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Virtually everywhere



hat a whirlwind the past few weeks have been. Glendale, AZ. Louisville, KY. Houston, TX. Longview, TX. These are all the places our editorial team has travelled since our last issue went to press. This photo of Yours Truly was taken September 19th at the SC&RA Crane & Rigging Workshop, where I practiced a lift created in 3DLift Plan. Any lift plan that a user creates of a pick can be loaded into A1A Software's

VR Lift Simulator. A1A President Tawnia Weiss shot this picture at the Exhibit Center. The next day she participated in a breakout session that discussed tech trends in crane and rigging. "By going into a 3D application, you can communicate to your customer exactly how the lift will take place," she explained. Fascinating stuff.

ICUEE was a stop on my itinerary, and it didn't disappoint. Not only did I get to check in with all the boom truck and knuckle boom crane OEMs, I also had meaningful face time and dialogue with the indoor exhibitors. Yes, it was a way to get out of the 90 degree heat, but I learned a lot that we will soon be reporting on.

Other interesting developments included a Custom Truck One Source press conference. CEO Fred Ross gave a compelling overview of the growth of the company and how the roll-out of the new Stinger boom truck line is progressing.

Manitex CEO Steven Filipov made his debut with the company, which introduced the new T600 boom truck and MAC articulating crane. Don't miss our SC&RA Crane & Rigging Workshop and ICUEE Reviews on pages 13 and 17, respectively. Breakbulk was also excellent, and we will review that event in our December issue.

This issue is chock full of good information including Hannah Sundermeyer's Product Focus on tower cranes and our Industry Forum on cranes and equipment financing. There's also a wire rope feature and Hannah's interview with Sarah Emig, a young female operator at Connelly Crane.

Can you believe this year is almost over? Drop us a line and let us know what you are thinking about 2020.

D.ANN SLAYTON SHIFFLER Editor

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ON THE INSIDE



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Wire rope maintenance and inspection are critical to its safety and longevity.

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roduced in neration

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Take-aways from the 2019 SC&RA Crane & Rigging Workshop.

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for tower crane demand as manufacturers release new models and market demand stabilizes. Hannah Sundermeyer discusses.

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INTERVIEW

OAED DEMOLITION

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NEWS

Digging and Rigging, a crane and rigging company based out of Mount Airy, MD, deployed a Grove TMS500-2 truck crane to assist a helicopter with the installation of a new radio tower in Clear Spring, MD. The helicopter air-lifted the 5-ton tower antenna while the truck crane helped tail it until it was in a complete vertical position.

The Kentucky Transportation Cabinet launched a new online system at the end of September for issuing travel permits for overweight/overdimensional vehicle drivers. Using verified, real-time data, the program provides intelligent routing based on road closures, vehicle weight and vehicle dimensions. This enhancement signals additional progress in SC&RA's Uniform Permit Transport 2021 (UPT2021) initiative towards fully automated permit route and analysis systems throughout the United States.

Magna Tyres, the Dutch manufacturer of tires for cranes, trucks and construction equipment, has opened a sales office in Fort Lauderdale, FL. It is the company's second sales office in North America as it follows the opening of one in Canada at the start of the year.

Mammoet reveals Focus crane details

eavy lift and transportation specialist Mammoet has revealed more details about its 2,756-ton capacity Focus crane that is due to be launched next year. The Focus is designed to be erected vertically in small areas such as city centers or industrial plants. To achieve this, Mammoet said that the main boom is erected vertically with the aid of a climbing frame. Once the main boom is in place the back mast is then installed vertically, too.

"This eliminates the need to sterilize larger parts of a plant area for crane assembly," said Jacques Stoof, director of innovation and market development at Mammoet. "Neither is there any more need to build over live pipe racks in a plant. All in all, the assembly process is less



The Focus is designed to operate in small spaces.

complex, safer and more efficient, and significantly reduces the costly area and downtime of assembling a crane."

Mammoet's Focus crane also has a variable super lift system with a radius that can be adjusted under load from 52 to 98 feet. The company said this will increase the crane's flexibility, delivering a larger operational window.

The first Focus crane is currently being built and the first unit will be available from the second quarter of 2020.

Tower trio new from Terex

Terex Cranes in Italy debuted three new tower cranes, including the company's first hydraulic luffer, to broaden its offering.



The manufacturer previewed the cranes at an event held at the factory in Northern Italy on October 10, 2019.

The largest of the three is the 13.2-ton capacity CTLH 192-12 hydraulic luffer, the first of its type from this manufacturer. The maximum jib length is 180 feet, at the end of which capacity is 2.6 tons. The new CTT 172-8 flat top is an 8.8 ton (on four falls of rope) with a maximum jib of 213 feet. The 4.4-ton version on two falls of rope lifts its maximum out to a radius of more than 82 feet. Maximum freestanding height is 213 feet.

Finally, the new CSE 32 selferecting tower lifts 4.85 tons and has a 105-foot jib. Tip load is 1.27 tons and the hook height can be altered between 64.6 and 70.5 feet. Its swing radius is 7.38 feet. Following final testing, the CTT 172-8 will be available from December 2019, the CTLH 192-12 from January 2020, and the CSE 32 from the second quarter of 2020. Read more about new

models in our Product Focus: Tower Cranes on page 44.





Denver Wire Rope purchased by Mazzella

Mazzella Lifting Technologies has acquired Denver Wire Rope & Supply. The merger will strengthen Mazzella's footprint and reinforce its commitment to be a one-stop resource for lifting and rigging services solutions, the company said.

