

ACT

The magazine for the crane, lifting and transport industry

A KHL Group Publication

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INTERVIEW
Bigfoot's
Jeff Steiner

INDUSTRY FORUM
Permitting

PRODUCT FOCUS
All terrain
cranes

SPECIALIZED LIFTING50

Ranking North America's top
specialized lifting companies

Official
domestic
magazine of
the SC&RA



'MUST SEE' PREVIEW
bauma
P58

Great capacity! Great reach! 2 overflow loads!

175 | AT

175-Ton | 150 mt All Terrain Crane

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- ALL NEW OPERATOR AND DRIVER CABS
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- CLASS-LEADING 15-LITER DISPLACEMENT ENGINE



Driver's cab features

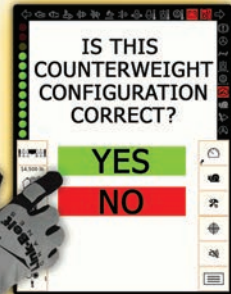
- Ergonomic, heated and ventilated air ride driver's seat with lumbar support
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bauma
APRIL 8-14, 2019 MUNICH



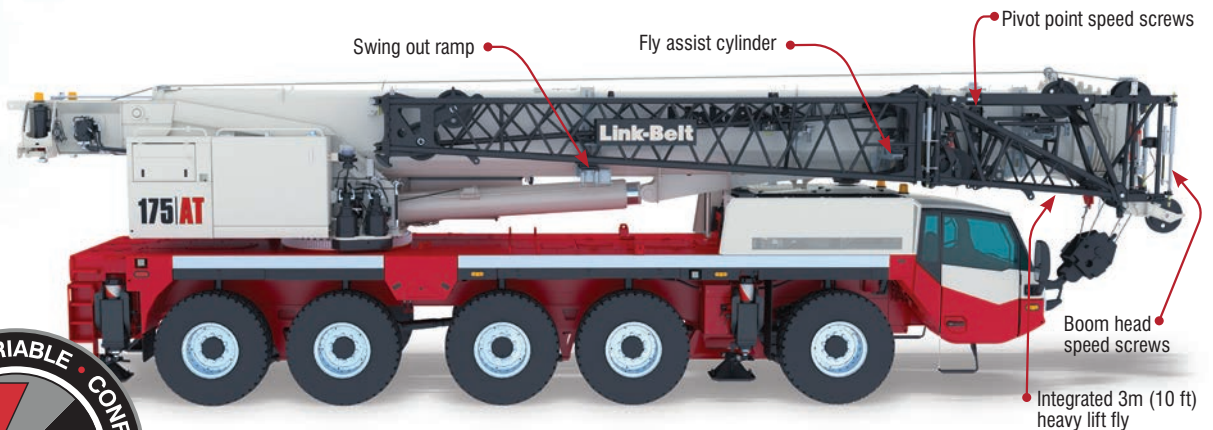
Efficient use of the overflow loads saves money

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ATF 60G-3

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A Bauma year!

It's a Bauma year. And next year is a ConExpo year. While you may not label years after the big construction equipment tradeshows, it's something that a lot of us do, namely the major construction equipment manufacturers and trade magazine journalists. The big crane and transport/trailer companies start planning for these tradeshows as soon as the last one ends. And their product development cycles are hugely influenced by these big shows.

Starting with this issue and over the next few months *ACT* will be covering the plethora of new products launched at Bauma. Our coverage will focus on the products that are North American centric. It's interesting that many of the products we will cover are new products to the American market, especially in the tower crane, mini crane and transport system categories. Ten years ago, many of these brands were not known of in our market. Suffice it to say Hannah Sundermeyer and I will be the ubiquitous roving reporters in Munich, gathering all the product news that is pertinent to our readers.

Our Bauma coverage begins in this issue in a big way. Our Product Focus: All Terrains highlights several of the new and almost new ATs that will be shown at Bauma. Our Preview: Bauma provides a look at many of the new or almost new cranes and equipment that will be shown at Bauma. Next month, we will present our full Bauma Show Guide, which will feature as much information as we can find about the products applicable to North America.

Also in this issue is our **SPECIALIZED LIFTING 50**, the newest of our toplists and one of the most interesting and important. This year's list features information about 42 companies that offer specialized lifting services in North America.

Our Interview this month is with Jeff Steiner, co-owner of Bigfoot Construction Equipment, which produces outrigger pads. Hannah Sundermeyer recently visited the Bigfoot headquarters near Chicago and her article is a great read. A keen business man, Steiner's patriotism is heartfelt and his ideals admirable.

We have three site reports in this issue and Sundermeyer also conducted our Industry Forum: Permitting. We've also got two articles that cover telematics and fleet management.

And finally, it's time to get your input. Jot me an email about your jobs, equipment and people.

D. ANN SLAYTON SHIFFLER**Editor**

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ON THE OUTSIDE



PHOTO COURTESY OF DEEP SOUTH CRANE & RIGGING

ACT's annual ranking of North America's top specialized lifting firms. See page 31.

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Official domestic magazine of the SC&A

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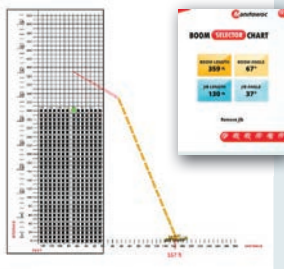
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Manitowoc Cranes has introduced the Manitowoc Boom Length Selector App that helps operators determine the best overall boom and jib length combination based on given lift parameters. By entering a few details, the app generates a setup for that specific lift. Manitowoc is the first OEM in the crane industry to release a smartphone app, the company said. The app has earned a 5-star rating on Google Play. It is available for iOS and Android devices.



Manitex International has expanded its articulating crane distribution network with the appointment of Giuffrè Brothers as a distributor for the state of Wisconsin.



The ALE team has mobilized a significant fleet in the Houston region, including the super heavy lift AL.SK350.

OSHA postpones documentation requirements

In response to industry requests, OSHA is delaying full enforcement of its requirement for employers to evaluate their certified crane operators. In a memorandum to OSHA Regional Administrators and State Plans, OSHA Acting Director of the Directorate of Construction Scott Ketcham stated that during the first 60 days of enforcement (until April 15, 2019), OSHA will evaluate good faith efforts taken by employers in their attempt to meet the new

documentation requirements for operators of construction cranes. During this period, OSHA intends to offer compliance assistance in lieu of enforcement, for those employers who have evaluated operators in accordance with the final rule and are making good faith efforts to comply with the new documentation requirement. However, if it is determined that an employer has failed to make sufficient efforts to comply, OSHA should cite for that deficiency. OSHA has requested

Regional Administrators and State Plan Designees to consult the Directorate of Construction in Washington, D.C. before issuing proposed citations arising during this time period that are related to documenting crane operator evaluations.

This temporary policy applies only to the documentation requirement. OSHA is fully enforcing the requirement that employers evaluate their operators before allowing them to operate cranes independently. ■

ALE expands with new U.S. team, office

As part of its expansion in the United States, ALE has set up a new office in the I-10 Energy Corridor area of Houston, TX. The company has expanded its operational capability by recruiting

additional personnel and investing in new heavy lifting and transport equipment. The expansion to Houston represents ALE's commitment to better serve its U.S. clients, the company said. The ALE team is also mobilizing an array of equipment, including specialized transporters, heavy haul trailers and a fleet of cranes, including the largest land-based crane in the world, the AL.SK350, which recently has been installing modules for an oil and gas project in Ingleside, TX, the company said.

ALE has also added its U.S. operational capability by complimenting its existing team with new engineers, offshore specialists, salesmen and other personnel focused on the company's national operations.

"Over the years we have

established a reputation for safe and innovative heavy lifting," said Richard Peckover, regional director, ALE. "We can now offer a dedicated U.S.A. branch, fully focused to the local needs of the market. Unlike our competitors, we are not just an asset provider, but bring an engineering and solutions-driven approach to our clients and their projects."

He said the ALE team is securing more medium- and large-profile jobs, providing solutions across the Gulf Coast, Texas and Louisiana.

"There are huge growth potentials and we expect further expansion nationwide," he said. "By expanding our presence in the country and solidifying it for the long-term duration, it demonstrates our commitment to our clients in the U.S.A. and the North American region." ■



Alamo's Liebherr LTM-1500-8.1 performed the 300-foot lift at a 235-foot radius.

Alamo Crane tackles Austin HVAC

In November 2019, Alamo Crane Service, under the direction of project leader Brian Ohlenbusch, changed out an air-conditioning unit atop the Chase Building on Sixth Street in downtown Austin, TX.

The street was shut down, except for one lane of traffic, from 8 p.m. on the Wednesday before Thanksgiving Day and until the following Sunday at 6 p.m. Men and equipment began moving that Wednesday evening. The old units were removed by mid-afternoon Thanksgiving Day, and the new units, each weighing 10,000 pounds, were set by Friday afternoon. Work was halted on Saturday for an annual holiday parade. The men and equipment moved out on Sunday.

Alamo's Liebherr LTM-1500-8.1 crane performed the 300-foot lifts working within a 235-foot radius. The move-in, setup and move-out were supported by 14 trucks, 17 men and a Terex T780.

Four police escorts were on hand for traffic control. As well, as two tower crane operators working at adjacent construction sites were on site to keep the tower crane booms safely away from the Chase Building site.

Cropac orders seven Terex boom trucks

Cropac Equipment is adding seven new Terex Crossover 8000 boom truck cranes to its equipment inventory. As a top performing Terex Cranes distributor, Cropac has received significant interest from customers for versatile boom trucks and the Terex Crossover 8000 model is the preferred unit for many of those contractors. The new boom truck cranes will be available at Cropac's locations in Ontario, Québec and Alberta, Canada.

"There has been a lot of positive momentum for the crane market over the last year," said Bill Finkle, president of Cropac. "We've seen higher demands across the board for the Terex cranes we carry. Our customers love the build quality, power and performance of the Crossover

8000, which is why we've placed this order."

The Terex Crossover 8000 boom truck crane features a 126 foot fully synchronous telescopic boom and has an 80-ton maximum lifting capacity. The unit's fully proportional controls allow the operator to define

boundaries for boom rotation, lift and lower to ensure all crane movements are precise.

Also, the boom truck's X-pattern outriggers are designed to offer maximum stability while still providing a small footprint so that the crane can be set up in tight areas. ■



Cropac purchased seven new Crossover 8000 boom trucks.

Self-erectors replacing mobile cranes in PA

MK Builders, a framing contractor based in Paradise, PA, has switched from using mobile cranes to Potain self-erecting cranes for residential homebuilding operations. MK Builders has four self-erecting cranes in its fleet: a Potain HDT 80; a Potain Igo T 85 A; and two Potain Igo T130s. The company is using them to set floor trusses, install



wood framing and paneling for residential builds, among other tasks. The company said the switch has resulted in a number of benefits.

"The fact that you can use the remote control to operate this crane from anywhere on the jobsite – in the building or on the ground – is the best thing that could have happened for us," said Jacob King, superintendent at MK Builders.

He said self-erectors are easier to transport to the jobsite, and once erected, the small footprint enables good access to the entire jobsite.

MK Builders bought the HDT 80 from Stephenson Equipment, a Manitowoc dealer in Pennsylvania.

As well, fewer crew are required to operate the cranes. The greater reach and radius means that all parts of the jobsite are enhanced.

MK Builders is currently constructing two, four-story apartment buildings and a one-story clubhouse in Malvern, PA. The company deployed its Potain HDT 80 and Potain Igo T 85 A cranes for the job.

"We chose the HDT 80 and the Igo T 85 A to help build both four-story buildings and the clubhouse because they could reach the height that we needed," King said. "Also, with the retention pond being on site, these cranes enable us to reach the other side of the building without having to move the crane." ■



■ Empire Crane Company has recently become a Preferred Partner for Orblaco products. Empire Crane will be the industry partner regarding quotations and sales and service of Orblaco camera systems. Orblaco offers a variety of cameras designed for cranes including, winch view, rear view, load view, corner eye and other locations that are not typically visible. from the cab.

■ H&E Equipment Services Inc. (H&E) has opened its new branch in North Phoenix, AZ, making it the third branch location in Arizona and the 96th nationwide. The facility is capable of servicing a variety of general industrial and construction equipment.

Roll Group completes project at Elba Island

Heavy lifting and transport specialist Roll-Lift USA has completed its activities on Elba Island in Georgia. Having worked there for more than two years, the last pieces of equipment were removed in mid-January. Roll-Lift employed a team and a large fleet of equipment on a project to expand the LNG plant in Savannah. The company said it overcame many obstacles to safely execute all its activities. Robert Jackson, Roll-Lift USA overall project supervisor, said at the peak of the project the company had a team of 35 people working on site.

First of the project's challenges was the low weight limit and deterioration of the only bridge to the island. It posed a huge problem, Roll-Lift said, for the delivery of 9,300 poles and 71 process and pipe rack modules. Instead the modules were brought in on 25 barges from the fabrication site 10 miles away along the Savannah River. The modules



Roll-Lift USA moved 840 modules on the Elba Island project.

were carried onto and off the barges on 68-axle lines of self-propelled modular transporter (SPMT) and 72 lines of modular trailer.

Poor ground conditions were another challenge. To bridge this area, Roll-Lift designed 85-foot-long ramps that could take the full load.

"The ground was terrible, which made it not easy to make the many necessary movements with the cranes," said Gary Lyons, crane

supervisor. "This also required a lot of coordination, since space was often tight. But I really enjoyed it because it was such a big project. Not with extreme heavy cargo involved, but it was the quantity that made it special. We have lifted 840 modules, utilizing seven of Roll-Lift USA's heavy lift crawler cranes. No less than 540 modules were heavier than 25 tons and then it becomes critical and requires a lifting plan for every lift." ■

LR1300 SX at work on Florida casino

Superior Rigging & Erecting embarked on a project for the Seminole Hard Rock Hotel and Casino in Hollywood, FL. The venue is undergoing a \$1.5 billion expansion that will open in fall 2019. It will include 638 luxury hotel rooms and suites in the guitar-shaped tower, 167 guest rooms and suites in an adjacent pool tower, 165,000 square feet of new gaming space, a 45-table poker room, a 42,000 square-foot full service Rock Spa and a 6,500-seat Hard Rock Live entertainment venue.

To complete the project, Superior Rigging & Erecting chose one of the most versatile crawler cranes in its fleet, the Liebherr LR 1300 SX crawler

crane. The crane fit the job requirements because it operates well in tight spaces and congested construction sites.

For Superior Rigging and Erecting, the crane was ideal for hoisting the large 65,000 pounds steel trusses that were

used for building the new structure.

The Liebherr LR 1300 SX has a load capacity of 660,000 pounds with a maximum hoisting height of 554 feet and a radius of up to 377 feet. The LR 1300 SX was primarily designed for lifting

work with high loads. The crane is easily assembled and disassembled, and it is used in such industries as steel erection, pre-cast erection, and machine setting. This crane is the "real deal" when it comes to heavy lifting, Superior Rigging said. ■

Superior used its Liebherr LR 1300 SX crawler on the Seminole Hard Rock Hotel and Casino project.



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I-4 Ultimate requires heavy lifting expertise

At 21 miles long and with a price tag of \$2.3 billion, Orlando's massive I-4 Ultimate is the largest infrastructure project in the Florida Department of Transportation's (FDOT) history. Divided into four phases, the project will require monumental bridge work to improve traffic flow through Central Florida. Thirteen existing structures will be widened, 53 new bridges added and 74 bridges replaced.

"We will be adding or reconstructing 40 structures in this area," said Vern Nix, owner of V&M Erectors., of Pembroke Pines, FL. "We need to place 50 million pounds of steel for this phase of the contract."

Initially, V&M rented cranes for bridge work. But several years ago it purchased a 230-ton Terex HC 230 and later added a Terex HC 275 and a HC 285 crawler. All three are working on the I-4 project. During bridge work V&M calls on a standby Demag AC 700 all terrain crane owned by Pompano Beach's Hunter Merchant.

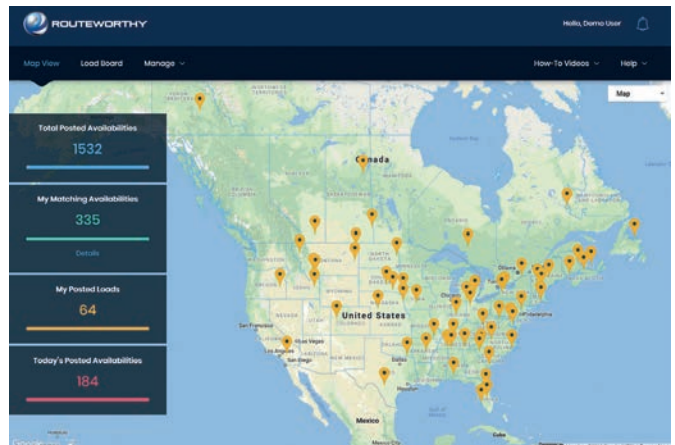
Precision Specialized at work in Canada hauling six loads from Toronto to Alberta.



Routeworthy offers transport solution

Routeworthy is a new load board for connecting pilot cars with specialized transport companies. The newly developed solution allows companies to elevate their operational productivity, drive down costs and increase efficiencies regarding clerical work associated to pilot car expenditures, the company said. Routeworthy matches up carrier loads and pilot car availabilities in real time across the United States and Canada. The system makes it easy for pilot car providers and specialized carriers to conduct direct, risk-free business while automating and streamlining business processes.

As a member of Routeworthy, benefits include having loads instantly matched with pilot car availabilities



Routeworthy can be used anywhere by desktop, laptop or smartphone.

24/7 across North America, reducing costs by negotiating directly with pilot car providers, saving time thanks to easy online service agreements and streamlined administration, providing a platform that eliminates

the risk and frustration of disputes, improved planning from being able to post loads well in advance and access to more professional pilot cars willing to go farther. The platform is free for pilot car companies. ■

GTI acquires Precision Specialized Division in Canada

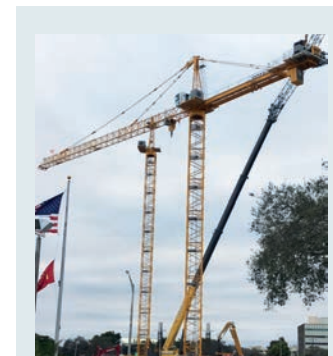
GTI Transport Solution (GTI) has acquired Precision Specialized Division in Canada. Precision Specialized is a division of Precision Truck Lines. Woodbridge, Ontario-based PSD is an open-deck and heavy haul transport operator in the province. GTI also operates open-deck, specialized and over-dimensional freight services. All jobs will be retained, according to GTI private equity backer Novacap, which also said

GTI plans to invest and expand into new markets. All operations will move to Brantford, Ontario, and the name will change to Precision Specialized Inc. (PSI).

Richard Lafrenière, GTI chief executive officer, said, "The team at Precision Specialized has demonstrated market leading know how in quality of service and engineering of complex project driven loads. We firmly believe that blending their expertise with the broad footprint of GTI will enable us to drive growth and become the preferred open-deck and heavy haul transportation company in North America."

Ed Bernard was named president of Precision Specialized Inc. "Precision Specialized is proud to be

joining forces with GTI to propel our company to the next phase of its growth," he said. ■



■ Sims Crane & Equipment announced that the company's entire tower crane fleet, which was purchased last year, will be entirely utilized at construction sites around the state by March 1, 2019.

