation. On-site personnel can perform most repairs, keeping downtime to a minimum. ADM builds the plants with inexpensive and easy-tofind parts and components to keep maintenance costs low.

A wide range of components further customizes each plant for particular customer needs. ADM offers cold feed bins, hot oil asphalt cement tanks (both horizontal and vertical), direct-fired horizontal cement tanks, portable and stationary bag houses, mineral filler systems, RAP systems, self-erect and stationary silos, weigh and drag conveyors, weigh batchers and fuel oil tanks.

In addition to the SPL, ADM offers the 160 to 425 tph MileMaker Series, the 110 to 350 tph RoadBuilder Series and the 100 to 425 tph <u>EX Series</u>. Each plant can be custom designed to meet the requirements of individual sites. ADM technicians are always available by phone and ready to travel worldwide to ensure all plants stay productive.

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CASE announces "Kickstart" landscape business development contest

<u>CASE Construction Equipment</u> is now accepting entries for the <u>CASE Kickstart Contest</u>, a business development contest where landscaping contractors can win a suite of prizes designed to take their company to the next level. Business owners are encouraged to enter the contest at CaseCE.com/Kickstart by answering basic questions about their operation, and describing how they would evolve their services by winning the contest. The deadline for entry is March 30, 2018.

One (1) grand prize winner and one (1) runner-up will be named, with the grand prize winner taking home the following package:

• A six-month lease on any one (1) piece of CASE Construction Equipment.

• A yearlong consultation with landscape contracting industry expert Jeffrey Scott that includes indepth business analysis, personal coaching and consultation, follow-ups throughout the year and a recap session to gauge results and set next steps.

• A \$3,500 CASE Parts & Service Reward Card to go towards the purchase of attachments, fluids, etc.

• Fleet management consultation and recommendations from CASE staff throughout 2018.

• Brand-new, custom-branded CASE apparel/uniforms for staff.

• Up to five passes to GIE+EXPO 2018 in Louisville, KY.

CASE representatives, along with Jeffrey Scott, will select the winning entry. The runner-up will receive select consultative and apparel considerations from CASE. All entrants will receive a retail offer for \$250

off the purchase of \$3,500 or more in CASE OEM attachments (valid April 1 through July 31, 2018).

"Many landscape contractors have the entrepreneurial spirit to grow their business, yet lack the assets to provide a catalyst for that growth," says Scott Harris, vice president — North America, CASE Construction Equipment. "Their work helps build and enhance our communities which is a driving principle of our company. So we intend to reward that entrepreneurial spirit and desire to improve another community by boosting their business with efficient and powerful tools to help get them started." "We'll be looking for a proven track record, but also a drive and dedication that makes it clear that this prize package will truly affect the winning company and each of its employees for the better," says Jeffrey Scott. "We're looking for entrepreneurs willing to do the work, to look at their business from a different perspective, and reap the rewards when each component of the prize package is engaged."

PG 11

For more information on this contest, and the entire offering of CASE equipment and business intelligence for the landscaping industry, visit CaseCE. com/landscaping .



CASE Construction Equipment is now accepting entries for the CASE Kickstart Contest.

Photo courtesy of CASE CE

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February 2018

West Virginia and nearby states, employing more than 200 people throughout the territory. The company's achievements have been recognized by John Deere and various venders with numerous awards for outstanding sales.

Identifying their need for innovative, quality material handlers, President and Owner of Leslie Equipment Company, John Leslie has said, "We feel that there is a demand in our region for the products offered (by Fuchs), and that we'll have a successful partnership serving our customer base." Leslie stressed that after extensive research into the industry, "Leslie Equipment Company feels that Fuchs is a great strategic partner."

Fuchs National Account Manager, Anthony W. Laslavic has recognized the capability and industry knowledge of Leslie Equipment Company and stated, "Leslie Equipment Co. has long standing relationships in their region and an extensive knowledge of equipment with expertise in Forestry, Construction and Industrial." Laslavic added, "Leslie and his team are very committed to their market and have the customers' and manufactures' utmost respect".