Denver Wire Rope & Supply has been in business since 1983 and is based in Denver, CO. The company is a supplier of rigging products, crane and hoist service, below-the-hook lifting devices and certified rigging inspection and training. The company will operate as Mazzella/Denver Wire Rope.

Gallagher acquires Allied

Arthur J. Gallagher has acquired Allied Insurance Brokers and its subsidiary, Ascinsure Specialty Risk. Marty O'Brien, Tres Whitlock, Jared Clough and associates will still work from the Pittsburg, PA offices under the direction of Dan Tropp, Gallagher's head of Mid-Atlantic retail property/ casualty brokerage and Chris Leisz, head of programs for Risk Placement Services.



Manitex rolls out T600 and MAC knuckleboom models

At ICUEE last month in Louisville, KY, Manitex International rolled out a new boom truck and its MAC line of knuckleboom cranes.

The new TC600 features a base rating of 60 tons and a maximum main boom height of 141 feet and a 194foot maximum height when equipped with an optional jib, according to Randy Robertson, sales director.

The TC600 incorporates a 4-section boom and offsettable lattice style jib utilizing high strength steel



and components providing high strength-to-weight ratio for increased capacities at long radius. The TC600 includes a spacious, high-visibility cab and the advanced hydraulics of the Manitex TC line of lift solutions with increased lifting capabilities. Featuring a removable counterweight system and uniquely designed trapezoid subframe, the TC600 provides added stability and precision control.

Manitex also debuted its new MAC 47.5 knuckleboom crane line.

"Our Manitex Articulating Crane (MAC) products combine the versatility of a knuckle boom crane and the dependability of the Manitex brand to bring you a highly engineered machine to get the job done," said Steve Kiefer, president and COO.



Superior adds Demag CC 6800-1 to its fleet

Rockingham, N.C.-based Superior Cranes recently purchased a 1,375-ton capacity Demag CC 6800-1 crawler crane. The new unit gives the company an advantage performing high-lift capacities, Superior said.

"Our Demag CC 3800-1 with its 715-ton capacity was the largest crawler in our fleet, so the acquisition of the CC 6800-1 was a significant capacity increase for our line," said Joe Everett, president and owner. "The crane's design combined with the service and support provided by Demag for our other crawler and ATs made purchasing the CC 6800-1 an easy decision."

It has a maximum main boom length of 492 feet and maximum tip height of 669 feet.



MLC300 accelerates bridge replacement

Ceccanti, based in Tacoma, WA, used a Manitowoc MLC300 crawler to assist with the replacement of a wooden bridge in Ridgefield, WA.

"We chose the MLC300 because of its superior capacity at radius and its maneuverability when compared to similar cranes in its range, and even larger cranes," said Jake Brockmoller, project manager, Ceccanti. "This crawler crane's radius allowed service of 75 percent of the job with help from the derrick barge. We would have certainly lost time and

The 386-ton MLC300 features a 334.6-foot boom, which can be fitted with a 315-foot luffing jib.

money if we had deployed other equipment."

The job started last February and was scheduled to take 14 months to complete. But it is wrapping up this month, five months ahead of schedule. The single-lane wooden bridge is replaced by a twolane concrete bridge that will pass over railroad tracks on the opposite riverbank.

The MLC300 was positioned on a bulkhead on the river's shore. The crane set shaft cages, positioned casings and placed girders without moving. The MLC300 lifted girders as heavy as 66.5 tons to heights of 65 feet and rebar cages as heavy as 61 tons to as high as 125 feet.

NEWS

ITI's OperatorPro is now available in the Apple App Store. The mobile application allows users quick access to their complete operator history. OperatorPro users can log shifts, activities, equipment configurations and notes.

Modulift has made changes to its standard range of Modular Spreader Beams so that they can now be used in water up to a depth of 492 feet at no extra cost.

ALT Sales Corp., a member of the ALL Family of Companies, earned Elite Dealer status from National Crane by Manitowoc. This designation has been earned by just two dozen other dealers throughout all of North America. The announcement was made at ICUEE in October.

WCS Permits & Pilot Cars has released a new feature available in its Permit Portal App. The app now links all required attachments with state and local permits.

■ Western Pacific recently celebrated the purchase of a new National Crane NBT3OH-2 TM boom truck. Western Pacific added the crane to its fleet because of its value in oil field work and utility applications, as well as everyday taxi crane service.



Equipment simulators were a crowd favorite at Lift & Move at Boss Crane & Rigging.

LG 1750 excels at tilt-up construction

Tilt Wall Ontario, which specializes in the tilt-up construction technique, has built a new apartment block at the Muskoka Bay Resort in Ontario, Canada. In tilt-up construction, concrete panels are cast on or off-site and then hoisted up and tilted into position. These panels become the building's load-bearing structural components, eliminating the need for perimeter columns.

The apartment building was constructed using 381 precast tilt-up concrete panels. The



panels' width ranged from 5 feet to over 60 feet with weights between 3,000 pounds to 128,000 pounds. To lift the precast panels into position, Canadian contractor Surespan provided crane services. Surespan utilized its 750-ton capacity Liebherr LG 1750 with a 350-ton capacity mobile crane as an assist crane. Tilt Wall Ontario also sourced the spreader beams to facilitate the lifting of the panels.

Equipment Corps supplied two Modulift spreader beams: the MOD 50 and MOD 110. They were used to even the load distribution and to facilitate proper angles on the lifting slings and hardware.

"We utilized two different sized beams and, between the two, they were used for about 80 to 85 percent of the picks," said Ken VanCasteren, project manager. "We did not adjust the lengths of the beams

A Liebherr LG 1750 is rigged with Modulift spreader beams.