HIGHLIGHT

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GPS, Telematics & Maintenance Info



Dispatch & Documentation



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GPS Tracking



Maintenance Scheduling



Faults/Alerts Notifications



Usage Data



Realistic 3D, Animation, Import Google Earth or CAD



Outrigger & Crawler Loads



Detailed Rigging Plans



Largest Database of Cranes



Catch up in Cleveland

The Association of Wire Rope Fabricators Spring General Meeting and Project & Information Exhibition (P.I.E) will convene in Cleveland, OH April 7-10.

WHAT:
AWRF Spring General Meeting & PIE
WHEN:
April 7-10, 2019
WHERE:
Hilton Downtown Cleveland, Cleveland, OH
INFORMATION:
www.awrf.org/events



ABOUT

SUNDAY APRIL 7

7:30 - 11 A.M. Board of Directors Meeting, Center Street Meeting Room A
11:30 A.M. - 5 P.M. Registration, Hope Foyer
5 - 5:30 P.M. First Timer's Reception, Center Street Meeting Room A
5:30 - 7 P.M. Opening Reception, Hope Ballroom DE

MONDAY APRIL 8

6 - 7 A.M. Workout Class, Center Street Meeting Room A
7:30 - 9 A.M. Breakfast Buffet, Superior Ballroom Floor
8 A.M. - 3 P.M. Product & Information

Exhibition (P.I.E), Superior Ballroom ABCD
9 A.M. - 2 P.M. New Product & Technology Spotlight, Superior Ballroom Floor
11:30 A.M. - 1 P.M. Luncheon Buffet, Superior Ballroom Floor
4 - 5 P.M. Workout Class, Center Street Meeting Room A
6 - 7 P.M. Reception, Hope Ballroom DE
TUESDAY APRIL 9
6 - 7 A.M. Workout Class, Center Street Meeting Room A
6:30 - 8 A.M. Networking Breakfast, Superior Ballroom ABCD/Veterans ABCD
8 A.M. - 12:35 P.M. General Business &

Breakout Sessions, Superior Ballroom ABCD/Veterans ABCD
10 A.M. - 3 P.M. The Tour – Meet in Lobby
3:30 - 4:30 P.M. Workout Class, Center Street Meeting Room A
6 - 7 P.M. Reception, Superior Ballroom Foyer
7 - 11 P.M. AWRF Banquet, Rock and Roll Hall of Fame (Bus Pickup in Lobby)
WEDNESDAY APRIL 10
9 A.M. Golf Tournament with Modified Shotgun Start (weather permitting), Bus Pickup at 8:15 A.M.
4:30 - 6 P.M. Closing Reception, Eliot's Bar

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A second look

Christopher Machut responds: Where there is no vision, people can perish.

A recent column in *American Cranes & Transport* titled “Oposing View,” by NBIS Vice President Bill Smith, requires a response. It demands to be read with the scrutiny of a lawyer, because it takes knowledge of the law to know the difference between what the law says, in contrast to how Mr. Smith presents it. I know Mr. Smith and I respect his knowledge of risk management as it pertains to the crane industry. Even though I oppose his viewpoint about the use of video cameras at construction sites, I welcome his opposition.

Mr. Smith’s argument against video cameras – that they are a liability – is a misinterpretation of the law and the facts. It is common knowledge that the construction industry is dangerous. A defendant may find it hard to convince a jury that he did not know, or that he could not have reasonably known, that his workers were at risk. Knowledge of danger is often proof of liability. It may be even harder for jurors to minimize the importance of what video cameras can do: Maximize the line of sight for crane operators, thereby lessening the likelihood of an accident resulting in injury or death. A defendant would be dumb to believe that a jury would be blind not to see the obvious, that he is liable.

Seeing beyond

Mr. Smith’s other point is that video cameras do in fact help crane operators see better and farther than they or anyone else could see without them. Not even someone with the best eyesight – for instance, a fighter pilot on the clearest day, under the bluest sky, across the wild blue yonder – can see what a video camera can

reveal: blind spots, obstructions, people on the ground and even workers above the clouds.

Yet Mr. Smith does not support the use of cameras by crane operators.

My argument is this: If video cameras are a distraction, why not ban them altogether? Why have a doctor use a colonoscope when he can use an X-ray? Why have a surgeon use a camera when his hand has excellent muscle memory? Why not make an exemption for actors and directors who use cameras, but exclude anyone who is not a full-time cameraman or videographer?

If my questions sound unreasonable, it is because the premise of not using a camera in crane operation is unsound.

If video cameras are a distraction, why are automobile manufacturers making cars safer with backup cameras? When we drive a car, we must do two or three or even four things at once. If we didn’t, we would jeopardize our own safety and the safety of others on the roadways. Pedestrians and the driving public are all at risk when passing a car that does not have a video camera, as well as sensors that sound an alarm to an inattentive driver.

Perhaps Mr. Smith’s resistance to the use of video cameras is actually a resistance to change. Put another way, change is disruptive. It breeds contempt because it is unfamiliar; because it is uncomfortable to the powers that be; because it is a power that we can slow but not stop; because it is temporarily avoidable but ultimately inevitable.

While his opposition to crane cameras may reflect an aversion to change, it does not reflect the truth. Crane cameras make operations safer and more efficient. This opposition refracts the truth more than it reflects it. It distorts the spirit of the law, just as it darkens the letter – and the light – of the law to remake the law.

Safe crane operations

In the meantime, juries read the law and review the evidence. Each case is different and not every verdict is the same – but a theme is discernible, a moral detectable.



Crane cameras give operators a closer look.

The point is unmistakable: Juries have found construction companies liable for accidents in which visibility was poor and workers were hampered without visual safety tools. The defendants knew the risks but put the jobsite in danger. The defendants in these cases chose not to see what their workers had a right to see for themselves: the dangers, the hazards and conditions that put workers in harm’s way.

The construction industry will continue to absorb these costs until it can no longer afford these costs. Crane cameras will become standard in crane cabs when the liability of not having one becomes greater than having one. But it will take time.

With respect, my view is simple. Let us view all that we should see. Let us see what we see and see what we can’t see with the use of a video camera. I hope you will take a second look at this issue. ■

THE AUTHOR



Christopher G. Machut is the founder and chief technology officer for Norfolk, VA-based Netarus, which manufactures and sells industrial-grade video monitoring solutions.



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Mainstream market indicators have rallied since the start of the year, but the heavy equipment sector has not seen the same recovery.

ACT's Heavy Equipment Index (HEI) tracks the performance of eight of America's most significant, publicly-traded construction equipment manufacturers – Astec Industries, Caterpillar, CNH Industrial, Deere & Company, Joy Global, Manitowoc and Terex.

Losing touch

After an uncharacteristic dip in December, stock markets have generally rallied in 2019. The heavy equipment sector has had similar ups and downs, but with this segment seemingly in the downward swing, the downs have tended to outweigh the ups.

As a result the ACT Heavy Equipment Index (HEI) is down some 15 percent on its position a year ago. As the chart illustrates, it has regained some ground from the low points at the end of last year, but it is adrift from the mainstream indexes that are only 5 percent or less down on their positions 12 months ago.

Company results define the market mood at this time of year, and by far the most important is Caterpillar. Although some of the reporting around Caterpillar's results highlighted the negatives – it is feeling the effects of slowing market demand in China and materials prices are rising

– its share price only ticked down for a day or two before bouncing back. The headlines for Caterpillar were that its revenues in 2018 grew 20 percent compared to the previous year and its profit per share was almost ten times higher in 2018 than 2017.

Forward looking

Stock markets are forward looking, and a company's share price is a reflection of the expectations for profitability over the next 6 to 18 months. Caterpillar is forecasting an increase in profit per share of 14 to 24 percent in 2019. It is not expecting to take any big one-off restructuring costs.

Although Caterpillar is in a position of good health, its results and outlook illustrate the point that the global equipment market appears to be peaking, and with it corporate profitability.

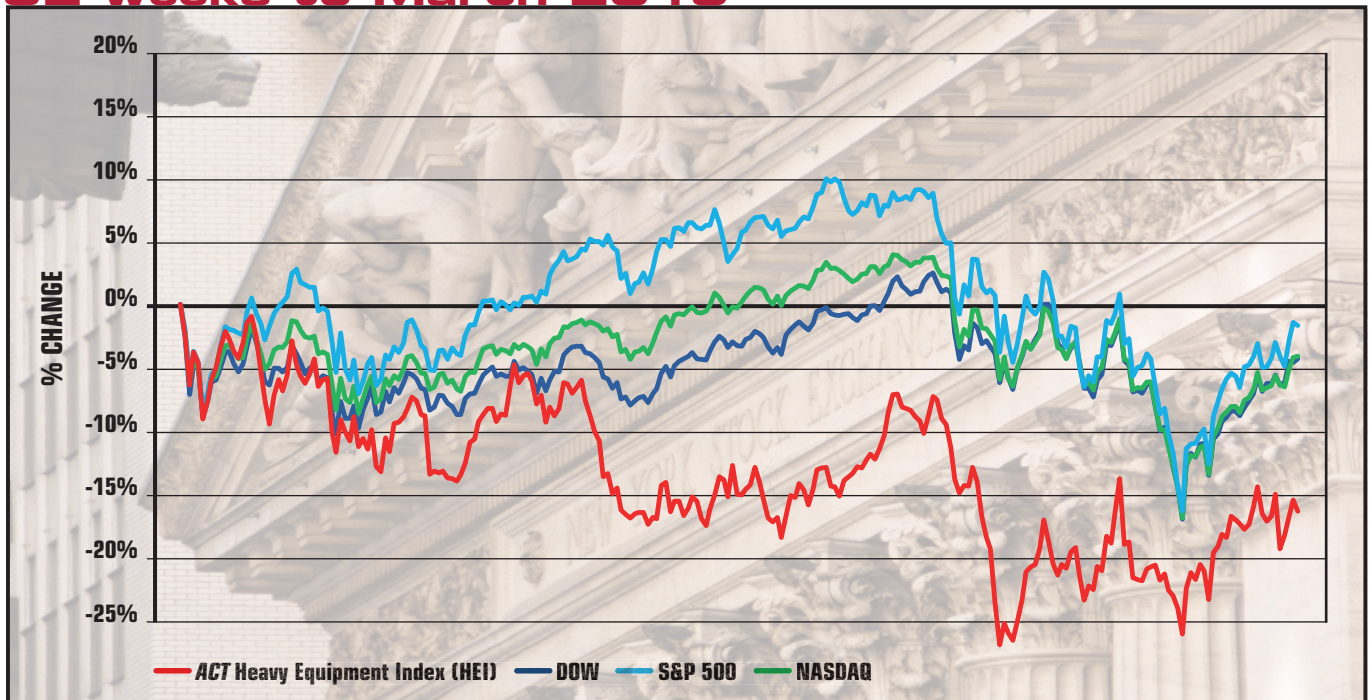
As such, a share index like the ACT-HEI would be expected to continue to track downwards over the coming

months with the expectation that profits in 2019 will be about as good as they get.

This is an area where stock markets can be counter-intuitive. They are forward looking and share prices often fall when the economy is healthy. Stock markets often rise when recession strikes because recessions tend to be fairly short – usually less than a year. Impacts on individuals and communities can last for years, but the period of falling GDP is brief, and this is what informs the stock markets.

There is a potential disconnect between the mainstream indexes and the ACT-HEI. While there is not much prospect of heavy equipment stocks rallying in the next few months, indicators like the Dow, NASDAQ and S&P500 look like they could at least hold their own. This illustrates the issue that makers of big ticket capital goods need much more robust economic growth than the broader stock markets. ■

52 weeks to March 2019



Troy Geisler discusses how to calculate the actual true capacity before purchasing a new trailer.

Editor's note

This is the second article in a two-part series about considerations that need to be made when calculating trailer capacity.

To select the right trailer, the one that will require the least amount of maintenance, provide the greatest lifespan and deliver the highest possible return on investment, it is vital to understand the most important factor of all – capacity.

Taking up where we left off in the February 2019 Rigging Review column, a trailer's safety rating also comes into play when discussing capacity. Without understanding the safety rating, it's difficult for a carrier to get a clear, comprehensive picture of true capacity.

A safety rating is an indicator of how much stress a trailer can safely handle. It encompasses the strength of the raw materials and components that a manufacturer has put into the trailer's design and construction, how the beams and cross members are configured and so on.

A widely accepted average magnification of payload weight on a trailer due to road dynamics is 1.8 to 1 ratio. When a driver is rolling down the road, the truck is hitting chuckholes, bouncing over bumps and crossing railroad tracks along the way.

On average, the stress placed on a 50-ton-rated trailer by a 50-ton load when the rig hits those bumps, chucks and tracks equals 1.8 times 50 tons, or 90 tons.

It's important to keep in mind that the 1.8 multiplier is only an average. On any given haul, the stress placed on the trailer can go above that level multiple times.



THE AUTHOR

Troy Geisler is the vice president of sales and marketing for Talbert Manufacturing. He has more than 10 years of experience

in trailer sales, including three years with Talbert. Troy earned his bachelor's degree from Purdue University in West Lafayette, IN.

Calculating



Carriers can vary gooseneck lengths to achieve proper steer weight and drive axle weight, and alter the distances between axles and axle groups to hit max weights and remain in compliance with state laws.

If no cushion is built in to the trailer to handle those spikes in stress, there will be more potential for long-term, progressive structural damage.

Since there is no universally prescribed level for safety ratings, they vary from manufacturer to manufacturer. They range from a safety factor of 1.8 to 1, which allows for no margin, to an industry high of 2.5 to 1, which is considered an ample cushion for even the most extreme road dynamics a trailer might encounter.

Not only does the safety rating tell a carrier how strong his trailer is, it's also a very good indicator of potential life. The greater the difference between the static design safety factor, be it 2.5 to 1, 2 to 1 or some other factor, and the dynamic 1.8 average multiplier, the longer one can expect a trailer's useful life expectancy to be.

Most trailer manufacturers do not like to advertise safety ratings, often for good reason. To understand why, it's helpful first to comprehend what a safety rating is not. A safety rating should never be used to determine how much weight can be added over the capacity rating and still keep the load, the driver and other drivers safe. In other words, a 2.5 to 1 safety rating on a 50-ton lowbed should not be used to justify loading a trailer with 125 tons of cargo. Just as the deck rating indicates, that trailer can safely handle a 50-ton payload under dynamic conditions.

For the most capacity and smallest impact on weight, some manufacturers use a T1 material with 100,000 psi minimum yield. T1 has maximum strength versus ductility.

The sum of the parts

Safety factors are strongly related to the quality of the components incorporated into the trailer, and that gets down to the nitty-gritty of the steel and the deck material.

Manufacturers have several options when choosing steel. For the most capacity and smallest impact on the trailer weight, some manufacturers use a T1 material with 100,000 psi minimum yield. T1 not only has maximum strength versus ductility, but also equates to a lighter, stronger trailer frame over other materials.

A trailer's decking is continually exposed to the elements, making durable decking with a long wear life also crucial. Apitong decking provides a tougher, longer lasting wood in comparison to other varieties, such as oak or pine. Tightly woven and incredibly dense, apitong is less susceptible to chipping and cracking and provides some amount of traction in comparison to a smooth metal surface.

Overload risks

Sometimes trailer owners or operators don't completely understand the capacity



trailer capacity

rating and mistakenly put more weight on the trailer than it is built to handle, or more weight in a concentrated area than it can handle.

Overloading a trailer once is not likely to make it break. Overloading it twice probably won't either. But do it consistently over time and eventually it will likely fail.

When a trailer breaks, the manufacturer hears about it. But often the complaint will be that a 50-ton trailer broke when it was hauling less than a full payload. For example, a 50-ton trailer might break when it's only hauling a 40-ton payload. The reason is not in that 40-ton load, but the number of times the trailer previously was overloaded and by how much each overload exceeded the yield strength of the trailer's load-bearing beams and cross members.

Yield strength refers to the amount of stress that the steel can withstand and still return to its original shape when unloaded. The first time a trailer is overloaded, the steel will return to something close to the shape it was in when it came off of the manufacturing line, but not exactly to that original shape. Each time it's overloaded, the steel will return to something less than the shape it was in the time before. Eventually, the steel, and therefore the trailer, will break.

So in our example, even though the trailer only carried a 40-ton payload, it is likely that it had been overloaded to some extent at one or more points in its past. That's when the damage was done, and that is what ultimately caused the failure. The steel got weaker and weaker and, on the day the trailer failed, it happened to be rolling with 40 tons on the deck.

Help to be had

It can be tempting to look at a trailer's capacity rating and stop there. But for a true sense of how much a trailer can handle and how it will hold up under the stresses of a specific operation, with its individualized loads, geographies, weights and other variables, fleet managers need to consider everything that goes into that rating.

Purchasing the right trailers for updating a fleet can be complicated and, clearly, the decision is an important one. But there

is help available. Many manufacturers have sales people who know capacity from top to bottom and can help fleet managers select exactly the right trailer with the optimal combination of load concentration, load distribution, speed and safety rating for specific applications and load types.

And having that knowledge about each specification will help ensure an investment that leads to a long, smooth ride. ■



Apitong decking provides a tougher, longer lasting wood. Tightly woven and dense, apitong is less susceptible to chipping and cracking.



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Red, white and

Bigfoot Construction Equipment's **Jeff Steiner** is carrying on a family legacy through American-made outrigger pads.

Hannah Sundermeyer reports.

When you hear the words "Made in America," you may think of Budweiser, Harley Davidson, Levi's and singer Toby Keith. But another name that comes to mind is Jeff Steiner, co-owner of Bigfoot Construction Equipment.

Steiner is a man who bleeds red, white and blue. With an unmatched work ethic, he has never been afraid to get his hands dirty. A U.S. veteran with 17-plus years of experience as a lineman working with cranes and stacking steel and in a man basket, Steiner had been constructing outrigger pads for the family owned business for more than 20 years.

The company was started by his late father, Bill Steiner – infamously known as Bigfoot Bill – while he was working in the concrete business. Today Bigfoot is a true-blue collar, family run business, manufacturing and distributing both wooden and composite outrigger pads the only way they know how, using American-made products for hardworking American people to use, Steiner said.

Every time I see Jeff Steiner, whether at SC&RA events or when I visited the Bigfoot facility in Woodstock, IL, I am blown away by his industry knowledge and experience. He is not just a business owner, but a man who has been out in the field learning how to do things first hand. A quick thinking, hardworking man, Steiner is the American dream, personified. After the passing of their father in 2017, Steiner and his brother Scott have taken over Bigfoot Construction Equipment and continue to live out the legacy of their "old man," as Steiner affectionately refers to him.

Steiner's unprecedented passion for Bigfoot products is evident through his responses to our questions. I think you'll

be enthralled with what he has to say and the principles he lives by.

WHAT IS THE HISTORY OF THE COMPANY?

Bigfoot Bill was a concrete pump operator and started building outrigger pads to local companies in the Chicagoland area. He first started building wood outrigger pads in 1991 out of our car and half garage with a wood-burning stove. The Steiner family garages were never to park cars, but always to build something. My old man was an old greaser and gearhead who could out-build anyone, anywhere. Using the best materials and building it right was not asked but demanded. Working with engineers and understanding real field conditions and the wide range of variables to work safe is key.

SO, YOU AND YOUR BROTHER ARE FOLLOWING IN THE FOOTSTEPS OF YOUR FATHER 'BIGFOOT BILL.' THOSE MUST BE PRETTY BIG SHOES TO FILL (FORGIVE THE PUN)?