Fuchs is looking forward to working with Leslie Equipment Company and having the opportunity to strengthen the ever-growing portfolio in North America. W.I. Clark Company,

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

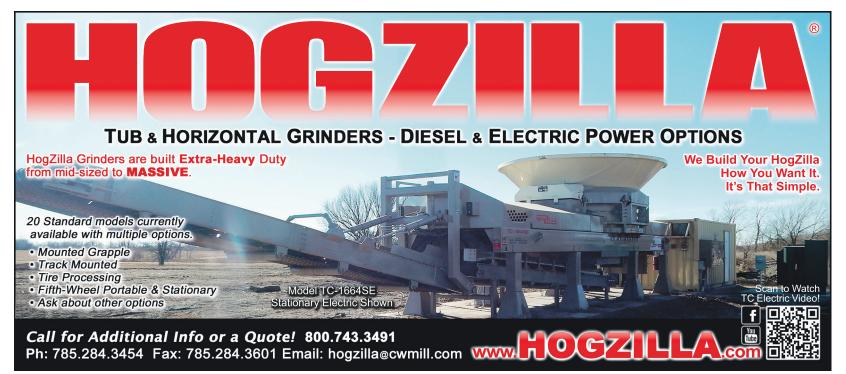
PG 13

Founded in 1925, The <u>W.I. Clark Company</u> is a fourth generation family business with a long standing history of offering sales, service, parts and rentals. The compa-

ny represents a diversified group of manufacturers with products for general construction, landscaping, highways, and scrap and recycling. W.I. Clark will now support existing Fuchs owners in Connecticut, Rhode Island, and the following counties in New York: Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester.

Fuchs strengthens distribution coverage in North America with Leslie Equipment Co. and W.I. Clark Co.





Fuchs is based in Bad Schönborn, Germany with over 420 employees and continues to lead the way in purpose-built material handling technology. Rick Parks, Vice President & Sales Manager of The W.I. Clark Company has said; "We are excited to represent the leader in material handlers for the scrap and recycling industries".

Fuchs is eager to begin working with The W.I. Company and is looking forward to a prosperous future together, supplying demand for Fuchs equipment throughout the territory.

RockRoadRecycle.com

PG 14



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The CEO of a software firm was tasked with a major change initiative after a large and lengthy acquisition. The Board of Directors wanted to see a definitive integration plan that included a timeline and an organizational management plan that would ensure the merging of cultures and continued growth for the long-term.

What followed was a classic case of "lukewarm leadership." The CEO appeared halfhearted, indifferent and his inconsistencies mounted. The Board would hear positive progress reports from the CEO and senior leadership team members would report the direct opposite. From his weak stance on commitment to the flurry of mixed messages, this CEO earned the moniker "Tepid Tommy." He seemed to be waiting in the wings for the flawless change initiative plan to find him.

Leaders take note

Followers pay attention and watch more closely than given credit for. Indifference, lackluster communications and lethargic efforts are often more conspicuous than appreciated. When change is at hand and the future seems unstable, a leader's performance can either diminish chaos or enflame it. In the backdrop of uncertainty, a mere spark of ambiguity or apathy can ignite the pervading fuel of resistance among the masses.

Lukewarm leadership is not just a phenomenon of the C-Suite. From the top to the front lines, followers everywhere watch intently. They are tunedin and sensitive to the message that leadership sends. The leader creates the climate. If an apathetic message is conveyed, the employee will respond in kind. Team members follow in direct correspondence with what they see and feel from leadership.

Here are four ways to combat luke-

warm leadership: • Set the tone

What you do as a leader has tremendous influence throughout your team, your employees and even your stakeholders. People respond to what you initiate. Begin with the energy and gusto you want to see in others. Demonstrate how much you are willing to give and show that you are duty-bound early and often. Make your messages steadfast. When people see and feel your energy, enthusiasm and promise they will not only buy in, they will help spread your "all-in" message. When you show unbound energy, your team will give more energy. When you are engaged, unwavering and decisive, your team will follow with their engagement, unwavering effort and decisive action.

• Communicate

Communication is more than a word. It is the standard by which leaders guide, direct, motivate and inspire action. Leadership quite simply depends on communication. Clear, confident, resonant communication will engender trust and followership.

Get Specific: Simple and concise is more effective than complicated and confusing. Attention is a precious commodity and time even more so. Hit the high points in your speeches and save the granular details for in person communications.