Boss, Bennett host Lift & Move

More than 400 area students from nearly 20 high schools and colleges traveled to Longview, TX on October 16 for a day of hands-on learning and crane and rigging industry exposure. Together with Bennett International, Boss Crane hosted their first Lift & Move USA event.

Lift & Move USA engages students and educators in learning about the skills needed and careers available in this highly technical field, serving construction, manufacturing, power gen, petro-chem, highway and related industries.

Students spent the day

running simulators, trying their hand at welding, practicing interviewing, experiencing live equipment demonstrations and discovering new career paths. Students also participated in mock interviews, even sitting down with Ingo Schiller, president and CEO, Tadano America.

For the day's finale, eyes were glued to the sky as the Boss and Bennett team used a Manitowoc 110-ton MLC100-1 to lift a Conex box onto a 48-foot step deck Fontaine trailer pulled by a 1988 Peterbilt. Find out more at www.liftandmoveusa.com. during the lifting process but instead used the two different beam sizes to allow for quicker rigging changes. For the MOD 110 we used an eight-point pick for load distribution and on the MOD 50 we used a four-point lifting setup."



238 HSL works on Virginia bridge jobs

iiconSOUTHEAST of Virginia Beach, VA rented a new 150ton 238 HSL lattice crawler from Link-Belt Mid-Atlantic for multiple Virginia Department of Transportation jobs on the Blackwater River, near Wakefield, VA.

From a temporary 300-footlong trestle built within rightof-way space of the existing bridge, the 238 HSL crawler crane demolished the old bridge, drives up to 80-footlong piles and places structural beams.

The batter pile angle is set using one template guide just above water level, and then a second 10 feet above. Two bridge abutments and five piers support a six-span concrete girder bridge, with each pier consisting of six piles and a pier cap. For pile soil displacement, a vibratory hammer with 8,000-pound capacity force is attached to a tubular stem for pilot holes prior to pile installation.



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SC&RA CRANE & RIGGING WORKSHOP REVIEW

An issues forum

The 2019 SC&RA Crane & Rigging Workshop drills down on key issues.

he 2019 SC&RA Crane & Rigging Workshop landed in sunny Phoenix, Arizona, September 18-20, and brought together over 600 attendees comprising owners, operators, safety directors and operations managers from the industry's foremost crane and rigging manufacturers and companies. Of those in attendance, 117 first-timers made the trip, and eight countries were represented by 36 internationals.

Safety, technology and workforce development weren't just buzzwords at this year's Workshop; in fact, the topics made their way into numerous sessions and additional conversations.

Workshop attendees benefited from a sold-out Exhibitor Center, complete with 94 booths, which brought together the industry's top manufacturers, software and training providers, insurance representatives and media. The Workshop week featured receptions by night, and a robust assortment of educational sessions by day, including a presentation of the 2019 Rigging Jobs of the Year.

Kevin D. Kelley Sr. and James Junkin, both with Environmental, Health & Safety Solutions, presented How to Be a Better Leader, while Pat Collins (Link-Belt Cranes), Ryan Long (Irving Equipment), Victoria O'Neil (Matcom) and Bob Picken (Sterling Crane) delivered a session



Link-Belt's Pat Collins was on a panel that delivered Navigating the Haze of Legalized Marijuana in the Construction Industry.





titled Navigating the Haze of Legalized Marijuana in the Construction Industry.

Employee engagement was the focus for Dan Negroni, founder and CEO at launchbox. In his presentation, A Crisis of Disengagement: 6 Steps to Increase Engagement, Performance and Retention, Negroni walked his audience through a six-step framework to help them transform their culture and workforce from disengaged to engaged.

Common goals

Tower signage was discussed extensively at the Tower Crane Committee meeting. SC&RA Senior Vice President Beth O'Quinn confirmed attendees' request for a one-page white paper on the subject while the Association and industry waits for the issue to be addressed within ANSI's B30.3 standard.

Maxim Crane Works' Frank Bardonaro gave a presentation focusing on contract considerations. Bardonaro warned attendees of the "... problems we are exposing ourselves to by letting a salesperson sign an agreement," which can leave crane companies vulnerable to debilitating price hikes, back-charges and "claw-back" audits working as profit centers. More than 600 industry professionals attended the SC&RA Crane & Rigging Workshop, including 117 first-timers and 36 attendees from eight countries.

NBIS's Bill Smith added that managing contracts is more important than ever and it's probably only going to get worse. (He elaborated later in the week during his Q&A session Ask the Industry Expert.) In response, O'Quinn pointed out that the committee had put together a "contract language document," and asked if there was support for revisiting it. The group agreed, and the committee will revisit the current language and develop new information that moves this issue forward – with a planned delivery in January at the annual Board & Committee Meeting.

Gary Fowler, general manager at Bragg Crane and Rigging, attended the meeting to learn what some of his counterparts at other companies are experiencing in the industry, and noted, "The biggest takeaway here is that it seems like most are struggling with the same thing – as far as the contract language issue. I think the struggle is that it's going to vary from state to state – not everyone's in the same boat. Certain states struggle where others don't." Mike Vlaming, president at Vlaming &

Next year's Crane & Rigging Workshop will be held in Dallas, TX, September 16-18, at the Dallas Sheraton Hotel. >14



Associates, added, "I think the signage issue is pretty straightforward – it's just to get a common set of rules before the industry consensus standard is modified in the next few years."

On the contract language issue, Vlaming elaborated: "I'm optimistic that the group can come together and develop crane rental language that would be beneficial to the industry in order to mitigate some of the challenges that have been expressed here at the meeting."