My brother Scott and myself now carry the legacy of this American family business. The torch that has been passed is an honor with personal attachments to our customers and our bloodline. Growing up



in the world's largest industrial park has been a big influence with work ethic and using American materials. As a veteran, and seeing the American jobs getting pulled out of the country, and with my friends and family out of jobs in the mid-1990s, using American materials and employees has not always been easy, but it has always been the right thing to do. Bigfoot will not deviate from who or what we are, an American family manufacturer.

SAFE USE OF OUTRIGGER PADS REQUIRES KNOWLEDGE AND EXPERIENCE. HOW DOES BIGFOOT HELP ITS CUSTOMERS UNDERSTAND HOW TO USE YOUR PRODUCTS?

Working in the field and being a crane operator, as well as working with critical picks, is experience you need to learn hands-on, not just by reading in a book from a marketing point of view. My friends and now their kids are working in the field for their families and working safe with Bigfoot outrigger pads. We know this day-in and day-out for decades, not just hearsay, but living it and building them. Bigfoot also works with an exceptional local engineering company [to determine] safe ground-bearing capacities.



Bigfoot offers a wide range of outrigger pads in both wood and composite materials. The company will also build custom pads for its customers.

blue collar



“ I know Americans want to work and build great things for the world to see and take pride in themselves and their family. It has never been about profit margin or marketing catch words, but safety for the hard-working personnel around the world. ”

JEFF STEINER, Co-owner, Bigfoot Construction Equipment



BIGFOOT OFFERS WOOD AND PLASTIC OUTRIGGER PADS. WHY DO YOU OFFER BOTH?

Wood and composite outrigger pads both have their place in the field, depending on where and what kind of equipment is being used. We custom-build what the customer needs to work safely. [We do not] offer inaccurate information to push product for better profit margins. Bigfoot builds for the blue-collar personnel, because we are blue collar and safety matters to [our customers] and their families.

WHAT DISTINGUISHES THE DESIGN OF YOUR COMPOSITE/PLASTIC OUTRIGGER PADS?

Bigfoot's custom composite has the highest load ratings and has been third-party tested. We were the first to use and make safety orange to address the needs of high visibility. Bigfoot custom builds outrigger pads, as well as standard stock sizes. There is no one anywhere in the world that builds stronger custom composite outrigger pads to date. We have had a lot of compliments from our customers about how these pads are indestructible, as well as competitors trying to match or use the same materials my old man has been

using for a long time. Bigfoot has been private labeling outrigger pads for some of the largest crane/bucket/digger derrick companies in the world. Because of our product, customer service and personal attention to every outrigger pad we build, customers look to Bigfoot for safety on all their set-ups.

WHEN DOES A CUSTOMER CHOOSE A WOODEN PAD?

Bigfoot's wood outrigger pads have been used since 1991 with exceptional success in the hardest field conditions, as well as private labeling for some of the world's biggest manufacturers of cranes and concrete. There are a lot of crane companies that will only use wood outrigger pads; they have worked for decades. The concrete guys have always been strong supporters of the wood pads as well. The concrete pumps have different vibration than cranes and bucket trucks.

WHY IS IT IMPORTANT TO ASSURE THAT THE BIRCH AND OTHER PRODUCTS ARE SOURCED IN THE U.S.A?

Growing up in the world's largest industrial park, Elk Grove Village, IL, and

going to high school in the early 1990s, I watched a lot of good American jobs disappear, including my father-in-law's. They were not retiring but went out of business and needed a job to feed their family. As a veteran and a trade school guy for line work (ALBAT), I know Americans want to work and build great things for the world to see and take pride in themselves and their family. It has never been about profit margin or marketing catch words, but safety for the hard-working personnel around the world. Helping to create American jobs along with it is an honor. Building it for the right reasons with the right material in the right place is our back bone. [It's] strength, stability and safety.

WHAT IS ABOUT THIS INDUSTRY THAT KEEPS YOU ENGAGED?

I have lived it and I know how hard and dangerous these industries are, whether it is being a lineman, crane operator, concrete pump operator or tree trimmer. These workers, they do it for a better quality of life for their families. Bigfoot will help them do it safely, so they can go home to them and see their children smile, laugh and grow up. It is what we do it for, no questions or grey area about it.

WHAT IS YOUR BUSINESS PHILOSOPHY?

Hard work, self-accountability and the customer always comes first. Let's roll up our sleeves and build the world's greatest outrigger pads every day. ■

Take a look: AT

North America is a critical market for all terrain cranes.

ACT highlights a few of the ATs that will be on display at Bauma Munich 2019.

All terrain cranes bring a long list of positive attributes to their owners, and the North American market for these cranes continues to expand. Although they are generally more expensive and highly technical cranes, all-terrain cranes are strong, versatile and cost effective to operate.

For the most part, the all-terrain crane population in North America is made up of five brands: Demag, Grove, Liebherr, Link-Belt and Tadano America. The all-terrain product lines of these manufacturers are varied and extensive, making purchasing decisions even more difficult.

“Most of our locations are in areas that have either terrain challenges or site challenges for size and mobility,” said Scott Wilson, president of M-L Holdings Company Crane Group Crane Service, headquartered in Albuquerque, NM, with offices throughout the United States. “It’s very important to have a crane that can

perform on mountainous terrains or in really tight quarters.”

M-L Holdings operates all terrain cranes in urban areas where narrow streets and congested roadways are an issue, and the company also uses cranes in mountainous areas where climate changes and soil conditions complicate crane setup. For this reason, all terrain cranes can be the ideal lifting solution, Wilson said.

“With the AT you have the ability to steer front, rear and crab/drive sideways to get into position and get the necessary tail swing you need,” he said. “There are many more benefits of an AT than you can’t get with a truck crane, like the hydraulic suspension. ATs are really ideal when the site conditions require you to be more nimble, to make difficult roadway and site turns.”

There are also many considerations when purchasing an all-terrain crane, Wilson said. Beyond capacity and reach, one must consider transportability, ease of operation and price.

“Beyond the environment the crane is going to be working in, you have to look at the types of jobs you will be performing,” Wilson said. “We have chosen certain cranes lately based on different manufacturers having different capacities with outrigger positioning, boom length and counterweight positioning. We might consider a Liebherr in the Mid-Atlantic region because it fits the building heights and alley ways in urban areas. In West Texas,



we go with Tadanos because they have worked well with the abuse of the oil and gas roads and terrain issues. Link-Belt ATs have simple operation mods while Demag and Grove have many other benefits.”

M-L Holdings has a variety of ATs in its fleet, and the company will likely purchase additional units as the needs arise.

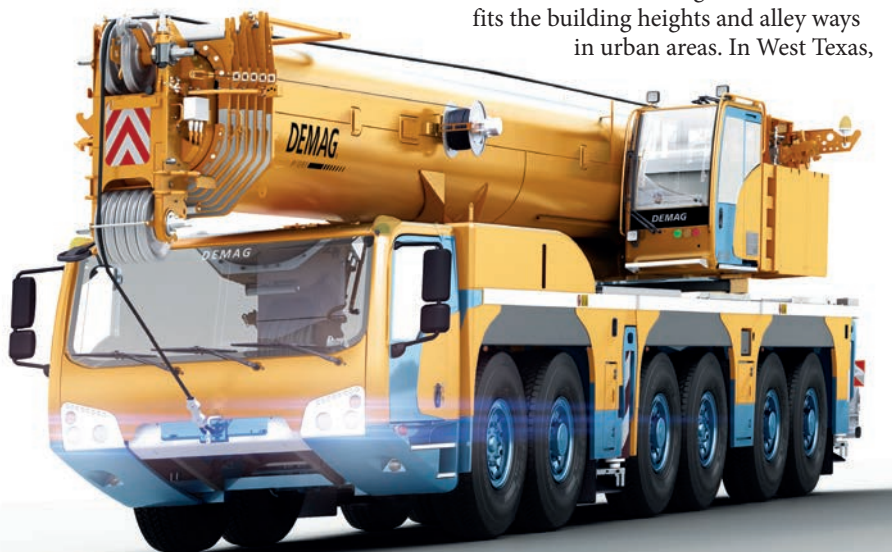
To discuss all the all-terrain cranes on the market in North America would require more space than we have in this magazine, as every manufacturer offers from eight to 20 models in their product ranges. For this article we asked the manufacturers to highlight one unit. As well, all these cranes will be exhibited at the Bauma construction equipment tradeshow in Germany in April.

Demag AC 300-6

At Bauma, Terex Cranes will show nearly the full range of its Demag all-terrain line including its AC 45 City, AC 55-3, AC 100-4L and AC 200-5. But of interest to North American customers is the AC 300-6.

The six-axle Demag AC 300-6 all-terrain crane, boasting a 350-ton (300 metric ton) capacity, features a 262.5-foot (80 meter)

The six-axle Demag AC 300-6 was designed to enhance productivity and reduce operating costs, according to Demag.



showstoppers

Like all Grove GMK cranes with CCS, the GMK3060L features the MAXbase option for variable outrigger settings and increased load charts in certain working ranges.



main boom. It is first crane of its size in the Demag range equipped with a luffing jib. Terex said this unit combines long reach with a strong load chart.

The main boom can perform jobs at heights up to 255 feet (78 meters) at a 242-foot radius (74 meters) without rigging a jib. It is ideal for tower crane erection, with a lifting capacity of 16.5 tons (15 metric tons) on fully telescoped 262.5-foot (80 meter) main boom, Terex said.

The AC 300-6 will be shown rigged with its luffing jib. Terex said the crane is the smallest in the Demag range that can be outfitted with this extension for superior reach and fly-over capabilities, bringing the maximum system length to 387 feet (118 meters). The luffing jib rigging system is the same as on the AC 350-6 and AC 1000-9 cranes, designed for safe and quick rigging. To avoid an assist crane, the HAV (main boom extension) can be used to build the luffing jib.

This crane features the IC-1 Plus control system and a single-engine concept with an intelligent

motor management system. The IC-1 Plus control system incorporates smart technology that provides asymmetric outrigger positioning based on real-time determination of lifting capabilities. This allows the crane to perform jobs usually reserved for larger machines, Terex said.

Grove GMK3060L

Grove will launch the successor to its GMK3060 at Bauma, the new GMK3060L. With a 157.5-foot boom, Manitowoc/Grove said the crane has significantly stronger load charts and that it will be available in both Tier 3/ Euromot III and Tier 4 Final/ Euromot V engine emission standards.

The new GMK3060L is based on its predecessor's design but has a 16.5 foot longer boom and offers the strongest taxi load charts in its class, Manitowoc said. Like the original, the GMK3060L features the most compact dimensions in the three-axle segment, enabling it to access tight jobsites, maneuver in tight spaces and even work indoors, the company said.

The chassis is almost as compact as a two-axle model, and up to 3.2 feet shorter than competitive three-axle cranes, with a carrier length of 28.47 feet and a minimum overall height of 11.41 feet with the suspension fully lowered, Manitowoc said. It has a seven-section TWIN-LOCK hydraulic pinned main boom.

"We launched the GMK3060 at Bauma 2013, and it has been a great success for us," said Andreas Cremer, Manitowoc's

The new Liebherr LTM 1230-5.1 delivers an extra 9.8 feet in boom length and an average of 20 percent greater lifting capacity, Liebherr said.



global product director for all-terrain cranes. "The new GMK3060L takes that crane and makes it even better by providing a longer boom, stronger load charts, fast operating speeds and a powerful yet more environmentally friendly engine."

The GMK3060L features Manitowoc's Crane Control System (CCS), as well as a boom configurator feature. This enables operators to input basic lift parameters, such as load, radius and load height, and the system automatically provides optimal boom options for performing the lift. This saves time at the jobsite and makes the setup process easier, Cremer said.

The GMK3060L is powered by a Cummins QSL9, a 254 kW (340 hp) six-cylinder in-line diesel engine that was designed for reduced fuel consumption. The QSL9 combines high strength with a compact footprint for one of the best power-to-weight ratios in its class, and will be available in both Tier 3/Euromot III and Tier 4 Final/Euromot V variants to cater for all markets, Manitowoc said. The crane will include a ZF TraXon automatic transmission, giving it 12 forward-speed options and two reverse.

Liebherr LTM 1230-5.1

Liebherr will present eight all-terrain cranes at Bauma including the 5-axle, 253.5-ton LTM 1230-5.1, which was introduced at the company's 2018 Customer Days event at the factory in Ehingen, Germany.

The predecessor to this new crane is the LTM 1200-5.1, which Liebherr said had one of the longest telescopic booms in this crane class at 236 feet. The new LTM 1230-5.1 delivers an extra 9.8 feet in boom length and an average of 20 percent greater lifting capacity, Liebherr said.

In addition to a multi-functional folding jib, a 141-foot fixed jib is also available. Crane operators can use the LTM 1230-5.1 using the company's VarioBase, VarioBallast, ECOMode and ECOdrive.

"The engineers at Liebherr-Werk Ehingen placed the multi-

The 175|AT transports to the job with full 81,200 pounds of counterweight in just two overflow loads. The crane does not have wing weights.



award-winning VarioBase support technology at the focus of the structural steel construction when creating the concept for the new crane,” Liebherr said. This meant that the new LTM crane is the first to have an asymmetrical support base – with the width being 24.2 feet at the front and 26.57 feet at the rear.

VarioBase means that it is now possible to generate particularly high lifting capacities, particularly at the rear working area over the 26.57-foot-wide supports – calculated in real-time by the LICCON controller. This new digitalization facility has a major influence on the structural steel technology and enhances the customer benefit in the form of lifting capacity increases, Liebherr said.

The company calls the combination of the trapezoidal and the variable support base, “VarioBase Plus.”

Link-Belt 175|AT

Introduced at its CraneFest customer event in October 2018, Link-Belt’s new 175-ton capacity 175|AT represents a new generation in the company’s all-terrain product range. The most distinguishing difference in this new model, which is set to begin shipping during the second quarter of 2019, is the two-person cab and single-engine concept.

In showing the 175|AT at Bauma, Link-Belt is clearly staging this crane and its future AT line to compete in the global marketplace. The company’s previous ATC line was targeted to the North American market. The new 175|AT, complete with its Tier 4 final off-highway

engine, was intended to work in markets around the world. With a 42.7 to 197.3-foot six-section pin-and-latch greasless main boom, the 175|AT features a three-piece on-board fly that measures from 10 to 32.5 to 55 feet. There are also three 18-foot lattice fly extensions. The crane has a total tip height of 315.1 feet and a maximum line pull of 23,500 pounds.

The single-engine concept incorporates a Cummins QSX 15 diesel engine that is off highway Tier 4F/Stage V compliant. The 535 HP, 15-liter engine has a 1,950 peak torque. With a ZF TraXon transmission, it has 12 forward and two reverse gears. The crane reports in the 111 to 150.9 metric ton class of ATs.

With five axles, the 175|AT has a high/low range and a standard 10X8X10 drive/steer drive train.

The crane features Link-Belt’s latest Pulse 2.0 – V-Calc system. In the operator’s cab there’s a 10-inch color touch screen display with RCL and engine data, diagnostics and monitoring and operator aids

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information.

The operator can customize the screen to his or her preferences, and the cab is Wi-Fi enabled for seamless software updates. The crane also includes Link-Belt's telematics system that monitors a wide range of customizable data points.

The crane carrier is 9.3 feet wide on 525 tires. With full counterweights the crane can be transported with just two flat beds carrying the counterweight system and lattice boom fly extensions.

Tadano ATF 60G-3

Tadano is keeping under wraps the new cranes the company will show at Bauma, although they promise at least two new all-terrain cranes. One AT that Tadano has revealed that it will exhibit is the

66-ton Tadano ATF 60G-3, a crane that is the result of German and Japanese engineering and the willingness to consistently rethink crane development and to question existing concepts, the company said. Unlike other 66-ton all-terrain cranes, the Tadano ATF 60G-3 has two front axles and one rear axle.

The crane comes with a boom length of 31.2 to 157.5 feet. It features a 5.2 to 24.2-foot jib and has a maximum sheave height of 157 feet. The ATF 60-G has a maximum radius of 144 feet and a maximum lift height of 187 feet.

The ATF 60G-3 is equipped with a 22-ton hook block in its 11-ton axle load configuration, which enables it to lift up

The Tadano ATF 60G-3 has a maximum radius of 144 feet and a maximum lift height of 187 feet.

to 18.8 metric tons taking into account the maximum hoisting winch traction. The 3-axle crane has been optimized for axle loads of 13 tons, 14 tons and 18 tons.

The engine on superstructure is a Mercedes Benz (Euromot IV, EPA Tier 4f), 260 kW (354 HP) with the ZF-AS-Tronic 12 AS 1625 SO gearing mechanism. The crane features a drive of 6 x 4 x 6 on the road and 6 x 6 x 6 off-road.

The crane is 440 inches wide, 111 inches wide and 144.8 inches tall. The gross vehicle weight is 71,007 pounds.

Even with a reduced outrigger base, the lifting capacities of the ATF 60G-3 are unrivaled due to the to the asymmetrical outrigger base feature installed in all ATF models with Tier 4 engines, Tadano said. In earlier models, the TADANO AML crane control system calculated and released the loads for each crane side whereby, for safety reasons, the respective shorter outrigger arm determined the maximum lifting capacity, whereas today the control system does this separately for each single outrigger. ■

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An aerial photograph of a construction site in an urban area. Several large cranes are visible, with one in the foreground lifting a large, cylindrical object wrapped in white protective material. The background shows a mix of brick and modern buildings, with green trees interspersed. The overall scene is busy and industrial.

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SPECIALIZED LIFTING 50

The annual **ACT**

SPECIALIZED LIFTING 50

continues to tiptoe upwards as companies add equipment and capacity. **Hannah Sundermeyer** reports.

PHOTO COURTESY OF DEEP SOUTH CRANE & RIGGING



Ton by ton

BY THE NUMBERS

- The companies represented in the **SPECIALIZED LIFTING 50** employ **14,847** people.
- **582** gantries and rubber tired gantries are owned by these companies, the same amount in 2018.
- **951** strand jack units are owned by the **SPECIALIZED LIFTING 50**, as compared to 895 in 2018.
- **5,248** pieces of other specialized lifting equipment (not classified as a gantry or strand jack) are owned by these companies as compared to 4,014 in 2018.
- The total capacity of every unit owned by every company on the list equals **1,457,799** tons. The total last year was 1,427,872 tons.

From oil and gas refineries to petrochemical facilities, nuclear power plants to wind farms, whether large- or small-scale projects, there appears to be no shortage or work for the specialized lifting sector.

Over the last year, the **ACT SPECIALIZED LIFTING 50** list has seen a slight increase in almost every category. While remaining steady, it appears that the market for specialized

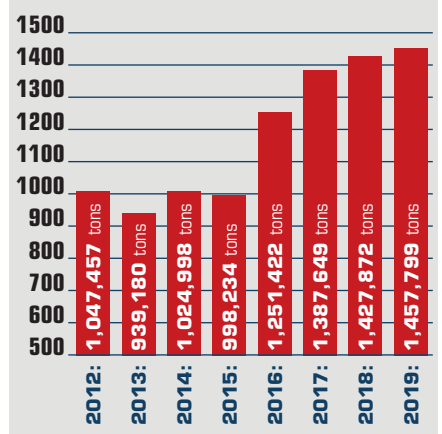
lifting is experiencing another year of quiet growth. With several minor increases, the indicators have remained stable without any notable surges since our 2018 survey. As the market continues to stabilize, the **SPECIALIZED LIFTING 50** index should continue to see modest increases.

The **SPECIALIZED LIFTING 50** posted an index of 1,457,799, gaining 29,927 tons over the 2018 index.