Get Face to Face: Nothing can substitute for face-to-face dialog. Yes, dialog rather than monologue. This does not have to be the top leader. Employees and team members know the demands on leaders and managers. They know the value of authentic live contact and informal dialog where they can see and feel that their message is being received. Your team appreciates being heard.

Demonstrate Beyond Words: What People can visibly see and feel your you do supersedes what you say. Remember Emerson and his famous dictum, what you do speaks so loudly I can't hear what you say. The proven formula for personal communication is 55 percent body language, 38 percent tone and 7 percent communication is through words. Body language and tone will validate everything that you say. Sending protocol out in a memo is not nearly as effective as walking around and informally sharing your thoughts and expressing yourself on the need for procedure. At bottom, lead at all times and if necessarv use words.

• Be the island of commitment in a sea of uncertainty

The new economy is well known to leaders. Increased global influence, more demanding customers and disruptive new players are challenges to be surmounted. But to your team members the new economy means uncertainty. Uncertainty leads to anxiety that makes people susceptible to stress, less productive and more vulnerable to conflict. During times of upheaval we need leaders who are anchored in commitment. Team members are quietly watching for the leaders who are islands of commitment in a sea of uncertainty. They bring commitment, a calming presence and their higher perspective to the context of uncertainty. There will always be some degree of uncertainty. But when leaders show resolute certainty, their commitment anxiety drops and morale climbs, team members take note and follow suit.

Show consistent enthusiasm

Nothing great was ever accomplished without enthusiasm. Leaders who show enthusiasm as a way of operating remove any hint of lukewarm.

heart-felt passion, energy and commitment and they buy in. Your team wants to win and they want you to be successful. No one tries to be second. Show consistent enthusiasm and your team will reciprocate with buy in and enthusiasm of their own.

Leaders have a significant role in creating a calm and productive culture. Most important, they have the power to conceive, articulate and inspire actions that lift people out of their fears and petty preoccupations. When savvy followers see and feel your energy, commitment and enthusiasm shining through the daily challenges and frustrations, there's nothing lukewarm about that.

About the author:

Brian Braudis is a highly sought-after human potential expert, certified coach, speaker and author of High Impact Leadership: 10 Action Strategies for Your Ascent. He has also authored several audio programs from executive leadership development to stress management. Brian believes "leadership" is a verb not a title. Brian's passionate and inspiring presentations are based on the foundation that regardless of your position or role everyone is a leader. For more information on Brian Braudis, please visit: <u>www.The-</u> BraudisGroup.com



IPCD is new distributor of Superior Industries idlers and pulleys

MORRIS, MN — Superior Industries Inc., a U.S. based manufacturer and global supplier of bulk material processing and handling systems, announces Industrial Products Conveyors & Drives (IPCD) as a new distributor of Superior idlers and pulleys. IPCD will stock Superior idlers and pulleys at its ware-

house in Richfield, NC.

"The past two decades of hard work at Superior has developed a strong product offering backed by a just as strong brand of customer service," says Bill Harvey, president and founder of IPCD. "Superior is a clear choice for any industrial distributor." Previous to acquiring IPCD, Harvey was the founder and president of CCI Conveyor Pulleys.

PG 17

Before coming under new ownership, IPCD was known as Industrial Products Incorporated, a supplier of conveyor equipment and components since 1976.



IPCD will stock Superior idlers and pulleys at its warehouse in Richfield, NC. Photos courtesy of Superior



Before coming under new ownership, IPCD was known as Industrial Products Incorporated, a supplier of conveyor equipment and components since 1976.



Help NAPA track U.S. use of recycled materials, warm mix

Input sought from all U.S. asphalt mix producers by April 1 for annual survey

Lanham, MD – Every asphalt mix producer in the United States is asked to participate in the National Asphalt Pavement Association's annual survey on the use of recycled materials and warm-mix

asphalt. This survey is conducted by NAPA under a cooperative agreement with the Federal Highway Administration (FHWA) and is an important tool for tracking the use of sustainable practices by

the asphalt pavement industry.

The confidential survey gathers information about the use of these materials during the 2017 construction season. Responses are sought from producers

of all sizes and from every community in all 50 U.S. states, as well as all U.S. territories.