Mitigating risk

On the operational education side, the Workshop didn't disappoint, with presentations by Dave Osiecki (Scopelitis Transportation Consulting), who delivered How the Latest Regulations Impact Your Business; Jeff Steiner (Bigfoot Construction Equipment) and Mike Walsh (Dearborn Companies), who both presented Understanding Ground Bearing Capacities; and Mike Blaich (FAA Obstruction Evaluation Group), who educated his audience with Looking Up: FAA Guidelines for Cranes.

The Safety Education & Training Committee meeting drilled down on several issues. Tree removal using cranes was given a thorough examination, as was a discussion covering additional items to potentially consider for the standard Crane Safety Inspection form.

Randy Sever (PSC Crane & Rigging), represented the Boom Dolly Task Force, discussing sections of collateral being produced in developing an online boom dolly course. His presentation had the audience take a poll via their phones.

Zack Parnell (Industrial Training International) gave an update on where the SC&RA Manual & Bull Rigging Competency Guidebook currently stands.

Said Parnell, "SC&RA members have been conducting bull rigging activities for decades, and now that construction has been performing more of that type of work, the intention was to basically draft a competency guide book – not just for this body to reference, but we also hope that external users, like construction companies, could reference it – to make sure that their people know what is required."

Parnell pointed out that, as bull rigging work increases for SC&RA members, there are significant safety issues to remain aware of. "We really think that people should be treating this activity as diligently as they treat under-mobile crane rigging tasks – and how that's already been defined in rigger one, rigger two and lift-director-type methodology. We need to apply that same methodology to bull rigging activities – which is proven to mitigate risk."

SC&RA anticipates a roll out (free to SC&RA members via download) set for November.

As is always the case with the Workshop, there was no shortage of expertise on hand throughout the week. Chad Fox (ruby+associates) workshopped engineering fundamentals with a presentation on Design, Fabrication and Testing of Cantilever Beams and Triangle Plates. Bret Shields (Buckner HeavyLift Cranes) and Thom Sicklesteel (NCCCO) provided eventgoers with the Inside Information: How Crane Operator Certification and Evaluation is Really Going. And digital information took center stage when Tim Hillegonds (Thrive Creative) joined KHL's Trevor Pease and Izzy Crouch in presenting How to Use Data to Revitalize Your Marketing. Mike Gelskey, Jr. (Lift-It Manufacturing) offered an expert take on Best Practices in Sling Protection, while Tech Trends in Crane and Rigging was capably delivered by Ted Blanton (North American Crane Bureau), Jane Intrieri (Fleet Cost & Care) and Tawnia Weiss (A1A Software).

A new world

The Governing Committee meeting attendees were privy to an update on SC&RA's workforce development initiatives.

Lift & Move USA Director Tracy Bennett articulated how this SC&RA endeavor has continued to serve as a productive workforce development arm of the Association – creating a foundational connection between the industry and educational bodies across the country.

"We're continuously meeting with young people – many who have not known about the industry, the equipment used and the long-term financially viable careers that are available," she said. "Lift & Move creates this first-time access for high school-age kids to real people, actual equipment and a true representation of what a career in this industry truly represents."

Bennett explained how SC&RA's leadership role in the recruitment and retention of the industry's next-gen workforce continues to progress and evolve – building upon a foundation that has both addressed and confronted this ever-emerging issue.





The 94-booth Exhibitor Center brought together top manufacturers, software and training providers, insurance representatives and media.

Workshop first-timer, Larry Miller (Sycor Americas) added, "Getting folks fully trained and even understanding the history of the industry is a challenge. A lot of the education here focuses on certifications, qualifications of the employee and making sure you have the most efficient worker and job for a company at any given time – not just the right person on the bus, but the right seat on the bus. It's a challenge with an older generation dealing with a lot of younger staff, but it's also enlightening today to see how these folks, driven by SC&RA, are working to bridge that gap."

Miller emphasized the importance of technology throughout the transition. "A lot of folks will be leaving this industry in the next decade – and enticing young, non-college-educated workers to join the trades will involve a focus on technology," he asserted. "It will be exciting for younger generations, but they'll also have to understand that this is a new world – technology driven, yes, but one that spent many years maximizing iron and diesel fuel to get the job done.

"Some of the older folks here will decide on what systems are purchased and implemented, but the younger folks coming up behind them are the ones that will take these systems and build businesses around them."



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ICUEE summer

Record attendance and temperatures set the stage for a successful, albeit sweaty, International Construction & Utility Equipment Exposition.



ICUEE 2019 will be remembered for its record attendance and scorching hot temperatures.

wo records were set at the ICUEE 2019 tradeshow in Louisville, KY October 1-3 at the Kentucky Exposition Center. Registered

Manitex President Steve Keifer and new CEO Steve Filipov stand on the company's new T600 boom truck, which made its North American debut.

Attec





attendance topped 19,000, from the United States, Canada and more than 65 other countries worldwide. Record 90 degree temperatures made the outdoor portion of the exhibition feel like summer, rather than early fall.

Breaking records

"We shattered our attendance record on Tuesday," said John Rozum, ICUEE show director. "Our 70 registration kiosks were printing 25 badges per minute between 8 and 10 a.m., so we knew the temperature wasn't the only thing running hot that day and breaking records."

ICUEE 2019 included over 1,000



exhibitors showcasing the latest products and solutions for the utility construction industry. Exhibitors covered a record 1.34 million square feet or more than 30 acres.

"By all measures, this was an outstanding ICUEE with more to see and experience >

>18



The new Load King Stinger 25-92 made its formal industry debut from Custom One Truck.