Top 10: LARGEST CAPACITY UNIT

RANK	NAME OF COMPANY	MAKE/MODEL OF LARGEST SPECIALIZED LIFTING UNIT	CAPACITY OF LARGEST LIFTING UNIT (U.S. TONS)	SPECIALIZED LIFTING INDEX (U.S. TONS)
1	Mammoet North America	Mammoet Lift System	350,000	372,800
2	Fagioli USA	Fagioli Self-Propelled Skid System	70,000	288,000
3	Deep South	Deep South Specialized Jack System	16,000	29,800
4	Wolfe House Movers	Synchronized Lifting System	12,000	16,905
5	Omega Morgan	Heavy Slide System	6,000	8,150
6	Barnhart Crane & Rigging	Barnhart Modular Lift Tower	5,000	285,850
7	Bigge Crane & Rigging	Bigge Lift Tower System	4,000	91,862
8	Berard Transportation	Enerpac Syncrolift	4,000	12,600
9	Burkhalter	Enerpac EP5000 Jacking System	3,527	22,700
10	Emmert International	Emmert Lift System	3,250	80,850

TOTAL CAPACITIES BETWEEN 2012 AND 2018



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RANK 2019	RANK 2018	NAME OF COMPANY	LOCATION	# OF DEPOTS	SCOPE OF OPERATION	# OF EMPLOYEES	SENIOR CONTACT
1	1	Mammoet Americas	USA	25	Worldwide	1,300	Bill Ambrose, president, Americas
2	2	Fagioli, Inc.	USA	2	Worldwide	142	Edoardo Ascione, president
3	3	Barnhart Crane & Rigging	USA	51	National	1,450	Alan Barnhart, CEO
4	4	Bigge Crane & Rigging	USA	17	National	1,065	Weston Settlemier, president & CEO
5	5	Emmert International	USA	3	Worldwide	110	Terry W. Emmert, president
6	6	Edwards Moving & Rigging	USA	9	Worldwide	106	Mark Edwards, CEO
7	7	Deep South Crane & Rigging	USA	8	Worldwide	630	Mitch Landry, president
8	9	Burkhalter	USA	4	Worldwide	91	Delynn Burkhalter, CEO
9	8	Doral Equipment	USA	3	National	50	Rob Keelan, vice president
10	10	Wolfe House Movers	USA	2	Worldwide	45	Jamin Buckingham, president
11	12	Lampson International	USA	8	Worldwide	300	William Lampson, president & CEO
12	11	Rigging Gear Sales, Inc.	USA	1	Worldwide	15	Ben Forster, vice president
13	17	Taylor Crane & Rigging	USA	2	National	86	Jim C. Taylor, Jr., founder & president
14	13	Erickson's*	USA	3	Regional	70	Steve Erickson, president
15	15	Berard Transportation	USA	5	National	75	Brett Berard, vice president, operations
16	14	Transport Bellemare*	Canada	4	Worldwide	1,100	Daniel Provost, transport operations manager
17	NEW	Global Rigging & Transport	USA	1	Worldwide	30	Dan Close, business development
18	16	International Industrial Contracting Corporation*	USA	4	National	300	Randall L. Goddard, vice president
19	18	Omega Morgan	USA	4	Worldwide	325	Troy Tallent, vice president
20	22	IRM Industry Movers	Mexico	2	Worldwide	130	David Gonzalez, president & CEO
21	19	TNT Crane & Rigging	USA	42	National	1,700	Mike Appling, CEO
22	20	Norris Brothers Co.*	USA	1	Regional	65	Bernard E. Weir Jr., chairman
23	21	PSC Crane & Rigging	USA	4	National	175	Randy Sever, executive vice president
24	29	Maxim Crane Works	USA	50	National	3,000	Frank Bardonaro, COO
25	23	Transtell SA de CV*	Mexico	1	Worldwide	120	Guillermo Arce, general manager
26	24	Advanced Rigging & Machinery Movers	USA	1	Regional	30	Matthew Hinty, president
27	25	Duffy Crane & Hauling*	USA	1	Regional	50	Jeffrey L. Cummings, president
28	NEW	Engineered Rigging	USA	3	Worldwide	10	Christopher Cox, president
29	27	Atlas Industrial Contractors*	USA	7	Worldwide	350	Randy Goddard, executive vice president
30	30	Riggers Group	Mexico	3	Worldwide	65	Hector R. Tores, Da Vila, vice president
31	31	Mid-Atlantic Lift Systems	USA	1	National	4	Travis Hall, president
32	33	Williams Steel Erection Company*	USA	1	Regional	100	Marianne Pastor, vice president
33	34	Process Group Inc.	Canada	3	National	275	Bryan Snyder, vice president, construction
34	35	CSE Inc.*	USA	5	National	250	Lisa Moon Stinnette, CEO
35	37	Intermountain Rigging & Heavy Haul	USA	2	National	95	Ron Montgomery, president
36	36	Holland Moving & Rigging*	USA	1	Worldwide	20	Chris Holland, president
37	39	Mountain Crane Service	USA	4	National	122	Paul Belcher, chief executive officer
38	38	Southwest Industrial Rigging*	USA	4	National	170	
39	26	Cropac Equipment*	Canada	4	National	75	Johnathan Vieira, marketing manager
40	40	AME Inc.*	USA	4	Worldwide	158	Scott Walken, director of preconstruction
41	NEW	M-L Crane Group	USA	14	National	587	Scott Wilson, president
42	NEW	HMS Lift Inc.	Canada	1	Worldwide	8	Eric Lavigne, manager

* estimated

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WEBSITE	# OF RUBBER TIRED GANTRIES	# OF OTHER SPECIALIZED LIFTING UNITS	# OF STRAND JACK UNITS	MAKE/MODEL OF LARGEST SPECIALIZED LIFTING UNIT	CAPACITY OF LARGEST SPECIALIZED LIFTING UNIT (U.S. TONS)	SPECIALIZED LIFTING INDEX (U.S. TONS)	
www.mammoet.com	0	20	305	157	Mammoet Lift System	350,000	372,800
www.fagioli.com	0	20	146	596	Fagioli Self-Propelled Skid System	70,000	288,000
www.barnhartcrane.com	0	87	770	25	Barnhart Modular Lift Tower	5,000	285,850
www.bigge.com	0	22	236	74	Bigge Lift Tower System	4,000	91,862
www.emmertintl.com	1	4	1,049	4	Emmert Lift System	3,250	80,850
www.edwardsmoving.com	0	16	560	4	Hydrosplex Strand Jack System	800	60,957
www.deepsouthcrane.com	2	3	50	6	Deep South Specialized Jack System	16,000	29,800
www.burkhalter.net	0	5	60	14	BPU-750	3,527	22,700
www.doralequipmentrental.com	0	6	58	0	Riggers 604	600	21,800
www.buckinghamtransport.com	0	0	87	0	Buckingham Synchronized Lifting System	12,000	16,905
www.lampsoncrane.com	0	4	8	0	E-Z Lift	2,400	13,500
www.rgsinc.net	0	118	219	0	Lift Systems HH1000	1,000	13,246
www.taylorcrane.com	0	9	210	0	Enerpac EVO Sync Lift System	2,400	12,998
www.Ericksonsg.com	0	5	80	0	Enerpac SBL 1100	1,176	12,676
www.berardtrans.com	0	0	8	0	Enerpac Syncrolift	4,000	12,600
www.groupebellemare.com	0	1	5	0	Goldhofer	2,872	12,000
www.globalrigging.com	0	0	15	16	CTTS	2,000	10,000
www.iiccsa.com	0	36	525	0	Riggers Manufacturing EZ604	600	9,660
www.omegamorgan.com	0	6	18	0	Heavy Slide System	6,000	8,150
www.irindustrial.com	0	3	103	0	J&R Engineering Lift N Lock Gantry	500	7,530
www.tntcrane.com	0	6	75	0	Enerpac SBL 1100	1,100	7,200
www.norrisbr.com	0	3	13	0		125	6,695
www.pscind.com	0	3	103	1	Hydra-Slide JS250 Up 'N Go	1,000	6,210
www.maximcrane.com	0	12	124	4	J&R Lift N Lock Gantry	700	5,750
www.transtell.com.mx	0	2	3	2	Hydrosplex HSL2000 Lifting	2,040	5,340
www.advanced-rigging.com	1	10	130	0	Hydratech FS 404 270	400	5,300
www.duffycrane.com	0	1	20	0			5,000
www.EngineeredRigging.com	0	2	8	2	Enerpac SBL 1100	1,200	5,000
www.atlascos.com	0	3	89	4	Atlas Tower Lifting System	800	4,400
www.riggers.mx	0	4	19	38	J&R Engineering Lift N Lock Gantry L1200	600	3,850
www.midatlanticlift.com	0	38	28	0	Lift Systems 34PT5400WT	500	3,258
www.wmsi.com	21	24	6	0	Link-Belt HC 278	300	2,200
www.processgroup.ca	0	6	6	0	Lifting Tower	1,000	2,130
www.cseonline.net	0	1	6	0	J&R Engineering Lift & Lock Gantry	900	2,000
www.irhusa.com	1	4	1	4	J&R Model L903-4-34-Gantry	450	2,000
www.hmrssupplies.com	50	0	20	0	Holland Power Dolly	55	1,990
www.mountaincrane.com	0	2	8	0	J&R Engineering Lift-N-Lock Gantry	700	1,400
www.swirusa.com	0	4	7	0	Lift Systems 850	850	1,332
www.cropac.com	5	5	45	0	Taylor X360M	50	1,000
www.ameonline.com	0	3	5	0	Lift Systems 75 Ton Twin-Lift	75	755
www.mlholdingcranegroup.com	0	3	12	0	Enerpac SBL-500	500	760
www.brutelift.com	0	0	8	0	BruteLift	200	345

Editor's Note: American Cranes & Transport is not responsible for errors or omissions.

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With the exception of a few flat years, it's easy to see that each year brings with it slight progress across the board. Acquisitions have accounted for some of the jumps on the list as the larger

ACT began distributing survey forms for the **SPECIALIZED LIFTING 50** list via email in January 2019 and followed up with phone calls and more emails in February. The companies that completed and returned these surveys over the course of the last two months were included in this year's list.

For some companies we were forced to use their data from our 2018 list. In these cases, an asterisk will appear next to that company's name. As a result, the **SPECIALIZED LIFTING 50** is an estimate.

While every effort was made to ensure the accuracy and completeness of the information in this list, ACT, and its editors and its publishers do not assume responsibility for any errors or omissions. We strive to improve this list, as well as our other annual lists, every year.

2020

To be a part of our 2020 **SPECIALIZED LIFTING 50**, email the editor, D. Ann Shiffler, to request a survey form. She can be reached at d.ann.shiffler@khl.com. Or you may email Assistant Editor Hannah Sundermeyer at hannah.sundermeyer@khl.com.



companies continue to expand, while smaller companies show little growth.

This year's **SPECIALIZED LIFTING 50** employs some 14,847 people, increasing by 198 employees over 2018. As the industry continues to combat the work force gap, the availability of jobs is

increasing alongside a declining number of employees interested in filling them.

In hopes of bridging this gap, the future of the industry will rely on a growing awareness in more blue collar job opportunities to keep this number steady and growing.

Top 10: NUMBER OF GANTRIES

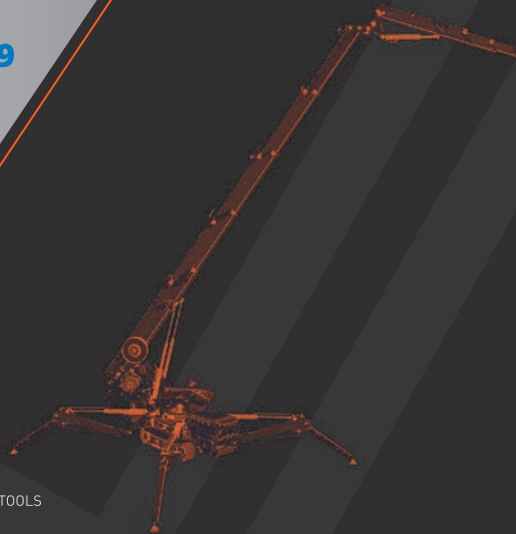
RANK	NAME OF COMPANY	TOTAL NUMBER OF GANTRIES	SPECIALIZED LIFTING INDEX (U.S. TONS)
1	Rigging Gear Sales, Inc.	118	13,246
2	Barnhart Crane & Rigging	87	285,850
3	Mid-Atlantic Lift Systems	38	3,258
4	International Industrial Contracting Corporation*	36	9,660
5	Williams Steel Erection Company*	24	TBD
6	Bigge Crane & Rigging	22	91,862
7	Mammoet North America	20	372,800
8	Fagioli USA	20	288,000
9	Edwards Moving & Rigging	26	60,957
10	Maxim Crane Works	12	5,750

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Making tracks

Jenny Shiner discusses how to introduce GPS tracking to gain acceptance and achieve better results.

GPS tracking software has become much more than a tactical solution to receive updates on vehicle locations. The technology is helping companies take a strategic approach to fleet management. Many businesses are using the systems to help drive return on investment (ROI) and solve significant business challenges. To accomplish this, opening the lines of communication with drivers about GPS tracking is crucial to achieving the big picture plans of a fleet management strategy.

With that said, how do you set up a positive perception of GPS tracking with your drivers and operators? Although the technology benefits the bottom line for the business, it's common for employees not to be on the same page from the start. GPS tracking is often thought of as "Big Brother." Employees may not understand how and why this technology is important.

To help drive a GPS tracking program's success, company management needs to talk with employees about the program and answer their questions head-on. To start the conversation, learn more about the top questions about how to introduce GPS tracking to employees to gain acceptance.

HOW SHOULD YOU ANSWER EMPLOYEE CONCERNS ABOUT GPS TRACKING?

It's important to listen to objections employees have about GPS tracking and



THE AUTHOR

Jenny Shiner is the communications manager for GPS Insight, www.gpsinsight.com. A graduate of Arizona State

University, she is responsible for external marketing communication for all business segments that GPS Insight targets.



Employees will gain a positive perception of GPS tracking when managers explain how and why the technology will be used, they can participate in open conversations with company leaders and learn about the benefits obtainable.

answer them with complete transparency. It will open the door to a conversation that can help alleviate their concerns. The most common concern employees have is that GPS tracking is overly intrusive. Drivers who have worked in the industry for a long time without the use of GPS tracking may not fully understand it or think that it's being introduced because management doesn't trust them.

Explaining that using GPS tracking is not about a lack of trust, but instead, it is about incorporating tools that will create better results for the business can help put their concerns to rest. When there is technology available to help solve difficult business challenges, help perform jobs more efficiently and increase revenue, it makes good business sense to use it. Sharing the benefits for the business and reassuring employees that it will not be overly intrusive will increase positive perception of the technology.

WHEN SHOULD YOU TELL EMPLOYEES THE BUSINESS IS USING GPS TRACKING?

Some fleet owners and managers are concerned about employees reacting negatively to their business using a GPS platform to track their vehicles, so they start using the system without introducing the technology to drivers and then surprise them with punishments.

“ Companies can start connecting the data to their fleet management strategy and achieve significant results in fleet safety, efficiency, productivity and cost savings. ”

However, it is strongly advised to discuss the plans to use GPS tracking with drivers before using the data. While it's common to conduct a pilot of the technology without telling employees to gather benchmark data, it's recommended that you make employees aware before using the data to hold them accountable during coaching.

Using GPS tracking to monitor vehicle locations without employee knowledge usually results in backlash and creates a negative perception of the technology. Along with the backlash, the coaching is unlikely to stick. It is important to be upfront and honest about the use the technology from the beginning.



One of the most popular uses cases for GPS tracking data for performance-based pay is gamification. Incentive programs can improve fleet metrics and motivate employees.

HOW DOES GPS TRACKING BENEFIT EMPLOYEES?

One of the best ways to gain acceptance from drivers is to discuss the ways GPS tracking can benefit them directly. GPS tracking helps businesses solve many challenges like increasing safety, improving driver accountability and making operations more efficient. When the organization runs as effectively as possible, it has a direct impact on revenue.

One of the best benefits for employees is the potential to increase their salaries or hourly wages. One of the most popular uses cases for GPS tracking data for performance-based pay is gamification.

Incentive programs are a great way to improve fleet metrics and motivate employees at the same time. A Driver Scorecard Report ranks drivers/vehicles based on speeding, rapid acceleration/ deceleration and idle time. Using this report helps fleet management reward drivers for where they dare doing great, and clearly show what areas they need to improve to receive their incentives.

SHOULD WE SHARE THE BUSINESS CHALLENGES THAT CAUSED THE NEED?

When introducing GPS tracking, organizations often ask if they should talk about the challenges that brought up the need for vehicle tracking. It is advised to share these issues because open communication is essential during change management, as well as providing specific examples of how these challenges will be solved.

If speeding citations are higher than industry standards, fuel costs are at an all-time high, or maybe an employee was using their vehicle after work hours, it is okay to share that information with employees. Presenting how a GPS tracking system can help solve these challenges

is important and will help employees understand why the business needs it to achieve better results in the future.

HOW DO WE SET RULES AROUND THE USE OF GPS TRACKING DATA?

It should not be a surprise to drivers when they are held accountable for their behavior with GPS tracking data. That's why it is a best practice to write driver policies for when and where GPS tracking will be used and share this information with employees before the procedure is put into action. When employees understand what is expected of them, there should be little to no backlash when this information is used for coaching or to hold them responsible for their performance.

When employees are on board, companies can start connecting the data to their fleet management strategy and achieve significant results in fleet safety, efficiency, productivity and cost savings. Employees will gain a positive perception of GPS tracking when managers explain how and why the technology will be used, they can participate in open conversations with company leaders and learn about the benefits obtainable.

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Andy Turnbull discusses how telematics and a connected service approach can improve asset utilization and fleet performance.

Connect the data

Today's off-highway and commercial vehicle operations are collecting large amounts of information from telematics systems on their equipment. Increasingly, they are harnessing connected asset data to improve utilization and performance as well as the productivity and efficiency of their maintenance programs and practices.

But the vast amount of telematics data at their disposal only enables improvements if it's used strategically and to its full potential. The real need is to leverage the right technology to combine data from different sources to provide measurable operational and financial benefits.

A common goal among all types of operations is to improve uptime. Unavailable equipment not only causes a loss of revenue and profit. Downtime comes at a higher cost for repairs and can lead to a rise in employee frustration and a drop in customer satisfaction.

While manufacturers are increasingly enabling a range of telematics capabilities on off-highway equipment and commercial vehicles, many asset owners and operators are not fully leveraging these systems to improve service supply chain efficiency. Only then can telematics data yield real benefits and measurably boost asset utilization rates.

Telematics data plays a role in maximizing uptime in several ways. It can optimize preventive maintenance processes by monitoring compliance with service schedules, and by providing alerts when assets approach or pass the threshold for the next maintenance event.