"By providing answers to the questionnaire, asphalt mix producers will improve the accuracy of the findings and will help ensure the industry's environmental impacts are properly understood by federal and state agencies, as well as the public," stated Brett Williams, NAPA Director of Engi-

neering and Technical Support, who is administering the survey. "The survey tracks implementation of these technologies and enables NAPA, FHWA, industry, and others to highlight sustainable practices in the asphalt pavement industry and to focus efforts to expand future implementation growth."

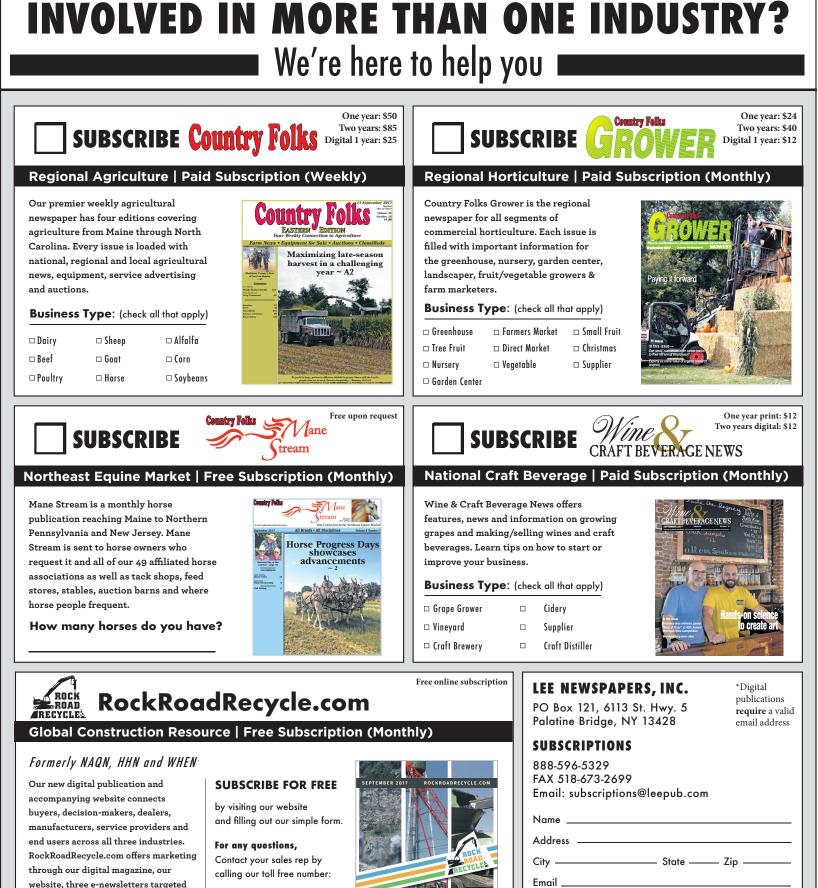
NAPA and FHWA have tracked usage of reclaimed asphalt pavement (RAP), recycled asphalt shingles (RAS), and warm-mix asphalt (WMA) annually since the 2009 construction season. The results from the 2016 construction season were released in November 2017, showing that more than 79 million tons of recycled material was used in asphalt pavement mixtures during 2016. This includes RAP and RAS, as well as other reclaimed and recycled material; such as ground tire rubber, steel and blast furnace slags, coal combustion products, and cellulose fibers.

In addition, about 116.8 million tons — more than 31 percent of total asphalt pavement mixture produced in 2016 – used WMA technologies to reduce mix-production temperatures. The full results of the 2016 survey are available at www.Asphalt-Pavement.org/recycling.

All asphalt mix producers operating in the United States and in U.S. territories are encouraged to participate in the confidential 2017 construction season survey by April 1. To participate, visit www.surveymonkey.com/r/RMWMA-Survey2017.

Data from the survey is kept completely confidential and is only reported in aggregate and used to determine quantities. State-level data is reported only if three or more companies from the state or territory participate. No company-specific information is disclosed or used for any purpose.

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CASE announces Michelin X Tweel SSL Airless Radial Tires as factory option on all skid steer loader models

<u>CASE Construction Equipment</u> announces the availability of Michelin® X® Tweel® SSL All-Terrain Airless Radial Tires as a factory-approved/supplied option on all skid steer loader models. Airless radial tires perform just like a pneumatic tire, but without the risk and costly downtime associated with penetrations and impact damage. CASE is the first skid steer loader OEM to offer the Michelin X Tweel SSL from the factory.