With the largest presence of any exhibitor, Altec's boom truck team was all smiles as the company celebrated its 90th anniversary.

ICUEE REVIEW





Boomtrux's Carlton Calfee



than ever before, and it was gratifying to see such positive energy among attendees and exhibitors," said Rick Johnson, ICUEE 2019 show chair and CEO Emeritus of Charles Machine Works.

ICUEE 2019 featured a new equipment









demonstration area, new and expanded education programs and new networking opportunities. ICUEE also looked to attract the next generation of workers. A new career skills event brought hundreds of high school students to the 2019 show to interact with exhibitors and learn about rewarding industry careers. AEM, show owner and producer, partnered with Bridging America's Gap on the event, which included hands-on learning stations, talks with industry professionals and tours of the show floor.



NCCCO's Dave Foster and Richard Thompson performed demonstrations and explained important certification information at the Lift Safety Zone.















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The September interest rate cut has helped maintain the high in stock prices. However, the equipment sector continues to slide due to the specific dynamics of the global industry.

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.

Interest rate impact

he U.S. stock markets have been stable at a high level in recent months. As the graph illustrates, there has been a rebound from the low points that were seen in the winter. when there was concern the markets were on the cusp of a prolonged downturn. The summer months have seen markets return to the levels seen in 2018, with new records being set. For example, the Dow moved above 27,000 points for the first time in July, a little ahead of the high 26,000 territory which was achieved about a year earlier.

There are two major drivers for the market at present. First are the on-going trade tensions between the U.S. and China. No doubt these will rumble on and markets will continue to react to whatever positive or negative noises are made.

The second key factor is the outlook for interest rates and how the Federal Reserve will react to the current economic climate. The last policy meeting in September saw interest rates cut by a quarter of a percentage point, but the minutes of the meeting released a few weeks later showed the panel was divided on the decision. Fed policymakers were due to meet again as ACT went to press and there was some expectation in the markets that rates would be cut again. This has been driven by concerns about the weakening of the economy. With so many indicators available, it is possible to chose whatever numbers support any given viewpoint, but the ones causing concern include those suggesting falling manufacturing activity and softening of consumer spending.

Although mainstream indicators like the Dow, NSADAQ and S&P 500 have performed reasonably over the last year, equipment manufacturers' shares, as represented by the *ACT* Heavy Equipment Index (HEI) have been more troubled. As the graph illustrates, this industry is down almost 10 percent compared to a year ago. The fundamentals for the cyclical shares like those of equipment manufacturers are slightly different than those for the mainstream indexes. Having reached a record high last year, global construction equipment sales are now declining slightly. Profitability has certainly peaked for manufacturers and some are starting to reduce factory capacity.

A final piece of industry news to note is that CNH Industrial has announced plans to split into two separate businesses - on-highway and off-highway. This is one of the first major strategic changes by CEO Hubertus Mühlhäuser, who was appointed in August 2018 following the death of chairman Sergio Marchionne. This will essentially reverse Marchionne's key initiative, which was the formation of CNH Industrial through the merger of the Fiat Group CNH Global (off-Highway Equipment) and Fiat Industrial (on-highway trucks, diesel engines and components).



<u>52 weeks to November 2019</u>



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DÉMAG.

Breaking barriers

Sarah Emig is breaking the mold as a young crane operator at Connelly Crane. Hannah Sundermeyer reports.

s a fourth-generation operator, some of Sarah Emig's early memories include grabbing the keys to a tiny Broderson crane and scattering the backyard with garbage cans, as she and her older brother arranged a makeshift obstacle course. It's safe to say the construction industry has been embedded in her from a very young age.

Emig is currently an operator for Connelly Crane, a family business, and she has learned every aspect of the industry from the ground up. To say Emig is a strong woman would be an understatement. Paving her own way, she has tackled a physically demanding industry typically dominated by men and achieved incredible successes along the way. Not only is professional hockey player on her growing resume, but Emig has participated in the SC&RA Leadership

Forum along with advancing her own skills as an operator as she learns the ropes for a variety of machines, all the while maintaining a perfect safety record.

While she loves her job and encourages women to get involved in the industry, Emig still jokes that the worst part about being a woman in construction is the state of the bathrooms on jobsites. Equal parts

SARAH EMIG, Operator, Connelly Crane insightful and inspiring, she meets every obstacle with an unwavering sense of determination and confidence. Her leadership skills inspire others on and off jobsites. She motivates young women to achieve their dreams whether it's on the ice as a hockey coach or in the cab of a crane.

Emig is taking the crane industry by storm and is defying gender roles in the construction world. I think you're going to love reading her story.

WHEN DID YOU GET INVOLVED WITH CONNELLY?

Although I grew up around the business, I didn't start working full time till about three years ago. I went to Adrian College for Business and also played NCAA hockey. Following that, I pursued my hockey career as far as I could playing professionally in Germany and New Zealand. After realizing that there was no way to make a living playing hockey, I moved back to Michigan and started learning the crane industry from the bottom up.



WHAT IS THE MOST CHALLENGING ASPECT OF YOUR JOB?

There are many challenging aspects of my job, but I would say the most challenging would be to not worry how others perceive me to be as a female operating heavy equipment and show them through my ability, knowledge and work ethic.

WHAT EXCITES YOU MOST ABOUT BEING AN OPERATOR?

What excites me the most about being an operator is seeing a job start from basically a dirt pile to a finished building and seeing all the pieces of the puzzle come together for the finished product. I love seeing how all the trades play a role in the project.