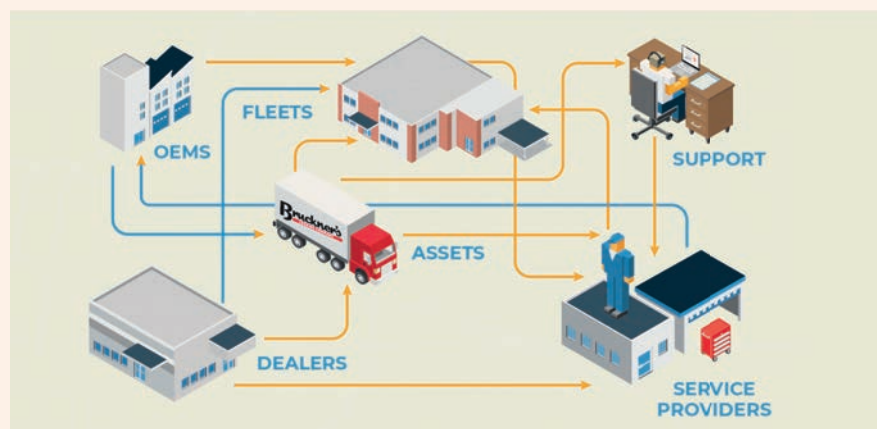


THE AUTHOR

Andy Turnbull is vice president of Decisiv's Off-Highway business unit. Decisiv, (www.decisiv.com), is the provider of Service

Relationship Management technology for commercial assets, including on- and off-highway vehicles and heavy equipment.

Driving asset performance with SRM



Informed decision-making

Telematics and remote diagnostics also have the ability to let you know immediately if one of your assets encounters an issue that needs attention. With that information, you are no longer in the dark until an asset returns to a facility or until an equipment operator calls to tell you about the issue.

Ultimately, the advantage of telematics is in its ability to enable more informed decisions. For instance, if an issue could lead to a breakdown you might decide to have the asset serviced immediately, either on site or at a company or outside repair location. For less critical issues, you might use telematics information to decide to have the repair made as soon as possible or during the next routine service interval.

With off-highway equipment on jobsites and commercial vehicles on the road, telematics platforms that provide GPS-based location information can help facilitate repairs. Linked to a database of service providers, for example, the systems can allow you to determine how long it would take to get an asset to the nearest location equipped to provide the service needed, or how long it will take a mobile service unit to arrive.

It's likely that in today's connected world you are already using telematics solutions

to facilitate maintenance and repairs. You may also have an asset maintenance management software solution.

Seamlessly integrated with management software, telematics data can become part of alerts, updates and reports on assets. Advanced software solutions have capabilities that help reduce downtime and lower costs. With location, mileage or machine hours data from telematics systems, asset maintenance software can be used to plan and track preventive maintenance on vehicles and equipment and produce automated notifications when service is due.

Combined, telematics systems and software-based solutions can provide actionable information seamlessly and automatically, increasing their collective value in your operation. But while connecting assets may be as simple as enabling a means of communication between telematics and remote diagnostics systems and asset management software, the real key to their effectiveness is the relevant information they provide.

What's really required to successfully drive asset performance and utilization with telematics is to move from simply collecting data from assets to a connected service approach that enables telematics in your service process. Telematics data can

yield real benefits, but it does not provide for the full potential if it is not part of a connected service supply chain.

The 'Four Cs'

Connecting a full ecosystem means bringing together assets, service locations, management systems and diagnostic tools, OEM data, call centers and remote service providers on one unified platform. Employing an advanced approach, a Service Relationship Management (SRM) platform makes that possible.

With an SRM platform, the four Cs of effective service event management include:

- Connectivity that facilitates seamless data flow between assets, service points, OEMs and equipment operators.
- Communication that enables contextual information sharing and collaboration at the point of service.
- Controls that provide tools to reduce risk, increase efficiency and improve decision-making.
- Consistency across service networks and repair processes, including shared service histories, for real-time decision support and post-event reporting that drives accountability

and ultimately process improvement.

In today's data-driven world, it's easy to become overwhelmed with the vast amount and scope of information at your disposal. Service Relationship Management technology unifies the service supply chain in measurable ways. With SRM, asset owners and operators are finding that availability is up by more than 20 percent, triage time is down by 70 percent, average repair time has dropped by 25 percent, and technician and shop productivity is up 30 percent.

Among service providers using SRM, check-in time has dropped more than 75 percent and dwell time is down by over 20 percent, average diagnostic time has been cut by 71 percent and average repair time is 25 percent lower, all while lower costs, improved profitability and enhanced customer satisfaction are being driven by several benefits, including a 90 percent fix-it-right-the-first-time rate.

Equipment/vehicle downtime is inevitable. Scheduled service is a critical part of keeping assets running smoothly and efficiently. But breakdowns also occur, resulting in costly unscheduled repairs.

Reducing downtime requires a

coordinated effort throughout your operation. Most equipment operators might also be surprised to learn that a large part of downtime is often not related to actual repairs. Instead, it is the inefficiency of management processes – especially a lack of communication and collaboration – that is to blame.

Solving asset management challenges requires in-context, accurate and actionable information. Real-time fact-based decisions cannot be made unless data on assets and service and repair operations is cohesively enabled.

In the short term, complete visibility into maintenance and repair activity is most valuable for keeping down costs and limiting downtime. In the long run, using automatically stored and easily accessible vehicle service and repair histories enables you to see where process inefficiencies and asset related issues are the cause of higher downtime costs and lower asset utilization.

Effective asset management is a business process that applied with the right technology can support your bottom line. In increasingly competitive industries that rely on and utilize a range of commercial assets, it can be a competitive advantage. ■

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To be successful in the permitting industry requires attention to detail and a face to the future. **Hannah Sundermeyer** reports.

Permitting processes continue to evolve alongside advancing technology.



A keen eye



JOHN INCONTRERA,
Owner, High, Wide
& Heavy Oversize



VALERIE INCONTRERA,
Office Manager/
Accounts Payable, High,
Wide & Heavy Oversize



SCOTT BOEHM,
President,
West Chester Permit



MIKE HARRISON,
Director of IT/Marketing,
Custom Permits

In 2019 we have self-driving, electric cars, augmented and virtual reality training and artificial intelligence advancing by the day. In such an evolving world, it only makes sense that a variety of industries grow alongside it.

When asked about the future of the permitting industry, John Incontrera, High Wide & Heavy, had three words: “Technology, technology, technology.”

A bright future

Mike Harrison, director of IT and marketing for Custom Permits also echoed this sentiment, referencing the evolution of permitting for electric, self-driving cars, such as Teslas. He joked that self-driving semi-trucks from Uber may also be on the horizon.

“I’m excited to see where everything goes because I think there’s a lot of potential for automation too,” said Harrison. “We are working on a lot of technology right now to speed up the permitting process and that helps out

“ We are able to communicate requirements to the carrier, and the carrier’s needs to the municipalities, spanning the communication gap. ”

JOHN INCONTRERA,
Owner, High, Wide & Heavy Oversize

the states a lot because the states, to implement any technology, have to get it passed by legislation, which takes forever. Any updates that get implemented take about three years, if I’m being realistic.”

With states becoming more proficient in technology, Harrison said that he predicts that they will eventually have better

Permitting app launched

WCS Permits & Pilot Cars kicked off the new year by introducing a new mobile app, the "Permit Portal," which sends drivers and dispatchers instant automated text message notifications when oversize permits are approved. The free app allows WCS customers to receive an instant text message notification or email as soon as an oversize load permit is available. Customers can request message notifications. Once a WCS permit agent confirms a mobile number in the system, text messages will automatically be sent for each permit approval of the customers load.

As soon as a permit is issued, a WCS agent will attach it to an order that will trigger the automated text message. Once received, the customer can click the link in the text message to open the "Permit Portal" app and view the order to download, print or email the permit.

Supporting documents including route surveys are available along with the permit.

"This new process for delivering permits creates accountability between the permit agent, dispatcher and driver. The progress of the order and associated permits can be viewed in real time by all parties," said WCS President Wes Mollno. "There will never again be any confusion as to the status of an order. The communication, convenience and simplicity of Permit Portal App has changed the game."

Drivers and dispatchers can benefit from the "Permit Portal" app.



systems to deal with all of the varying permits as everything moves more towards technology.

There is now a booming opportunity in North America for high paying truck driver and crane operator jobs, which is also good for pilot car and permitting companies.

"Most of the time the driver just wants to be on the road making money, and they don't want to have to worry about paperwork," Harrison added. "They don't want to have to worry about filling stuff out. They want somebody else to do all that work. So that's kind of where we come in."

With permitting companies' futures looking bright, *American Cranes & Transport* consulted with four permitting industry players to discuss all things permitting. This year's panel includes John Incontrera, owner, High, Wide & Heavy Oversize; Valerie Incontrera, office manager/accounts payable, High, Wide & Heavy Oversize; Scott Boehm, president, West Chester Permit; and Mike Harrison, director of IT and marketing, Custom Permits.

HOW WOULD YOU CHARACTERIZE THE CURRENT MARKET FOR PERMITTING?

JOHN INCONTRERA: Interesting, although, some of the improvements in automated permitting systems make for faster turnaround times, and varying regulations make it very difficult for carriers to coordinate across several municipalities. High, Wide & Heavy Oversize is successful in this sector, as we are able to communicate the requirements to the carrier and the carrier's needs to the municipalities, spanning the communication gap.

BOEHM: The current market for permitting is following the economy and remains very strong and in high demand. This time of year is always a little slower due to winter weather. Our customers remain optimistic and are investing in new equipment to keep up with industry growth.

HARRISON: In the trucking industry, a lot of it can be held up by weather sometimes. So, with the recent 'Polar Vortex' it kind took a hit. And of course, over the holidays things kind of slowed down, but we

“ The automation of routing on the permit requests has made it possible for us to cut our turnaround times in half. High, Wide & Heavy Oversize customers get their permits quicker, with less denials. ”

VALERIE INCONTRERA,
Office Manager/Accounts Payable,
High, Wide & Heavy Oversize

anticipated it definitely picking up a lot. I know with all of the online shopping going on these days, so much more shipping is going on. I've been reading a lot of articles about how there are not enough truck drivers available in the industry. More people may be taking driver jobs because more white-collar jobs are being flooded. That leaves a lot to be had for the blue collar businesses, and especially in the trucking industry. There are lots of truckers out there making a lot of money, compared to what they used to make.

HOW HAS THE AUTOMATION OF PERMITTING APPLICATIONS AND ROUTING SYSTEM PROCESSES IMPACTED YOUR OPERATIONS?

VALERIE INCONTRERA: The automation of routing on the permit requests has made it possible for us to cut our turnaround times in half. High, Wide & Heavy Oversize customers get their permits quicker, with less denials. These new systems have also allowed for Department of Transportation (DOT) offices to "return for clarification" rather than a full denial and re-submission which would make you start the whole process over.

BOEHM: Automated permitting and routing systems have enabled state employees to focus on the non-routine permits that need the hands-on personal touch. This permit automation has enabled us to procure permits faster than ever, increasing customer satisfaction and ultimately their bottom line. We continue to automate our systems, just like the

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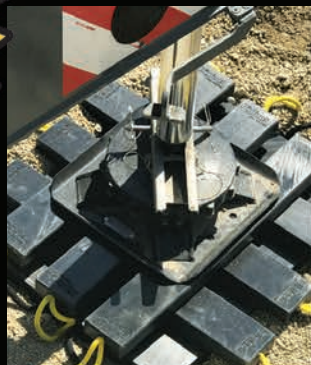
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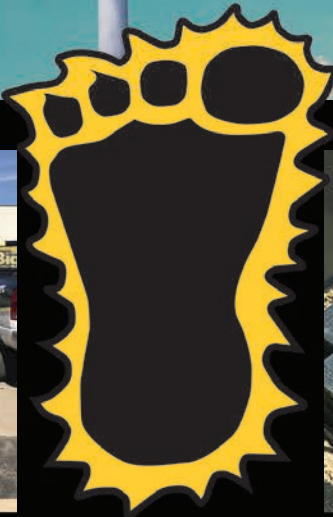
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The current market for permitting remains very strong and in high demand.

states and localities, to further improve the overall process.

HARRISON: I don't know about a hard number, but we have definitely reduced the time to process a permit. It's hard to say. If I had to guess, I would say it's been reduced it by around 70 percent. It used to take 10 minutes, now it only takes two or three.

HOW DOES YOUR COMPANY MANAGE LOCAL PERMITTING MOST EFFICIENTLY?

VALERIE INCONTRERA: High, Wide & Heavy Oversize is actually located within New

York City (NYC). Although High, Wide & Heavy Oversize does process permit applications for all 48 states, we specialize in NYC DOT permits and NYC oversize route surveys. Many carriers will avoid NYC due to permit/escort providers who don't have the experience or local knowledge on how to best complete the task safely and efficiently. As for other local municipalities, we have built relationships with local offices over the past 17 years and this allows us to move seamlessly through their systems and procedures. Success in our industry is

“ Our customer base is pretty diverse; construction, wind, rigging, steel, manufacturing, etc. All seem to be thriving. One thing that they all seem to have in common is that loads continue to get bigger and bigger. ”

SCOTT BOEHM, President, West Chester Permit

predicated on communication, which we have been able to accomplish.

BOEHM: West Chester Permit manages local permitting by establishing strong relationships and maintaining them with higher permit volume. We also compile detailed processes and procedures for each locality.

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HARRISON: We have a few different types of permits that we do in Ohio, although it's interesting as our most popular permits are actually New York HUT (Highway Use Tax) and Florida (International Fuel Tax Authority) IFTA. We are based in Ohio, but we have customers from all 50 states. We actually have a contract with Florida to be able to issue permits on their behalf. The process of securing that contract took a lot of credibility and reputation with our company— which includes being in good standing with all the states – and with that contract outlines all of the requirements of the state. So, we pretty much have contracts set up for that kind of stuff. Most states require the VIN license plate for trucks and the make, fuel type, the basic primary information, etc. So that's just what we require for all permits. And then certain permit types actually require more information, like maybe the driver's name or the highways that they're going to be traveling on. So those are in our system as a field that will only show up if it's the type of permit that needs that specific information. So, we just kind of have set it up that way in our system to

“ Everything is going towards more technology. The states are becoming more proficient in that as well. Although they take a long time, eventually they will all have better systems to deal with all of these permits. ”

MIKE HARRISON, Director of IT/Marketing, Custom Permits

be able to track that. And now humans don't really have to remember those anymore. They can just let the computer do the work.

ARE YOU SEEING A TREND IN WHAT IS BEING HAULED? ARE THERE ANY TRENDS IN LOCAL PERMITTING?

JOHN INCONTRERA: High, Wide & Heavy Oversize is currently seeing an influx of infrastructure-related commodity, as always there are several large municipal projects in our area – LaGuardia Airport, Kosciusko Bridge, Goethals Bridge, along with several interstate projects. High, Wide & Heavy Oversize is heavily invested in the LaGuardia Airport project, permitting

and escorting over 5,000 oversize loads since the project started 2016.

BOEHM: Our customer base is pretty diverse – construction, wind, rigging, steel, manufacturing, etc. All seem to be thriving. One thing that they all seem to have in common is that loads continue to get bigger and bigger. As for local permitting trends, more and more require permits for their roads and the rules and processes vary greatly. Turnaround times often do not meet the needs of the industry.

HARRISON: There are not too many out-of-the-box things. We're seeing mainly construction equipment like excavators, agricultural tractors, that kind of thing. Those are most of the ones that we get. ■

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Project-specific

A cantilever lifting beam system offered an innovative solution to install a drive motor into a small window at a power plant.



The drive motor was rigged to the cantilever lifting beam with four 17-ton shackles and four 8-foot endless slings in a basket.

At times, a lifting solution requires the use of a highly specialized piece of equipment. Such was the case recently in Amarillo, TX, where the ML Crane Group team of Crane Service and the Alternative Movement Division (AMD) were contracted to remove and replace a 21,700-pound mission critical drive motor in an operating power plant.

After reviewing the site constraints and assessing all the challenges to change out the drive motor, the team determined that the engineered solution was to use their cantilever lifting beam rigged to a 100-ton capacity Link-Belt HTC 86100 truck crane.

The cantilever lifting beam was the safest and most cost-effective way for the crew to pick the motor out of a small access window on the side of one of the power plant buildings.

Short of creating another opening in the building or on the roof, the window provided the only access to the drive motor. Tight clearances of only an inch

Minimal overhead clearance required short slings to minimize rigging height.



The engineered solution was to use a cantilever lifting beam rigged to a 100-ton capacity Link-Belt HTC 86100 truck crane to remove and replace a critical drive motor.

or two needed to be considered during all aspects of the lifting plan, according to Crane Service's Amarillo Branch Manager Homer Aikin.

Gear protection

An additional issue was a ceiling-mounted monorail crane track that protruded outside the wall of the building. Multiple pads and softeners would need to be attached to the tracks to protect the slings

and rigging that could possibly come into contact with any sharp edges during the removal and installation of the motor.



solution

“Without the use of the cantilever lifting beam, the customer would have had to design, build and install a new ceiling-mounted monorail crane in order to remove and replace the drive motor as the only access was through the window in the side of the building,” said Aikin. “The tight clearances had to be taken into account at all times.”

The crane was rigged to the beam using two 17-ton shackles and four 8-foot endless slings. The drive motor was rigged to the cantilever lifting beam with four 17-ton shackles and four 8-foot endless slings in a basket. Short slings were used to reduce the height of the rigging as there was minimal overhead clearance.

Ground control

The counterweight on the cantilever lifting beam was adjusted using battery operated, wireless remote control (up to 100 feet), allowing the beam operator on the ground to maintain critical beam balance during the lift. The cantilever lifting beam is perfect for use in refineries, power plants, chemical plants, feed mills, manufacturing and specific jobs that have limited access, Aiken said.

The working cantilever lifting beam weighs 20,000 pounds and has a load limit of 25,000 pounds, although it has been tested at 34,000 pounds with zero

The Link-Belt HTC 86100 truck crane was rigged to the beam using two 17-ton shackles and four 8-foot endless slings.

deflection. The maximum offset from the crane hook center is 16 feet.

The length of the beam is 28 feet. Counterweights are adjusted using the wireless remote-control system.

The ML Crane Group team executed the job flawlessly, and ahead of schedule. ■



Designed for project-specific rigging options, the cantilever lifting beam weighs 20,000 pounds and is 28 feet long.

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Berard found the quickest and most cost-effective plan for moving two huge vessels to a Louisiana refinery.



The vessels made an 8-day barge journey via the Tombigbee River to Mobile, AL, and then the Gulf Intracoastal Waterway through New Orleans to Amelia, LA, near Berard's Ro-Ro site.

An epicenter of the world's petrochemical, offshore energy exploration, industrial and power industries, the U.S. Gulf Coast region provides a throng of heavy and specialized rigging, lifting and transportation challenges. The region is also Berard Transportation's "oyster," providing amazing projects that involve handling huge vessels, modules and components.

Recently Berard was tasked with finding the fastest and most cost-effective method

to transport two 155-ton steel refinery vessels from the fabricator in northern Mississippi to a refinery near New Orleans.

The Berard team decided the best way to get the huge vessels to the refinery was an eight-day barge trip via the Tombigbee River to Mobile, AL, then the Gulf Intracoastal Waterway through New Orleans to Amelia, LA.



"We loaded out onto the Berard-owned BTI 1945 deck barge using an 8-axle line Goldhofer PST-SLE transporter directly at the fabricator's yard," said Brett Berard, vice president and project manager. "The vessels were then secured for inland transit and barged to the Berard waterfront Roll-on Roll-off facility near Morgan City, LA."

Berard used its Grove RT880E roll-off site to set barge ramps, ballast pumps and for transport equipment assembly.



Lashing plan

Berard worked with the client to develop a lashing plan, including supporting calculations, for both modes of transport, barge and highway transporter. The client identified lashing points on the cargo that were sufficient to obtain the restraint to meet requirements for the move.

The Goldhofer 8 axle PST-SLE transporter was again used to roll-off of the barge and stage on stands. The Berard team self-loaded the vessels from the stands onto a 10-axle line Faymonville DualMAX trailer. The vessels were then

The vessels were loaded out onto the Berard-owned BTI 1945 deck barge using an 8-axle line Goldhofer PST-SLE transporter.