The Michelin X Tweel SSL is one single unit, replacing traditional tire/wheel/valve assemblies. There is no need for complex wheel/tire mounting equipment. There is no air pressure to maintain once each tire is bolted on. The AT models feature a deep open tread design for excellent cleaning and traction, and a deep layer of undertread allows the core to be retread many times.

"CASE offers a broad range of skid steer tires to meet the needs of a variety of applications from general dirt work and landscaping, to road-building, excavation and mining/aggregate environments," says George MacIntyre, product manager, skid steer loaders, Case Construction Equipment. "The addition of airless radial tires to our lineup of factory-available options expands our current offering and shows our commitment to advanced technology, as well as our dedication to providing our customers with a growing array of machine options that can have a positive impact on total cost of ownership."

The Michelin X Tweel SSL provides outstanding stability and enables a skid steer loader to work rapidly with more comfort for the operator, reducing driver fatigue while improving productivity. It delivers a consistent footprint with strong wear life that is twoto-three times that of a pneumatic tire at equal tread depth. The proprietary design provides great lateral stiffness, while resisting damage and absorbing impacts. Additionally, the unique energy transfer within the high-strength poly-resin spokes reduces the "bounce" associated with pneumatic tires.

PG 19

For more information on the Michelin X Tweel SSL, visit <u>MichelinTweel.com</u>. For more information on CASE skid steer loaders, visit <u>CaseCE.com</u>.





CASE is the first skid steer loader OEM to offer the Michelin X Tweel SSL from the factory. Photos courtesy of CASE CE

The Michelin X Tweel SSL provides outstanding stability and enables a skid steer loader to work rapidly with more comfort for the operator, reducing driver fatigue while improving productivity.

USCC's certified compost program expands to Mexico

RESTON, VA — After more than 17 years of testing compost quality for US compost manufacturing facilities, the USCC's Seal of Testing Assurance program is expanding to include its first participant from Mexico.

Novedades Agrícolas Dasa, of Baja, Mexicali, CA, in northwest Mexico, tested its pelletized amendment using the STA requirements and began as an official participant in November. Novedades is involved in irrigation, fertilizer distribution and design and installation of intensive farming solutions. The company sells compost in Baja CA, Sonora, Sinaloal, Jalisco, Guanajuato and Michoacan.

They join a total of 263 STA participants, representing more than 350 compost manufacturing facilities and products from across the United States.

STA is a compost testing, labeling and information disclosure program designed to provide users of finished compost with information to provide the maximum benefit from compost. Sixteen state and federal agencies now require that the compost they specify and purchase be STA tested to ensure quality, and supply essential data on the finished compost. (Depending upon compost methods and feedstocks, their levels of nutrients, salts and other ingredients can vary.)

"STA is a program that makes sure composters that are committed comply with assurance that compost is safe and tested and analyzed regularly, and it helps the consumer to find compost close to them that is made the right way," said Sergio Dabdouab, president of Novedades.

USCC's STA program was created in 2000 and is the consensus of many of the leading compost research scientists in the United States. It is the only compost testing program available to compost producers or compost buyers.



The parts and service expansion is expected to be completed in the second quarter of 2018.

Bandit Industries has recently announced two major building additions to expand production capacity and add a new, state-of-the-art parts and service facility.

Bandit will invest \$1.4 million in the two expansions. Both are expected to come online in 2018. This is the second round of expansion in as many years.

"We added manufacturing space 18 months ago and revamped our assembly lines in anticipation of the increased demand," said Bandit President Jerry Morey. "We continue to invest in our future, not only in facilities and gear, but in our workforce, including training. We added 38 people in 2017 and plan to add another 50 employees in 2018. Our employees are what set us apart with the pride we take in the equipment built and in the way we take care of our customers. We are proud of what they do and accomplish."

The new parts facility will also house a central receiving and distribution area, improving the flow of parts and materials to the six major manufacturing facilities. This will free up extra manufacturing space to further increase Bandit's production capacity. Bandit has added more than a dozen dealers with over 30 total locations in the past two years.