There are many challenging aspects of my job, but I would say the most challenging would be to not worry how others perceive me to be as a female operating heavy equipment and show

them through my ability,

knowledge and work ethic.

INTERVIEW



WHAT IS YOUR FAVORITE PIECE OF EQUIPMENT TO OPERATE?

My favorite piece of equipment to operate would have to be a crawler crane. I am fascinated by how they are assembled before they are ready to go to work for the job. I have spent the most time oiling on crawler cranes and I am more familiar with them, which probably adds to them being my favorite to run.

WHERE DO YOU BELIEVE OUR INDUSTRY WILL BE IN 5 TO 10 YEARS?

I believe that our industry is gaining more awareness every year. I know that our Operating Engineers Local 324 training center has been doing a lot of work at local high schools to share what our industry is and what it has to offer as a career. I also think that safety is going to continue to be a major aspect in the day-to-day for operators and crane rental companies, more documentation and record keeping of training, qualifications and service checks.

WHAT IS YOUR ULTIMATE CAREER GOAL?

My ultimate career goal is to play a major role in being the best generation that Connelly Crane has had. Connelly Crane just celebrated 75 years of business. I look forward to being a part of the fourth generation in such a great family business.



WHAT ADVICE WOULD YOU GIVE TO OTHER WOMEN HOPING TO PURSUE A CAREER IN THE INDUSTRY?

Just go for it! It is such a fun and exciting industry to be a part of and pretty rare for women to be involved, which I think is awesome.

WHAT IS THE BEST AND WORST PART OF BEING A WOMAN IN CONSTRUCTION?

The best part about being a woman in construction is when people ask you what you do for living and you say I'm a crane operator. Their usual response is, "Those huge machines you see on construction sites?" and I would say "Yup, those are cranes." Then they say how cool and impressed they think it is that you're able to do that and work out there with all those guys. The worst part about being a woman in construction is the bathroom situation on jobsites. Using Porta-Pottys with the rest of the guys on the jobsite is not the cleanest of bathrooms, but you do get used to it.

CAN YOU TELL ME ABOUT YOUR EXPERIENCE WITH SC&RA'S LEADERSHIP FORUM?

My experience with SC&RA's Leadership Forum could not have been better. I was able to establish relationships with other young professionals in the industry and discuss different topics that are changing within the industry. I really enjoyed that the group consisted of many different roles within companies, so we were able to gain perspective on topics from a different standpoint than what I am used to. I have been attending SC&RA events since I was a kid. They were our family vacations growing up, so I was used to my dad introducing me to his business relationships that he has developed over the years. After attending the Leadership Forum, I was able to introduce my dad



In her spare time, Sarah Emig coaches hockey, spends time with her lab Nash and travels with her husband Jeremy Emig.

to people I have met and started business relationships with.

WHAT DO YOU DO WHEN YOU ARE NOT WORKING?

When I'm not working, I love spending time with family and friends doing anything outdoors from sports on the lake to hunting, hiking and playing hockey. I have a two-year-old lab that I am obsessed with and spoil her. I also coach a 12 and under girls AAA hockey team. I love to travel with my husband as much as time allows us.

WHO INSPIRES YOU THE MOST?

My dad, Mike Connelly, inspires me. I have watched and admired his work ethic from a very young age. Seeing his true passion for the industry is something I really look up to. Also seeing how he is very detailed and knowledgeable with what he does. He takes his time and does research before making decisions. I hope to continue to learn the business from him.

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RIGGING REVIEW

Greenfield Products' Smart Crane Mats bring a different concept to the market. **D.Ann Shiffler** reports.

Recently patented, Greenfield's Smart Mats range in size from 4-foot by 4-foot up to 8-foot by 12-foot.

Mat technology

reenfield Products is known for its expertise in producing custom products like boom dollies and other specialized equipment. Product development is a hallmark of the Hazel Crest, IL-based company. So, it's no surprise that Greenfield is now in the crane mat business, and was recently awarded a patent for its crane mat design and construction.

"Greenfield's line of Smart Mats features a two-point pick design that allows the operator to use the same round nylon slings used for the crane counterweights to handle the crane mats," said Greenfield's Gustavo Anzola. "The mats are designed so they can be lifted as a stack, four mats at a time, or individually. This translates into a very efficient operation when setting up the mats around the crane."

The construction of the mats is not the usual steel mat made of tubing or I-beam, Anzola said. Greenfield's mats are roughly 40 percent lighter than typical steel mats on the market, which means transportation savings, he said.

"They are also thin profile compared to wood or composite mats, so operators won't have any issues getting the crane outrigger float on top of the mats," he said.

Another advantage is that Greenfield Smart Mats have virtually no noticeable deflection when loaded. "Our mats are stout and very rigid, offering good outrigger load distribution," Anzola said.

Ease of use

Greenfield offers mats that range in size from 4-foot by 4-foot up to 8-foot by 12foot and from 200,000 to 500,000 pounds in capacity. Anzola said the new mats provide an efficient and convenient lifting configuration for the crane rental market.

"The lifting points don't protrude through the top or sides of the mats, greatly reducing trip hazards," Anzola said. The mat design allows for the set of four



mats be stacked together and to be lifted as a single load and drop in sequence around the crane. The operator or oiler is able to use the same rigging for the counterweights of the crane to lift and place the crane mats.

Greenfield designs and manufactures this product in-house from its Union City, TN factory. Greenfield has been "quietly" manufacturing steel mats since 2013. The company decided to get in the mat business when existing crane customers were looking for a manufacturer that could design and fabricate steel mats.