The Berard team then self-loaded the vessels from the stands onto a 10-axle line Faymonville DualMAX trailer. The vessels were then transported 90 miles to the project site.

transported 90 miles to the project site.

“Berard operates a waterfront Ro-Ro site near Morgan City, LA,” Berard explained. “The site is improved and ready for heavy transport projects, so no job specific improvements were required.”

The saddles were custom built to Berard’s recommended specifications, Berard explained. They were 22 feet wide, allowing for self-loading using the 10-axle line Faymonville DualMAX trailer. Once loaded on the trailer, the saddles ends were unbolted to reduce travel width. At the destination, the saddles were reattached by the Berard team for self-offloading.

Berard used its Grove RT880E at the barge Ro-Ro site to set barge ramps and ballast pumps, and for transport equipment assembly.

Overall dimensions of the vessels were 196 feet long, 17 feet wide and 18 feet

tall. The gross weight of each vessel was 596,550 pounds.

The duration of the entire project was 15 days, with the last three days making the 90-mile over-the-road trip from the barge dock to the refinery. The vessels were transported one after the other using the Faymonville DualMAX transport system.

The haul required superload permitting from the Louisiana Department of Transportation and Development (LA DOTD). The heavy haul required two Louisiana state police escorts and three civilian escorts.

Obstacle course

Obstacles along the route included low oak trees, power lines, traffic signals and pipe racks in the refinery. The full convoy included 11 vehicles, including state police escorts, bucket trucks, LA DOTD vehicles, Berard escort vehicles and two prime movers. The pull tractor is a Peterbilt 357, Cummins engine, with planetary drive, the push truck is a Kenworth C500, Cummins engine, with planetary drive.

With Berard’s expert planning, the job went off without a hitch.

“We encountered some rain for load-out in Mississippi, but no major weather events for the transport,” said Berard

Berard said one of the biggest challenges



Obstacles included low-hanging oak trees, power lines, traffic signals and pipe racks.

of the project was convincing the client they had the best transportation plan.

“The fabricator is water served, so barging directly to the Mississippi River-accessible refinery seemed to be the first option,” Berard said. “However, barge offloading on the river can be difficult due to the permitting process to cross the levee system. Corps of Engineers permits may take over six months to obtain, and the river level could affect when cargo can be offloaded.”

The first alternate was to put the vessels on trucks to haul the vessels directly to the refinery, which would take months of permitting and surveying.

“Our plan involved the best of both worlds, barging to a roll-off site that required no permitting, and a tested route that could handle the weight and dimensions of this cargo,” Berard said. “Once awarded, the route was surveyed and approved by LA DOTD in less than 40 days.”

The full convoy included 11 vehicles, including state police escorts, bucket trucks, LA DOTD vehicles, Berard escort vehicles and two prime movers.





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Door to door

Pioneer Heavy Haul transported a 160-foot-long cold box from Ontario to North Carolina.

Weather is always the unknown when it comes to transporting super loads in the winter months, especially in Canada. Based in Welland, ON, family owned Pioneer Heavy Haul was able to engineer a door-to-door transport solution, providing all the equipment to transport a massive cold box from Port Robinson, ON to Cofield, NC. The cold box measured in at 160 feet long, 28 feet 9 inches wide and 22 feet tall. The gross weight was approximately 736,000 pounds.

Pioneer utilized its 3-axle and 4-axle Kenworth C-500s and 20 lines of Goldhofer THP-HL. The trucks and trailer were rigged for any scenario, as two pull trucks or as a push and a pull truck. Pioneer's team included two drivers, two steermen and four men on the ground.

Pioneer self-loaded the cold box by hydraulically lifting it off the 4-foot stools on which it was fabricated. The Pioneer team then transported the cold box out of the building approximately 500 feet to where a deck barge was awaiting the roll-on operation.

The first challenge Pioneer's team overcame was to transport the cold box out of the fabricator's building and out of the main gate to the roadway. Even with widening the shipper's property, there was just enough real estate to maneuver the cold box through the drive way and out of the gate.

"There was no room for error with the space provided," said Pioneer's Operations Manager Mack Jones. "There was some concern that the 160-foot long cold box wasn't going to make it through the



After shrink-wrapping, a 20-axle Goldhofer system was used to lift the cold box off its stools.

gate. But with our experienced crew and knowledge operating the Goldhofer systems, it went off without a hitch."

Pioneer's team rolled the cold box and the trailer onto the barge and then secured it to the deck using beams and marine-rated chain. There was a full crew of ironworkers that worked through the night welding the beams from the cold box to the deck of the barge. By morning the barge was on its way, departing from Port Robinson, ON, making its way to the North Atlantic.

Frigid journey

The cold box then made its journey through the Welland Canal to Lake Ontario and through the Great Lakes St. Lawrence Seaway System to the North Atlantic Ocean. The barge travelled south to Morehead City, NC in a single tow.

Local river tugs would then deliver the barge to Cofield, NC. Nucor Steel's dock is located on Chowan River.

"The barge trip spanned approximately 2,104 nautical miles from Port Robinson, ON to Morehead City, NC and 190 nautical miles from Morehead City, NC - Cofield, NC," said Jones.

Due to weather considerations, Pioneer's team estimated the transport would take between 15 days to a month. In fact, the project took 22 days, with the cold box delivered on December 7, 2019. Pioneer's team met the barge in Cofield and performed the roll off directly into the facility, using Nucor's on-site dock. The cold box was hauled about one mile to where the Pioneer team self-offloaded it to stools. A crane would later move it into position.

"The success of the cold box delivery was routine due to expert engineering, knowledgeable crews and advance planning," said Jones. "Under the management of our operations manager Amanda Morrison, our field superintendent Paul White and Field Superintendent Kurt Morrison, Pioneer completed the delivery of another cold box."



The cold box measured 160 feet long, 28 feet 9 inches wide and 22 feet tall. The gross weight was 736,000 pounds.

ACT previews Bauma 2019 with our 'must see' list.

Not-to-be

The Bauma 2019 tradeshow will be held April 8-14 in Munich, Germany.

The equipment used by North America's lifting, rigging and specialized transportation sector has become more global, making the Bauma tradeshow in Munich, Germany a world stage for purchasing cranes, rigging gear, transport systems and remote control systems. Efforts to lure American customers to global brands has grown exponentially over the past decade, and more North American OEMs have found Bauma to be the ideal place to launch new equipment and grow their international presence. Plus, American OEMs have increasingly acquired or merged with global brands, giving the world's largest construction equipment tradeshow even more status. And as markets have improved, there has been a concentrated effort by European and other global manufacturers to expand their distribution channels to North America.

Held every three years, Bauma also gives American customers the opportunity to engage more directly with their international vendors. The trek to Bauma has become a ritual for American customers who often travel beyond Munich to OEM factories in Europe to see where and how the equipment they are purchasing is made.

While all OEMs will show equipment that all buyers will deem "must see," following is *American Cranes & Transport's* preview of the particularly interesting equipment, technologies and services on show. Our April issue will

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WHEN April 8-14, 2019

WHERE Messe München Trade Fair Center, Munich, Germany

HOURS Mon-Fri: 9:30 a.m. to 6:30 p.m.
Saturday: 8:30 a.m. to 6:30 p.m.
Sunday: 9:30 a.m. to 4:30 p.m.

REGISTRATION INFORMATION:
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feature a more comprehensive Bauma Show Guide, for those readers who attend the event and those who do not.

New 120-ton RT

Link-Belt Cranes will introduce the never-before-seen 120|RT 120-ton (110 metric ton) rough terrain crane. The 120|RT delivers outstanding reach with a six-section 38.3 to 164.1-foot (11.6 to 50 meters) pin-and-latch formed boom that is built at Link-Belt's Lexington, KY facility. An available two-piece 35 to 58-foot (10.7 to 17.7 meters) on-board offsettable fly provides flexibility and reach. It manually offsets at 0, 15, 30 and 45 degrees. The crane's one-person fly erection technology minimizes work at height with ground controls for fly assist and boom hoist cylinders. Two 16-foot (4.9 meter) lattice insert extensions provide a

maximum tip height of 261.7 feet (79.8 meters).

The 120|RT's six-speed transmission is powered by a dual compliant Cummins Stage V/Tier IV QSB 6.7L 232 hp (173 kW). Also available is a Cummins Tier III QSB 6.7L 240 hp (179 kW) diesel engine.

Link-Belt's Variable Confined Area Lifting Capacities (V-CALC) system features 81 different outrigger configurations with real time 360-degree charts. Once outriggers are set, the Link-Belt Pulse 2.0 system indicates the crane's available capacity. The system previews the operator's real time capacities given the crane's current configuration at the next five



Three slabs of hydraulically removable upper counterweight totalling 28,800 pounds is standard on the all-new 120-ton Link-Belt 120|RT.

missed

radiuses for a set boom angle.

The 120|RT has the same cab design as the 75|RT, introduced in 2017. All electrical components coming into the cab are bulk headed for “plug and play” assembly. The cab features a 20-degree tilt and ergonomic seat and electronic joystick/single axis controllers. The 120|RT will transport with base unit fully equipped minus modular counterweights at 94,472 pounds (42 852 kg). It has an overall height of 12 feet 10 inches (3.91 meters).

Boom aid system

Crane operation can be demanding, even when the hook is empty. Liebherr is rolling out a new assistance system on the LR 1300 SX crawler crane. Known as the “Boom Up-and-Down Aid,” this system promises to increase operational safety as well as simplify handling.

If the center of gravity of the crane is too far forward, there is a risk that the crane can tip when lowering the boom and jib. The Boom Up-and-Down Aid indicates the approach to the tipping border and automatically stops operation before the operator unintentionally enters an unsafe zone. It assists the operator in leaving the danger zone without having to activate the safety bypass switch, Liebherr said.

The Liebherr LR 1300 SX is the newest generation of Liebherr's crawler crane line.



Available since September 2018, the 21LC1050 is Comansa's latest high capacity flat-top tower crane.



The new Liebherr LR 1300 SX is fitted with wind sensors on the main boom and jib. Both the measured wind speed and the actual crane configuration – boom length and boom angle – are taken into consideration when calculating a hazardous situation for the crane. When the conditions become dangerous, the system gives a warning. At higher wind speeds, the operator can adjust the maximum lifting capacity through a simple selection on the control panel.

The assistance system is available for the following crawler cranes from Liebherr-Werk Nenzing: LR 1110, LR 1130, LR 1160, LR 1200, LR 1250, LR 1300 SX

Grove three-axe AT

While Manitowoc will debut six new cranes from its Grove and Potain lines, a highlight will be an upgrade of the three-axe Grove GMK3060 all-terrain crane. The new model is based on its predecessor's design but has a longer, seven-section twin-lock hydraulic pinned main boom of 157.5 feet.

The GMK3060L chassis is up to one meter shorter than competitive three-axe cranes, with a carrier length of 28.47 feet and a minimum overall height of 11.41 feet with the suspension fully lowered.

Comansa flat top

Comansa's latest high capacity model is the 21LC1050 flat-top tower crane. The crane can load up to 110,230 pounds and has a maximum radius of 262.4 feet. An optional 279-foot reach is available.

The 21LC1050 features high speed hoist mechanisms, up to 984 feet per minute, and the capacity for 5,150 feet of wire rope. Designed with a single-double trolley system with automatic reeving change, the 21LC1050 has an optimized load diagram. Working with the simple (or



The Grove GMK3060L chassis is almost as compact as a two-axe model, Manitowoc said.

front) trolley, the crane improves its tip loading capacity and reaches higher hoist speeds, the company said. The 21LC1050 is delivered with the new CUBE cab in its XL size, the largest cab from Comansa.

New Kobelco crawlers

Two new G-2 series models will be the main attraction in the crane section of the Kobelco stand. The 90-metric ton capacity CKE900G-2 and the 300-metric ton capacity CKE3000G-2 will make their debut.

With a maximum lifting capacity of 200,000 pounds, the CKE900G-2 has a boom length that spans from 40 to 200 feet. The fixed jib offers a maximum lifting capacity of 24,000 pounds. The maximum combination between the two is 190 feet + 60 feet.

The crawler's engine is a 285-hp 2100-rpm HINO four-cycle, water-cooled, vertical inline, direct-injection, turbo-charged model with an intercooler. Its main and auxiliary winches have a maximum line speed of 390 feet per minute and a rated single-line line pull of 46,800 pound per force. It has an operating weight of 198,500 pounds and a transport weight of 95,800 pounds plus 69,100 pounds of counterweight.

The CKE3000G-2 has a maximum lifting capacity of 661,300 pounds with a crane boom length from 78 to 295 feet. Its fixed jib offers a maximum lifting capacity of 58,600 pounds with a maximum jib length of 100 feet. The maximum combination between the two is 256 feet + 100 feet offering a maximum reach of 356 feet.

The crawler's engine is a 450-hp 2100-

>60

Kobelco will show two cranes from its new G-2 series, including the CKE3000G-2.

Tadano said its 120-ton GR-1200XL is the highest capacity RT on two axles in its product range.



rpm Scania four-cycle, water-cooled, vertical inline, direct-injection, turbo-charged model with an intercooler. The crane's main and auxiliary winches are offered in non-free fall or optional free fall capabilities, and a rated single-line line pull of 61,640 pound per force. It has an operating weight of 721,075 pounds, minimum car body transport weight of 93,615 pounds and a maximum of 352,795 pounds of counterweight.

Largest two-axle RT

Tadano has a range of surprises planned for Bauma, but the company is keeping them under wraps. Sources say Tadano will show new four and five-axle all terrain cranes.

Shown for the first time in Europe, Tadano is showcasing the largest 2-axle rough terrain crane in its crane lineup, the 120-ton GR-1200XL. This crane gives buyers a rig between the GR-1000XL and the GR-1600XL and meets the need for a higher reaching rig with longer boom length and larger lifting capacities, the company said.

The GR-1200XL has a strong yet light, high-tensile steel, rounded boom that features a single telescopic cylinder. It gives the crane a 184-foot (56.1 meter) lifting height and 150-foot (45.7 meter) load radius. Its jib provides additional reach, extending the lifting height to 241.4

feet (73.6 meters) with a load radius of 159 feet (48.4 meters).

Additional features include Hello-Net telematics and Tadano's new Smart Chart System. Hello-Net telematics help customers optimize their operations with real-time monitoring of crane activity, history, position data and maintenance information. The Smart Chart System is a safety device and control system that gives a square-shaped rated-load capacity footprint which taps the potential of a crane by expanding the conventional circular working area which enhances both efficiency and safety, Tadano said.

Telecrawler technology

In the telecrawler class, Tadano Mantis will show the 88-ton (80 metric ton) capacity GTC-800 telescopic crawler crane. The GTC-800 is CE marked and made its European debut in 2018.

The GTC-800 is a collaboration between Tadano Mantis and Tadano Ltd. resulting in a purpose-designed telecrawler. Integration of Tadano winches, jibs, hydraulic cylinders, AML-C and Hello Net telematics increase reliability and commonality with other Tadano models, the company said. The full power, 5-section 37 foot 8 inches to 141 feet 1 inches (11.5 to 43.0 meters) hydraulic boom is designed for flexibility – performing well for lift work, while also enabling out-of-level, pick-and-carry and foundation work. The main boom is complemented by a 33.1 / 58.1 foot (10.1/17.7 meter) bi-fold jib with offsets at 3.5, 25, and 45 degrees. The maximum lifting height with the jib erected is 198 feet (60.4 meters). An optional 98.2-foot (2.5 meter) heavy lift jib with a maximum capacity of 23.5 tons (21.4 metric tons) with 3.5 degree and 30-degree offsets is also available.

The GTC-800's out of level operation is enhanced by market leading capacities on up to 4-degree slopes, 1.5 degree "level" ground charts, and automatic load chart switching, the company said. Equipped with Opti-Width, the GTC-800 is capable of limitless combinations of symmetrical and asymmetrical track width



Three of the eight Liebherr EC-B series tower cranes will be rigged with soLITE fiber rope.

setups with no requirement for pinning of the track frames in fixed positions, the company said.

Liebherr EC-B series

Liebherr's tower crane division will be rolling out the company's new EC-B series of eight cranes. An element of this series debut is that three of the eight new cranes are rigged with fiber rope.

The first eight units of the new series handling cranes with maximum payloads from six tons to 16 tons. The maximum peak load capacities are from 1.6 tons to 2.8 tons.

The two largest cranes in the new series, the 340 EC-B 12 and the 370 EC-B 12 Fiber, each have a reach of up to 78 meters. The new EC-B series also features the new LiCAB cabin.

The 240 EC-B Fiber and 370 EC-B Fiber are rigged with high-strength soLITE fiber rope, which was developed by Liebherr and Teufelberger over the last 10 years.

In addition to up to 20 percent higher peak loads of the fiber cranes compared to the steel cable variants, the fiber rope has four times longer service life with the same usage as a steel cable, Liebherr said. The rope weighs about one-fifth of the weight of steel cable.

Terex flat top debut

Terex will show off the 11-ton capacity Terex CTT 202-10 flat top tower crane. The new model offers three chassis options: 12.5-foot, 14.8-foot and 19.7-foot base selections. Using Terex

transfer masts, the new crane can be configured with H20, TS21 and TS16 masts, offering from 5.2- to 6.9-foot widths so that customers can

The maximum lifting height for the Tadano Mantis GTC-800, with the jib erected, is 198 feet.



The Terex CTT 202-10 is ready for installation of the Terex Tower Telematics, T-Link.

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The WOLFF 1250 B is being shown for the first time at a trade show.

manage component inventory while cost-effectively meeting tower height needs.

The CTT 202-10 can be configured in nine different jib configurations from 82 to 213.3 feet. It delivers a maximum 11-ton capacity at a length reaching 79.4-feet, depending on jib and counterweight set-up, and can hoist up to a 2.3-ton load at the maximum 213.3-foot jib length. Terex Cranes' Terex Power Plus feature will temporarily allow for an increase of the maximum load moment under specific and controlled conditions by 10 percent, giving the operator extra lifting capacity during those conditions.

Depending on tower configuration, the CTT 202-10 has a maximum under hook height of 251.6 feet and provides a maximum crane height to shorten erection time. The CTT 202 will also be available with an 8-ton capacity version, the CTT 202-8.

Augmented reality

CM Labs Simulations, developer of Vortex training simulators, will be launching its new Augmented Reality (AR) application, which makes it possible for instructors to bring a virtual mobile crane right into the classroom, where trainees can interact with it, conduct walkarounds and learn the fundamentals of machine inspection.

Two training simulators will be on display at CM Labs' booth: the Vortex Advantage and the desktop Vortex Edge Plus. Both simulators can run CM Labs' full catalog of lifting and earthmoving training packs, including mobile crane, flat-top tower crane, luffing tower crane and crawler crane as well as excavator, wheel loader and other machines.



The Liebherr LR 1800-1.0 features a luffing jib and derrick system.



the vSCALE D6 console with a 12-inch high-resolution color display.

The big Wolff

Wolff has impacted the American market with its tower crane range, and the company will show several new models and features. The company will present a trio of cranes, the new Wolff luffing crane 133 B, the Big Wolff 1250 B and the latest Wolff 6020 clear crane.

The Big Wolff 1250 B has a jib radius of 80 meters and a lifting capacity of 60 tons. The U.S. version of the Big Wolff 1250 B was adapted to meet the needs of the American market with quick lifting speeds and high load capacities. It is currently in use at the construction of the New Patient Pavilion for Penn Medicine in Philadelphia together with a Wolff 700 B.