"As our dealer network expands, the need for parts expands right along with it," said Bandit Parts Manager Jamie Morey. "This new facility will allow us to respond rapidly to our dealers' and customers' parts requests, limiting their downtime and delivering on the promise that we stand behind every Bandit machine sold."

The parts and service expansion is expected to be completed in the second quarter of 2018. As soon as that facility is completed, the second expansion will start that will add production space for new products Bandit intends to introduce in the third quarter of 2018.

"Our new dealers are reaching more customers than ever before, driving demand for our products," said Bandit's North American Sales Manager Jason Morey. "Producing enough new units to meet that demand has provided Bandit with a welcome challenge – one that we're more than ready to meet."



This is the second round of expansion in as many years.

Bandit added three-quarters of a million dollars of new cutting and steel processing equipment in 2017 to keep up with the demand for parts for its expanding production areas.

Bandit also introduced a number of new products in 2017 including an entry level stump grinder, several new models of hand fed chippers, a new large capacity self-propelled whole tree chipper, a new intermediate model horizontal grinder, a new forestry mower carrier with mowing and stump grinding capabilities.

Bandit Industries demand isn't just limited to North America, either. Bandit's International business continues to grow significantly.

"Bandit continues to customize machines and build products for the international market," said Felipe Tamayo, Bandit's International sales manager. "We are selling products in every corner of the world, and now sell to 56 countries. We are also designing products specifically for the foreign markets to further gain market share overseas."

Learn more about Bandit Industries complete lineup of powerful, productive machinery by visiting <u>www.banditchippers.com</u> or by calling 1•800•952•0178.



When Bandit Industries needs to remove trees to make room for the expansion, they've got plenty of equipment on hand to deal with the stumps like this BTC-300 track carrier with its detachable stump grinder head. This machine made quick work of the dozen stumps standing in the way of the building construction.

Photos courtesy of Bandit Industries

The company's premier global auction just got bigger

ORLANDO, FL — Due to strong early demand from consignors, Ritchie Bros. has decided to set the stage for its premier global auction in Orlando, FL to be even bigger this year — extending the event to six days. Starting on Monday, Feb. 19 and running through Saturday, Feb. 24, the six-day mega-auction will feature items from every industry neatly laid out across its 200-acre auction site.

"This is a can't-miss event for sellers and buyers across the country and around the world," said Jeff Jeter, president (US sales), Ritchie Bros. "This is not your average, ordinary, everyday auction. This is a global event with a selection you won't see anywhere else. Last year we sold more than 11,500 items through the Ritchie Bros. and IronPlanet Orlando events, attracting bidders from more than 80 countries. This year we plan to do it even bigger and better, with the best service you will see anywhere in the industry."

Jeff added, "Adding the sixth auction day really optimizes the event so that we can grow to include more consignors and ensure that we aren't selling too late into the evening."

- What customers can expect with the February 2018 Orlando auction:
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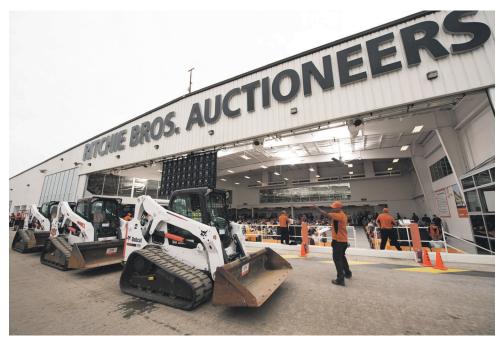
• Comprehensive online equipment information with robust equipment descriptions and photography

• Multiple ways for bidders to participate, incl. onsite and online, via mobile or tablet with the Ritchie Bros. app

• Onsite, dedicated financing support with Ritchie Bros. Financial Services, giving buyers more spending power

• New virtual sales option for selling offsite assets with IronClad Assurance

For more information about the 2018 Orlando auction, visit: $\underline{rbauction.com/}$ $\underline{Orlando2018}$.



Starting on Monday, Feb. 19 and running through Saturday, Feb. 24, the six-day mega-auction will feature items from every industry neatly laid out across its 200-acre auction site. Photos courtesy of RItchie Bros.



There are multiple ways for bidders to participate, including onsite and online, via mobile or tablet with the Ritchie Bros. app.





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