"Most steel mats back then were home-made without any engineering documentation," said Anzola. "We could offer customers engineered steel mats that matched the crane's maximum outrigger load."

Originally, Greenfield started designing mats from steel I-beams, but they were heavy and customers needed lighter solutions.

"We re-designed our mats to be lighter and very efficient to handle and position around the crane," Anzola said.

The initial target for Greenfield's mat line was all terrain cranes from 100 to 500 tons capacity.

"We are most competitive when large capacity and large areas are needed underneath the outriggers," he said.

INDUSTRY FOCUS WIRE ROPE

Maintenance performance

Wire rope maintenance ensures longer life and safer operations.

wire rope consists of hundreds of components that must move and interact in unison to bend and support massive weights. Wire rope is often likened to a "machine," and like any other machine, a good maintenance program will yield significantly longer life. Although the subject is much broader and longer than a short magazine article will allow, touching

THE AUTHOR



Tony Fastuca is vice president of Python America High Performance Wire Rope USA.

Wire rope inspection guidelines: OSHA and ASME standards

maintenance ensures that

the crane is also in good working order.

As a manufacturer and distributor of wire rope, wire rope slings, chain slings, synthetic slings and rigging hardware, we often see customers confused about what is involved in the inspection of their rigging equipment. Our goal is to help you understand what is required for your wire rope slings to meet ASME standards, which will help to ensure the safety of the users, help extend the service life of the slings and help reduce unnecessary equipment repair costs and loss of production due to equipment downtime.

As a starting point, the same work practices which apply to all "working" wire rope apply to wire rope which has been



THE AUTHOR

Mike Close writes industry blog articles for the Mazzella Lifting & co-hosts the Mazzella Companies Podcast. fabricated into a sling. A good working knowledge of wire rope design and construction is essential in conducting a wire rope sling inspection. There are two industry standards that exist to provide the end-user with guidelines for inspection and criteria that warrants removal from service: OSHA 1910.184 and ASME B30.9.

What are the basic inspection criteria for wire rope slings? The goal of a sling inspection is to evaluate remaining strength in a sling which has been used previously to determine if it is suitable for continued use. When inspecting wire rope slings, daily visual inspections are intended to detect serious damage or deterioration which would weaken the slina.

This inspection is usually performed by the person using the sling in a day-to-day job. The user should look for obvious things, such as broken wires, kinks, crushing, broken attachments, severe corrosion, etc. Any

deterioration of the sling which could result in appreciable loss of original strength should be carefully noted and determination made on whether further use would constitute a safety hazard. ASME B30.9 standards specify that a wire rope sling shall be removed from service if any of the following conditions are present:

MISSING OR ILLEGIBLE SLING IDENTIFICATION: If the tag is missing or illegible, the inspector should remove the sling from service and send it to the manufacturer for current or updated certification, tagging and testing.

BROKEN WIRES: For strand-laid grommets and single-part slings, ten randomly distributed broken wires in one rope lay, or five broken wires in one strand in one rope lay. For cable laid, cable laid grommets and multi-part slings, use the following:

DISTORTION: Kinking, crushing, birdcaging or other damage which distorts the rope

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equals safety and on the jobsite

on some of the key points of wire rope maintenance is at least a good start.

A significant part of good rope maintenance is ensuring that the equipment it works with is also in good order. For the rope, that mainly means checking the sheaves. Sheaves must move freely to avoid undue abrasion and run true without wobbles to avoid vibrations that can fatigue the rope. Next, the groove must be suitable for the rope being used. It is recommended that the groove be 1 percent larger than the maximum rope diameter including its allowable tolerance. That means for a typical wire rope with 0 to +5 percent tolerance, the groove should be nominal rope diameter +6 percent.

Worn and undersized sheaves lead to deformations from forced twist while larger tolerances can lead to damage caused by a lack of support. Corrugation



structure. The main thing to look for is wires or strands that are pushed out of their original positions in the rope.

HEAT DAMAGE: Any metallic discoloration, fusing of wires or loss of internal lubricant caused by exposure to heat.

DAMAGED END ATTACHMENTS: Cracked, bent or broken end fittings caused by abuse, wear or damage.

BENT HOOKS: No more than 5 percent over the normal throat openings, measured at the narrowest point from the plane of the



LEFT: Light showing through the bottom of the gauge is an indication that the sheave is worn or undersized. RIGHT: Resulting rope damage that can arise from poor sheave and roller maintenance.

in the groove will both twist and wear the rope. Finally, inspection of rollers must be regarded to be as important as inspection of the sheaves. They also need to be free of corrugation, wear and stuck or worn bearings.

Lubrication is crucial

Among the most misunderstood aspects of crane rope maintenance is lubrication.

unbent hook (see ASME B30.10 Hooks).

CORROSION: Severe corrosion of the rope or end attachments which has caused pitting or binding of wires should be cause for replacing the sling. Light surface rust does not substantially affect strength of a sling.

PULLED EYE SPLICES: Any evidence that eye splices have slipped, tucked strands have moved or pressed sleeves show serious damage may be sufficient cause to reject a sling.

UNBALANCE: A very common cause of damage is the kink which results from pulling through a loop while using a sling, thus causing wires and strands to be deformed and pushed out of their original position. This unbalances the sling, reducing its strength.

KINKS: Are tightened loops with permanent strand distortion that result from improper handling when a rope is being installed or while in service. A kink happens when a loop is permitted to form and then is pulled down tight, causing permanent distortion of the strands. The damage is irreparable, and the sling must be taken out of service.