Heavy lift crawler crane

Heavy lifting capacities and low-cost transport are the main features of Liebherr's new 800-metric ton capacity



The WIKA Mobile Control vSCALE D6 console has a 12-inch color display.

Maeda mini

The CC423 crawler crane is the newest

addition to the Maeda crawler crane range. With a capacity of 2.93 tons, the CC423 was developed for use in tight spaces. Due to the crane's highly compact tracked footprint there is no need for outriggers and near zero-tail swing.

The main feature is the 1,465 kilogram pick-and-carry capacity. Other features include a new engine equivalent to EPA Tier 4 standard, an open but covered superstructure mounted operator's cab and a gross weight of 4,400 kilograms.

In control

WIKA Mobile Control, WIKA and Tecsis bring together three technologies that make lifting loads safer, according to the company.

By developing robust sensors, mobile controllers and application software, WIKA Mobile Control ensures that customers benefit from maximum safety and equipment uptime. As a system integrator, WIKA Mobile Control will present the gSENS LWG cable reel with CANopen safety signal transmission. Also don't miss

Designed to operate in tight spaces, the Maeda CC423 doesn't need outriggers.



CM Labs' tandem lift simulation will be exhibited for the first time at Bauma.

The GTC-800 will be featured at BAUMA 2019!
 Tadano Booth No. FS 1205

GTC-800

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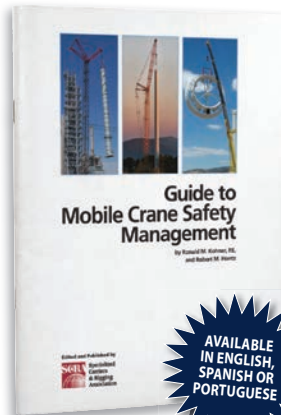


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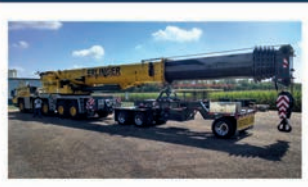
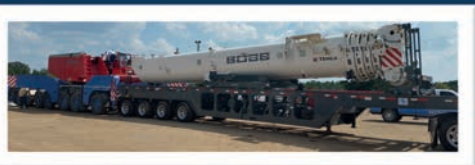


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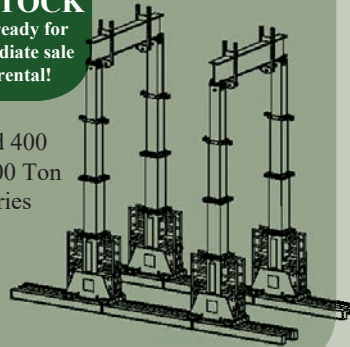


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crawler crane, the LR 1800-1.0. The crane features a luffing jib and derrick system, and for the first time, the boom system features lattice sections with three system dimensions that can be telescoped into each other for transport.

Even though it is just three meters wide, the LR 1800-1.0 is particularly rigid as a result of its increased design height, Liebherr said.

The new LR 1800-1.0 also features the derrick ballast with VarioTray – after raising the lattice boom with the large derrick ballast, part of the ballast can be unbolted quickly. Only a small proportion of the ballast is required for hoisting work with the boom fully or almost fully raised. This avoids the task of stacking and unstacking of ballast slabs. A new type of ballasting system is used for the suspended ballast – a hydraulically adjustable folding frame allows the ballast radius to be adjusted to up to 23 meters.

Lift and shift

Of interest to the American buyer at the Faymonville stand is the DualMAX trailer that was designed for heavy-load transportation in North America. The DualMAX can be widened from 14 to 20 feet loaded out.

Dubbed the “lift and shift,” this patented system is used when the load distribution must be adjusted for infrastructure reasons, such as crossing bridges or making tight turns. The steering system



The Faymonville DualMax was designed specifically for American roadways.

does not need to be modified during the widening process of the DualMAX, with everything remaining fixed.

The Faymonville BladeMAX will also make its premiere. This trailer offers a solution for transporting the newest generation of wind turbine blades, Faymonville said. Rotor blades can be picked up, erected up to an angle of almost 90 degrees, swiveled and rotated by 360 degrees around their own axis using the adapter, which is mounted on a self-propelled vehicle or between modular axle lines. The BladeMAX works without the use of counterweights.

Also at the Faymonville stand will be products from the Cometto brand, which is a member of the Faymonville Group. Cometto will show its electronically steered modules, specifically the 6-axle MSPE 48t, on which the Faymonville BladeMAX is mounted.

Two towers from Jaso

Jaso will show the two largest cranes in its tower crane line, the J1400 and J780 models. The J1400 features a jib of 80 meters and can lift a maximum load of 64

While the latest generation of ADDRIVE will be a focus for American customers, Goldhofer will show many new products.

Enerpac’s ETR1250 trolley system can be synchronized to a single integrated Intellilift wireless control unit.



metric tons. It has a tip load of 10.5 metric tons at 80 meters.

A highlight at the Jaso stand will be a Hoist Cam by Netarus mounted on the JASO J560 crane block, showing the features of this visualization technology.

Enerpac trolley system

Enerpac’s electrically-driven ETR125 integrated trolley system recently made fast, continuous work moving three 500-ton monopile transition wind energy components some 90 meters across the deck of a ship. Visitors can see the attributes of the new ETR125 in person at Bauma.

The Enerpac trolley solution is a faster and more capable alternative to traditional skidding systems, offering faster travel speeds, digital synchronization and improved load stability, Enerpac said.

Goldhofer unveiling

The latest generation of the ADDRIVE will be a highlight for North American buyers as will the optimized versions of the THP modular heavy-duty trailers and the latest generation of the PST self-propelled modules. Visitors will also be able to take a close look at the FAKTOR 5.5 high girder bridge. With its payload to deadweight ratio, it is a good solution for customers looking for a lighter version of the FAKTOR 5, Goldhofer said.



The Jaso J1400 has an 80-meter jib and can lift 64 metric tons.

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Certification surges for knucklebooms

If NCCCO's experience is anything to go by, there are going to be a lot more truck drivers carrying a CCO card on the nation's highways in coming months – at least those equipped with articulating boom cranes (knucklebooms).

According to data just released by NCCCO, demand for knuckleboom written and practical exam testing in 2018 was up by 28 percent compared with the previous year. This followed a massive 96 percent surge from 2016 to 2017.

When all three categories for which NCCCO offers a certification – with hook, with winch and with fork attachment (loader) – are considered, knucklebooms with just a hook predictably account for the lion's share of the testing conducted. However, those equipped with a winch made a surprisingly strong showing (22 percent), almost equal with articulating boom loaders (24 percent).

Regional differences are marked, said NCCCO Director of Operations Joel Oliva.

“Ten states account for more than 60 percent of all certified articulating crane operators (*see sidebar*)”, he said. “Washington State leads the pack,

accounting for fully 13 percent of all certificants since testing began in 2009.”

It's pretty clear that the combination of a local jurisdiction requirement such as in Washington State or New York City, that was put in place ahead of the federal rule, along with effective enforcement, goes a long way to accounting for some of the variations.

Building supplies fuel surge

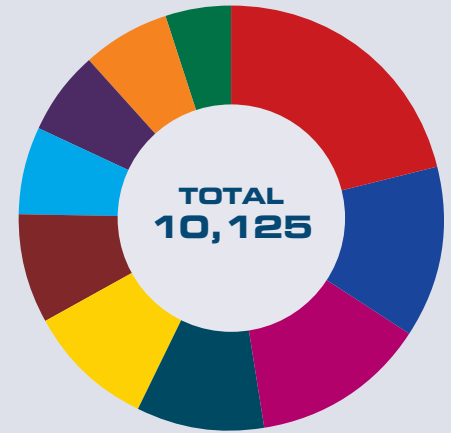
But why the big surge over the last two years?

“Two words,” said NCCCO Program Manager, Tara Whittington, “Building supplies.” Indeed, it seems from reports by the top dozen or so training firms who account for the largest proportion of pre-CCO exam preparation that delivery of building materials to construction sites accounts for much of the sudden interest in certification ahead of the federal rule that went into effect in November.

“For some building supplies companies, certification wasn't even on their radar and so with the November deadline looming they scrambled into action,” said Whittington. “For others, many thought they were exempt until OSHA made it clear that anything other than unloading materials at a jobsite and placing them on the ground would cross the line from general industry into construction and trigger the certification requirement.”

NCCCO's Regulatory Affairs Coordinator, Matthew Shaw agreed. “The minute an operator starts to arrange roof trusses or joists, for example, on the ground to facilitate hoisting by another crane, rather than merely place them there, he has to be certified.” The same is true for loader cranes used for delivering such items as drywall. “Invariably these items are not offloaded

Top Ten Knuckleboom States



- Washington (13%)
- California (8%)
- New York (8%)
- Florida (6%)
- Pennsylvania (6%)
- Texas (5%)
- Illinois (4%)
- Minnesota (4%)
- Wisconsin (4%)
- Ohio (3%)

onto the ground but lifted to the desired floor level,” said Shaw. “At that moment these cranes fall completely under the construction regulations, and they have to be operated by a certified operator.” Some employers, concerned at the risk of crossing the line from general industry into construction and being cited for not having a certified operator, or baulking at having to track who is – and who is not – certified, have elected to have their entire workforce certified. “At \$13,000 per citation, and ten times that for a repeat or willful violation, employers are choosing rather to invest in certifying their operators,” Shaw adds.

Is it construction or is it general industry?



“Some employers, concerned at the risk of crossing the line from general industry into construction and being cited for not having a certified operator, have elected to have their entire workforce certified.”

Navigating the evaluation maze

You've read the Final Rule, OSHA's FAQs, and the NCCCO Employers Guides*.

You've watched the SC&RA webinar and reviewed the Employer Evaluation Forms**. You've even taken a stab at scanning the Preamble*. But you still have questions.

Following are eight you might have asked yourself, along with some answers that may help you navigate around OSHA's new rules for crane operator qualifications.

1 I HEARD OSHA HAS POSTPONED SOME PART OF THIS RULE?

That's correct. According to an announcement by OSHA last month, you must still conduct evaluations of trained and certified operators now, but documentation of those evaluations can wait until April 15.

2 CAN A TRAINED AND CERTIFIED OPERATOR STILL BE CATEGORIZED AS AN OPERATOR-IN-TRAINING?

Yes. Although it sounds odd, until certified operators are also evaluated for the specific configuration of crane and the type of work they are about to

“ An individual may be a fully certified and evaluated operator with respect to one piece of equipment... but simultaneously be an operator-in-training... with respect to different equipment or tasks. **”**

[Preamble to the Final Rule, Federal Register, Vol. 83, No. 218, p. 56211.1]

do, they are still considered by OSHA to be “operators-in-training” and subject to the restrictions that govern them.

3 ONCE AN OPERATOR IS EVALUATED FOR THE CONFIGURATION OF CRANE AND TYPE OF WORK THEY WILL DO, CAN THEY STILL BE OPERATORS-IN-TRAINING?

Yes. OSHA said in the Preamble to the Final Rule that an individual may be a fully certified and evaluated operator with respect to one piece of equipment, but simultaneously be an operator-in-training with respect to different equipment or tasks that require significantly different skills or knowledge.

4 HOW DO I KNOW WHEN I HAVE TO EVALUATE AN OPERATOR AGAIN?

When the skills, knowledge or ability of the operator are not sufficient for him or her to operate that crane in a given configuration or situation. The employer (or an agent of the employer) has to make that determination. But note that OSHA also said (again in the Preamble) that employers are not required to evaluate their operators in every possible configuration of equipment or combination of configuration and boom length.

5 WHAT ELSE CAN TRIGGER EVALUATIONS?

When there is evidence from an operator's knowledge or performance that retraining is necessary. And retraining must always be followed up with re-evaluation. Examples of such evidence might be incidents, near-misses or misinterpreting load charts or hand signals.

6 HOW DO I DETERMINE WHO IS QUALIFIED TO CONDUCT THE EVALUATIONS?

OSHA said the evaluator must be someone with the knowledge, training,

“ Additional evaluations

are only required when the operator's existing skills, knowledge or ability to identify and avert risk are not sufficient for that operator to operate the equipment in a new model, configuration, etc. **”**

[Preamble to the Final Rule, Federal Register, Vol. 83, No. 218, p.56222.1]

and experience necessary to assess equipment operators. While a current or former crane operator might also be an evaluator, the knowledge, training and experience needed to operate a crane may not be sufficient. Note that you cannot rely on OSHA's standard definition of a “qualified person” here.

7 IF I HIRE AN OPERATOR AND HE BRINGS HIS CERTIFICATION CARD AND HIS EVALUATIONS BY A PREVIOUS EMPLOYER DO I NEED TO EVALUATE HIM AGAIN?

Yes. OSHA does not allow you to rely on evaluations conducted by a previous employer.

8 IF I WORK IN A STATE OR CITY THAT REQUIRES LICENSING, DO I ALSO HAVE TO BE CERTIFIED?

Only if the license meets OSHA's requirements for written and practical exams. If it does not, your operators must then also be certified as well as licensed. ■

* These can all be downloaded from the OSHA Resource Center at nccco.org/oshas-crane-rule.

** Go to scranet.org for further information.

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Sweeping insights

Using telematics to monitor, understand and correct driver behavior.

One of the biggest benefits to using telematics is the sweeping insight it gives you into the behavior patterns of your drivers. Not long after implementing a telematics solution, you begin to understand your driver's behavior on a much more comprehensive scale – both in terms of what they're doing right and what they're doing wrong. You also begin to understand that the data is telling you a story – a story about just how safe your company truly is.

Telematics has radically changed the kind of information available to safety managers. They can now proactively deal with problematic driver behaviors that might lead to accident, crashes and even lawsuits against your company. Whereas safety managers may have had to make educated guesses about specific driver behaviors in the past, they can now look directly at the data. They can see if certain behaviors are being repeated – like hard braking or excessive acceleration – and make determinations about why those events are happening. Are drivers distracted? Are they tired? Knowing what the problematic behavior is allows you to locate the root cause – and remedy it through training.

Telematics and training work hand in hand. Your telematics data gives you the opportunity to uncover trends, or identify behaviors that are beginning to trend, and use predictive analytics to assign training modules to drivers. There are a number of driver training solutions available in the market today. NBIS has developed one of the most comprehensive and industry-specific online driver training programs around. Using proprietary claims data, and designed by some of country's foremost transportation experts, the NBIS Online Driver Training



THE AUTHOR

Chris Nelson is Program Manager for Specialized Transportation for NBIS, the official

insurance provider for SC&RA. For more information please visit nbis.com.



Module is specifically formulated for drivers operating mobile cranes, heavy haul tractors, and concrete pump trucks. It targets the most common high-risk driving situations and behaviors and gives practical ways to deal with and avoid them.

Foresight for safety

The foresight that telematics data presents to safety managers and fleet professionals gives them an important opportunity to head off accidents before they happen, which ultimately saves money and lives. It also helps lay the groundwork for what your training schedule should look like month to month.

One of the other big advantages of telematics is that you can use what you're learning to incorporate new policies and procedures into your safety program. As I'm sure you know, written safety policies are an important piece to your entire fleet-safety initiative. They provide clarity and transparency to your drivers – and put everyone on the same page. When incorporating telematics data, your safety program doesn't just get more robust, it gets smarter – and more effective.

Perhaps one of the most innovative ways telematics data can be used is this: as competition. What I mean is that the data collected by telematics systems can be used to invent driver league tables, with rewards for those drivers who perform

“ You can use your telematics data to incorporate new policies and procedures into your safety program. ”

best and also for those who demonstrate substantial improvements in their safety standards. Incentives like this can give drivers a great deal of encouragement to make the changes you want them to make.

At this point, fleet telematics is no longer a new concept – it's here to stay, and to tell you a story. Your job is to figure out what that story is and respond accordingly. Remember, too, that in addition to driver behavior indicators, data and metrics such as vehicle location, idle time, maintenance schedules, and even engine diagnostics can be collected and analyzed for training purposes to improve your fleet's overall safety and productivity.

To learn more about the NBIS Online Driver Training Module, or for help understanding your telematics data, contact Chris Nelson, or another member of the NBIS Risk Management Team today call 877.860.RMSS or visit www.NBIS.com.



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- Martin Seban**, senior consultant – economics and country risk, EMEA, IHS Markit
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Tips for hiring smart

Positioning your company to hire the right people.

Industry leaders around the country have spent the better part of the last few years trying to crack the worker-shortage code – often to no avail. And though it's not for lack of effort, the wrong hiring decision can waste time and cost your business money, and ultimately have a negative impact on your existing employees.

One thing to keep in mind: as badly as we might need to put butts in seats, if we hire people just for the sake of hiring them, it's likely going to cost us in the long run, and we'll find ourselves back at square one, all the same.

In a recent piece for *FleetOwner*, Jane Clark mentioned Mark Goldman, CPA, and owner of MGR Accounting Recruiters, and his advice to clients and conference attendees on how to avoid a bad hire. For starters, don't do all the talking. As an interviewer, if you're the only one talking and asking questions, you're not really getting to know this person – who they are, why they're sitting in front of you and what they want out of a job, career, life, etc.

And certainly don't skip over the job duties – essentially, hiring based on physical appearance. Moreover, if the interviewee hasn't inquired about job duties, and/or shown an interest in what is going to be required of them, then it's also time to reconsider.

Age is another piece to this puzzle: of course, we all want young, able and eager individuals, ready to join the team and propel the company to ever-greater heights. But be careful about hiring

someone so young that they might vanish on you when things aren't going their way, or when the challenges of the job require more than they want to give.

Additionally, hiring someone because they seem like a "great guy," or gal, even though you're not really measuring them against your core values, mission, vision and where they fit into the forward progress of the business, is shortsighted and almost certainly counterproductive when the dust settles.

Committed and capable

Obviously, avoiding a background check is one of the quickest ways to set yourself up for failure with a new hire. If you're so rushed that you avoid the background check, don't call references or fail to show this person the work environment (or potential team members), then you probably need to sit down and assess more than just your workforce.

It can also be very productive to ask a candidate about what other options he/she is entertaining. This can give you a gauge on where you stand in the game, and what you may need to adjust within your offer sheet or onboarding process. It allows for an opening where you can get to know the candidate a bit more – a deeper dive into why they're interested in the industry, how they think about their future and whether or not this is, ultimately, a good fit.

As Clark pointed out in her piece: "While the list seems long, it begins by being aware of your existing hiring practices."

She added, "Train the people in your company who are involved in the hiring

“ Avoiding a background check is one of the quickest ways to set yourself up for failure with a new hire. ”

process about the proper way to conduct an interview and make decisions about job candidates. Ask people who are involved in the hiring process to review hiring processes and procedures right before an interview.”

At the end of the day, Clark makes a great point. You can't know exactly who it is you're attempting to hire. But by knowing yourself and your process as well as you can, you can position yourself more strategically to bring someone in who's committed and capable of helping your company find success.

To hear the latest on best hiring practices, as well as how to keep your best employees, register for SC&RA's upcoming webinar with seasoned executive recruiter Larry Wainscott, March 27, 2 p.m. EST, at scrinet.org/webinars. ■

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The route to safety

Understanding boom dollies and cranes as the industry evolves.

Since 2017, when SC&RA formed its Boom Dolly Task Force, the Association has been working collaboratively with the Crane Rental Association of Canada (CRAC) to mitigate risks in the use of boom dollies with mobile cranes.

Beth O’Quinn, SC&RA Sr. Vice President, Crane & Rigging, explained that the Boom Dolly Task Force’s mission is to educate members on proper procedures and reduce risks, as well as develop best practices and training materials.

“The goal is to increase awareness of the special and unique considerations boom dollies add, above and beyond driving cranes with booms in their normal position of being over the carrier,” she stated. “The effort has required SC&RA, and all parties involved, to develop a thorough understanding of the driving

dynamics of cranes with conventional truck suspensions as well as hydraulic (all-terrain) suspensions, which includes: operating procedures, connecting to crane, brake adjustments (if any), preparing for highway travel, travel precautions, and returning to normal crane operation.”

To that end, keeping the load under certain restrictions as it moves is also very important, as there are myriad laws and safety concerns when it comes to moving around equipment so large. Thus, if a company can move the crane boom with the outrigger boxes, swing-away jib, block, ball and necessary counterweight, they will save the entire operation valuable time during the setup process once everything arrives at the jobsite.

Recognizing that, historically, training is certainly provided for cranes and for boom dollies independently, but not once the two systems are married together, SC&RA has been highly motivated to provide online training courses that address the key issues companies should consider when utilizing both.

Remaining focused

Tim Bennett, Vice President at NCSG Crane & Heavy Haul Services, as well as a member of the Boom Dolly Task Force, believes that industry faces multiple challenges when operating boom dollies.

“The boom dolly was brought on as a means to meet weight restrictions for road ways and bridges,” he explained. “But as



crane technology advanced over the years, little interface was done to mate the carrier to the dolly – and generic dollies became the norm.”

As a result, Bennett underscored that, where feasible, companies should make a point to appropriately size or mate the boom dolly with the crane. “Avoid the bigger-is-better principle; running a tandem/tandem, or tandem/tri dolly with a smaller crane, such as a 130T, and you’re asking for the tail to wag the dog.”

Bennett also emphasized the need to invest in training. “Most crane operators are not ‘truckers,’ let alone have experience pulling a trailer with multiple pivot points. Tail swing is one of the most overlooked parts of the training for crane operators driving these things down the road.”

He added, “Remember the reduced steering and braking points – this should translate to reduced operating speeds and best practices on how to operate with.”

Bennett emphasized that companies utilizing boom dollies should remain focused on the weight transfer to the dolly and extra load capacity as a result.

Worth considering

If you’re in the market, Alan Schmidt of Tadano America Corporation indicated that, for companies planning the purchase of a new boom dolly for a new all-terrain crane, don’t assume that the cheaper options available will get the job done.



“First, remember that a boom dolly is a trailer, and the best practice for pulling a trailer is with the use of a hitch.”

ALAN SCHMIDT, Tadano America Corporation



Boom dollies can be modified and customized depending on the customer’s needs for the project or the type of crane they’re moving.



SC&RA's Boom Dolly Task Force's mission is to educate members on proper procedures and reduce risks, as well as develop best practices and training materials.

In fact, long-term maintenance costs, downtime and safety issues can all be easily avoided with a little planning on the front end.

"First, remember that a boom dolly is a trailer, and the best practice for pulling a trailer is with the use of a hitch," he said. "While many crane carriers either come with or have an option for a pintle hook, most boom dolly brackets are robust but not designed for the task of pulling. The use of a tow bar connected to the pintle hitch reduces the possibility of damage to your expensive boom. The method of pulling by hitch is a common practice in Canada, but in the USA, pulling by boom is the most common practice."

Schmidt maintained that the connection between the boom dolly and boom should be such that it supports the weight of the boom but also allows for the motions that the boom produces during the travel of the vehicle.

"As you think about your boom's journey, consider a few questions: Where is this unit going to travel? Is the topography relatively flat or is it very hilly?" he said.

While a flat travel route produces no ill effects, Schmidt pointed out that a hilly route can be cause for concern. Travel up and down hills can produce large departure and ascent angles. If the attachment between the boom and boom dolly is unable to compensate for this, it will produce unwanted stresses on

the boom, boom dolly and boom-dolly attachment.

"Beyond the terrain that your crane will be travelling on, the number of axles on your boom dolly is also a consideration," said Schmidt. "The main goal here should be choosing a boom dolly that provides for the lowest cost of ownership and easiest cornering of the unit. When a three- or four-axle dolly becomes necessary, the ability of the third and fourth axles to easily follow is important."

While these considerations may cost your company more initially, they're worthwhile, said Schmidt, in that they produce significant benefits: "They reduce potential for damage ... which means more uptime on the jobsite working instead of spending it doing repairs."

Risk vs. reward

Most companies that offer boom dollies do so with a few options to choose from.

HMR models are available with single, split and tilting tower options. Three- or four-axle dollies are also available when the overall weight requires a little more to be touching the ground during transport.

These days, boom dollies can be modified and customized depending on the customer's needs for the project or the type of crane they're moving. And today's versions come with an assortment of bells and whistles: storage for spreader beams and outrigger pads, cameras and leveling springs to name a few.

But Bennett admits that this space is still evolving, and while companies will continue to reap the rewards of new innovation, they should pay close attention to the risks – and prepare accordingly.

"There's a lack of available formal training in driving and handling a crane with a boom dolly," he confirmed. "And some folks misuse the dolly as an additional hauling trailer for counterweights and other items. It's also difficult to apply a specification when multiple dolly combinations emerge without specific crane interfaces.

"And people should understand that combined braking can be reduced by up to twenty-five percent when using a boom dolly. Similarly, steering angles can be reduced by upwards of thirty percent."

His advice? "Work with your industry association on developing best practices. SC&RA (Boom Dolly Task Force) and CRAC both have active committees working on these recommendations.

Look at integrating smart technology into the dolly and having it interface with the carrier. ABS systems, anti-roll, swing-out alerts and trailer-brake manual valves in the carrier – as examples. But mostly, get informed – get involved." ■



The goal is to increase awareness of the special and unique considerations boom dollies add, above and beyond driving cranes with booms in their normal position of being over the carrier.

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Trail King adds Hiles to marketing team

Trail King Industries, a leading trailer manufacturer serving a variety of markets and based in Mitchell, SD, has hired Amber Hiles as marketing coordinator in the Trail King sales department.

In this newly created role, Hiles will focus on digital asset management and content creation to support internal marketing goals.

Hiles comes to Trail King with several years of

experience in digital design and content creation. Most recently, she was employed as a division manager for Make It Mine Designs, where she worked with clients to design and create branded items. Previously, she held roles as web editor, writer and multimedia specialist at Klock Werks and the *Daily Republic*. Hiles is a published author and also runs her own photography and design business.



Amber Hiles

Hiles holds two bachelor's degrees in creative writing and digital media and design from Dakota Wesleyan University.

"With the addition of Amber to the team, we look forward to

adding robust content and visuals for our customers to refer to when making their hauling decisions," said Rick Farris, Trail King's vice president of sales and marketing.

Terex Utilities names new leaders

Terex Utilities announced two organizational changes to further underscore the company's commitment to serving customers. **Richard Gunderman** has been promoted from director to vice president parts and services, reporting to **Clint Weber**, vice president and general manager for Terex Utilities. In addition, **Nick Cammisa** was named to the newly created position of director, service sales, reporting to Gunderman.

"Terex Utilities is devoted to helping fleet managers maintain the best possible up-time of their equipment," said Weber. "Our growing national footprint of service centers allows us to expand our customer support, which is focused on premier service and reduced downtime.

Maintaining that level of customer service is due in part to having dedicated personnel with intimate knowledge of the different business challenges faced by small municipalities to large investor owned utilities."

Strieder named to new post at Terex Cranes

Ulrich Strieder has been named operations director for the two Terex Cranes plants in Zweibrücken - Dinglerstraße and Wallerscheid, Germany. In this new role, Strieder will be reporting directly to Terex Cranes Germany Managing Director Thomas Schramm.

With many years of experience managing operations for a number of companies, Strieder earned a master's degree in engineering from RWTH Aachen University. He started his career with the steel tube

manufacturer Mannesmann Röhren-Werke in 1991. In 2000, he joined Kronenberg as a technical director, followed by a move to MAN Commercial Vehicles in 2003 as a production director. Most recently, Strieder worked as an operations manager at Schütz GmbH & Co.

"I'm confident that with Ulrich Strieder at the helm, we'll be able not just to continue the positive streak we've had at our plants, but to boost it even further," said Schramm. "Mr. Strieder will be using his decades of experience to drive us forward in new ways, and accordingly will be an enormous asset to our company. I'm tremendously happy that we were able to get a new team member who not only has ample experience, but has also had a storied and impressive history of success throughout his career."

Schramm said this



Ulrich Strieder



Custom Equipment has appointed industry veteran **Terry Dolan** as its president

and CEO. Dolan brings nearly 30 years of experience in the rental, construction and equipment industries and will lead the overall direction and strategy of the organization.

Raimondi Cranes has named

Cristian Badin sales director, reporting to Mauro Masetti, chief commercial officer.



"Cristian, with more than a decade of sales and business development experience in the tower cranes segment, is a hands-on, solution-oriented heavy lifting professional," Masetti said.

Don Krause was recently hired as vice president of marketing/communications for Stevenson Crane



Services. In this newly created position, Krause will be responsible

for portraying the company's image and developing communication campaigns utilizing tools ranging from on-line to print to trade shows and more.

appointment comes when the restructured Zweibrücken and Wallerscheid plants have solid workloads and are well positioned for the future.

"I'm looking forward to the job and the challenges it will bring. I'm also confident that if we focus on our customers' needs, we'll be able to get stuff moving in the right direction," Strieder said.

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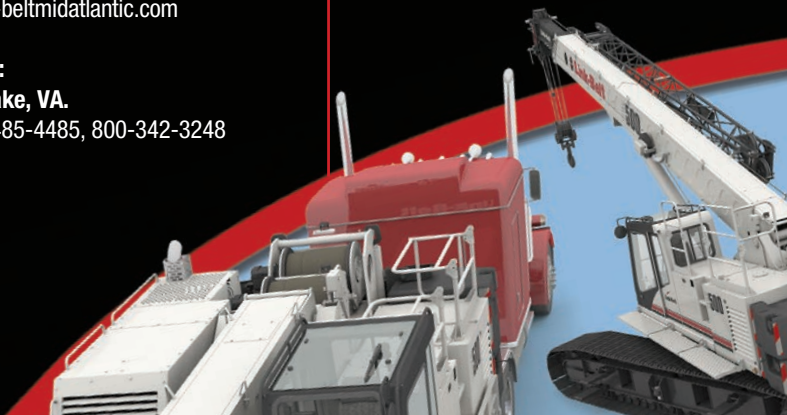
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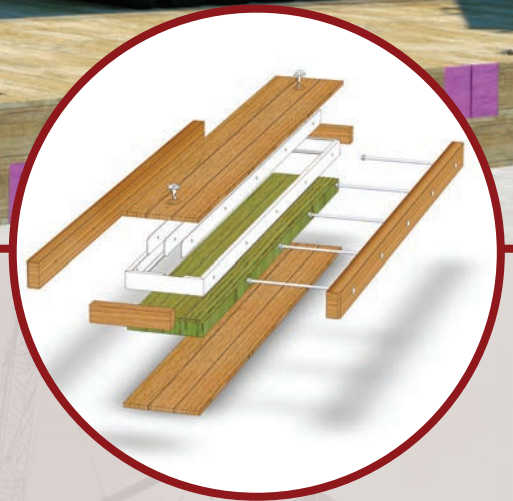
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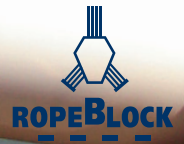
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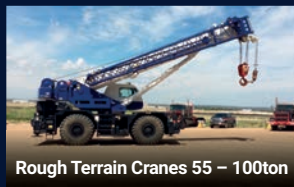
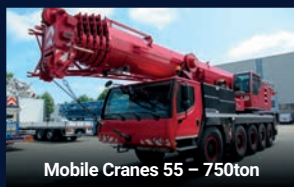
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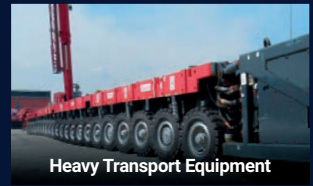
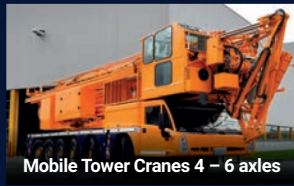
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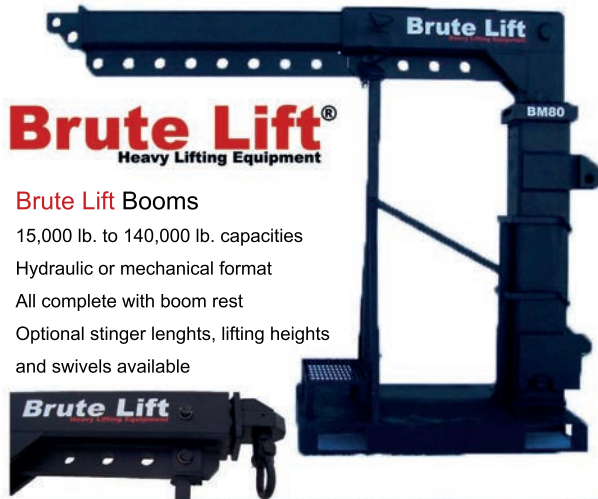


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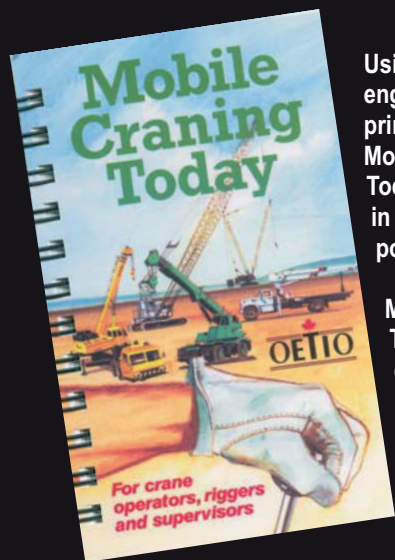
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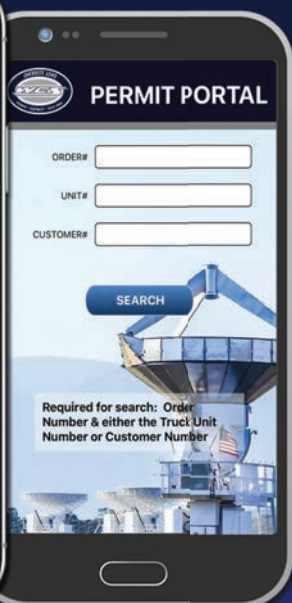
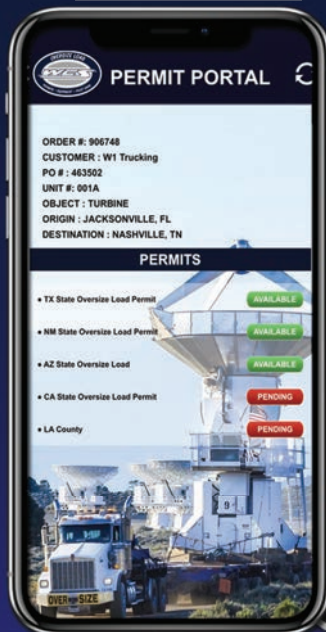
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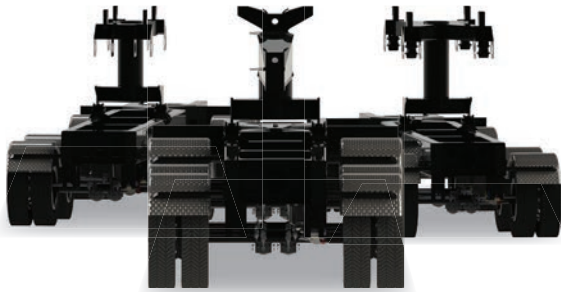
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Information pays

Telematics can be used to improve driver behavior.

Improving road safety starts with improving drivers' behavior. One effective way to do this is to adopt fleet telematics. Using the internet, sensors, cameras, cellular-baseband radios and complex algorithms to monitor things like driver performance, a truck's mechanical status and other critical truck-safety issues, telematics can shed light on areas that need improvement. According to Octo, a global leader in telematics, there are three specific ways telematics can improve driver behavior.

1 PROVIDE SHORT- AND LONG-TERM FEEDBACK ON DRIVER BEHAVIOR:

Immediate alerts, daily reports and driver scoring provide feedback to telematics users, allowing drivers to understand how their driving habits impact safety – and respond accordingly. Immediate feedback helps drivers change their behavior, while trend reports and driver scoring help reinforce behavior change and improve habits over the long term.

2 INCENTIVIZING SAFE DRIVING:

Insurance discounts offered for safe driving incentivize improved behavior, helping to reinforce gains made in safety. Gamification flips the focus of driver improvement from reactive feedback to proactive. By incentivizing drivers toward safer behavior – whether the incentive is a coupon, reward or digital badge – telematics can help people drive safer immediately, without the need to wait for a critique of poor driving.

3 REDUCING DISTRACTED DRIVING:

Telematics-driven mobile apps can identify when someone is driving and restrict inbound texts, calls or other cellphone behavior to reduce distracted driving. Telematics devices can also detect the symptoms of distracted driving, highlight these events to the driver and provide awareness of the impact of this behavior.

As with any business solution, there are questions decision-makers should ask when deciding which telematics solution to adopt. First and foremost, it should have verified driver-improvement features, increase efficiency and promote safety.

Following is a list of questions that have been adopted from Telematics.com, an online publication that covers telematics news.

DOES THE SYSTEM INCLUDE, OR IS IT COMPATIBLE WITH, AN ELD THAT IS FMCSA-MANDATE COMPLIANT?

This is the first item to consider, as the federal mandate for electronic logging devices (ELDs) is law. The FMCSA list of certified ELDs can be found at <https://eld.fmcsa.dot.gov/List>.

IS THE SOLUTION SCALABLE AND ADAPTABLE TO USER'S NEEDS?

Changes and improvements in telematics technology are inevitable. A system that cannot be customized, expanded and modified as the technology advances will quickly become outmoded.

DOES THE PROVIDER OFFER CUSTOMER SERVICE AND SUPPORT?

After a telematics system is selected and implemented, it's not the end of the process but a beginning. A good telematics provider can be a partner throughout by helping the user stay current with or ahead of developments.

IS THE SOLUTION COMPATIBLE WITH A DIVERSE RANGE OF ASSETS?

With the rise of telematics as an OEM installation in most vehicles and equipment, a variety of hardware and software solutions may be in a user's fleet. Telematics technology must have the ability to receive all inputs through a single interface and consolidate the information.

CAN THE SOLUTION BE INTEGRATED WITH OTHER BUSINESS TECHNOLOGY?

Telematics can be part of an overall suite of vehicle and back-office systems – including functions such as payroll, accounting, timekeeping, regulatory, inspection and maintenance – which will streamline operations and reduce administrative hours.

IS THE SOLUTION USER-FRIENDLY?

The best telematics system is one that can easily be learned and forgiving of errors, designed for simple operation. This makes for a shorter learning curve during the system's implementation and onboarding new staff.

DOES THE SOLUTION OFFER A MOBILE APP?

This is becoming increasingly important in transportation, construction and other business segments where the data review and analysis take place in the field and the office.

IS THE PROVIDER REPUTABLE, EXPERIENCED AND RELIABLE?

A purchaser should take reasonable care not to end up with an orphan system – one that is no longer supported. Likewise, a provider with years of experience that is recognized as a leader in the industry is a good bet for making sure that a large capital investment doesn't turn out to be a bad decision.

THE AUTHOR



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