DOGLEGS: Are permanent bends caused

When a wire rope is bent the individual wires and strands have to slide relative to each other and the rope itself glides within the sheave. Without proper lubrication, friction increases and the rope life is drastically reduced. Checking the lubrication and periodically applying a thin coating of maintenance lubricant is key to any maintenance program. As a rule of thumb, ropes require maintenance



by improper use or handling. If the dogleg is severe, the sling must be removed from service. If the dogleg is minor, (exhibiting no strand distortion) and cannot be observed when the sling is under tension, the area of the minor dogleg should be marked for observation and the sling can remain in service.



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RopeBlock's Super Reeve Connector

The new Super Reeve Connector Swivel Socket (SCS-SW) from RopeBlock is the result of further development of the company's patented Super Reeve Connector Socket (SCS). The new design adds an integral swivel. The Super Reeve Connector Swivel Socket utilizes a poured button that achieves an efficiency of 100 percent of the wire rope breaking strength, RopeBlock said.

The shorter length optimizes the hoisting height. Integrating a swivel increases safety as the torsional forces are reduced in comparison to situations where only a socket is used, the company said. RopeBlock engineers have designed the SCS-SW as a universal product that can be relatively easily adapted to all types of cranes. The SCS-SW is available for wire rope sizes from 7/16 inches to 2 1/8 inches (11mm - 54mm).

lubrication every six to 12 months.

When it comes to maintenance lubrication there are a few lesser-known things to keep in mind. First, the lubricant must be compatible with the original lubricant. Otherwise, through intermixing, the two products can form a totally different lubricant with different technical properties. Second, a lubricant designed only for wire rope is a must. Wire rope lubrication performs a very specific function with very specific properties which generally cannot be met by multi-use products such as a typical gear, chain and rope lubricant. Third, the lubricant must be able to penetrate inside of the strands to cover each component uniformly. A product that just sits on the outside does not help the wire rope life, plus it can inhibit inspection.

Drum issues

A common wear area of running ropes on construction cranes is at the drum. Since the rope is wound in multiple



(ABOVE) A is a wire rope with incorrectly maintained lubrication. (BELOW) A partially cleaned section shows a dangerous situation hiding beneath the lubrication.



layers it is subjected to abrasion and crushing at crossover points between rope wraps and change in layers. To get optimal life from the rope it must be sufficiently tensioned on the drum to 5 to 10 percent of working load limit during installation. When a wire rope is sufficiently tensioned it tightens and gains lateral stability wires pushed out of position due to non-tensioned drum wraps, enabling it to resist crushing from the incoming loaded rope. When it is not tensioned it will crush much more easily. It is important to note that tensioning is not a one-time event. Over time, unused lower wraps and layers slowly lose this tension and therefore ropes need to be routinely tensioned as part of the crane maintenance program.

But even with perfect tension, wire

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INDUSTRY FOCUS WIRE ROPE



WireCo develos Betalift SP

WireCo WorldGroup has introduced a new product that will replace Apex for extend and retract assemblies on cranes. Following an analysis conducted by its technical and engineering specialists, Wireco WorldGroup is now offering Betalift SP.

"Betalift SP can be directly substituted into the application the Apex product is currently used, with equal breaking strength and even more benefits to our customers," said WireCo WorldGroup. "Manufactured to the industry's highest standards, Betalift SP is constructed with drawn galvanized wires that provide excellent corrosion resistance. In addition, extensive testing has shown Betalift SP provides 25 to 50 percent improvement in fatigue life."

The company said Betalift SP is the strongest rope available for crane assemblies and is not to be used with a swivel.



ropes will eventually wear at the crossover points.

Extending life

Another method to extend the lifetime is by cutting a length equal to 1-1/4 drum wraps from the drum end to move the wear points. For this method to be effective it must be done at intervals that occur prior to these sections showing more wear than the rest of the rope. Three or more times over the rope's lifetime is recommended.

For tower cranes the problem is usually compounded. The crane starts at a base



Wires are pushed out of position due to non-tensioned drum wraps.

height and climbs during the job leaving lots of unused rope in the lower layers on the drum, not to be used until the crane is climbed to its final working height. These lower layers at the start of the job cannot be practically re-tensioned or shortened until the rope climbs high enough to fully spool the rope off. Unfortunately, by the time the rope at these lower layers is needed it may already be damaged. The solution is to plan to use a different length of rope for each stage of the job. This ensures that there aren't any unused, low tension layers becoming damaged before seeing any useful life and in most cases the ropes can be used again at the next job.



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Omega Morgan hauled a 245,000-pound steam reformer from Tucson, AZ to Sparks, NV.

Street smart

he heavy haul business in North America is never run-of-themill. While lashing a heavy component on a trailer and heading down the road may look simple, it is not. Beyond the route surveys, permits, regulatory approvals, equipment selection, rigging, safety assessment and tedious project engineering, there are hundreds of details that require expert attention along the way.

Hauling specialized loads requires focused experience and know-how. *American Cranes & Transport* rounded up five heavy haul projects that showcase distinctive challenges and solutions.

A desert journey

The Omega Morgan specialized transportation team recently moved a large steam reformer from Tucson, AZ to Sparks, NV. Measuring roughly 78 feet long and weighing 245,000 pounds, the reformer posed several challenges.

"There were several factors that contributed to the method they used to move the tank," said Erik Zander, director of sales for Omega Morgan. "First,

Omega Morgan's team assembled the trailer deck underneath the tank, then built the load saddles so that the nozzles would clear the rails. accommodations had to be made for the dozens of nozzles and accessories on the outside of the tank. These are crucial to the operation of the reformer, and if one of these were to be damaged, it would have been an expensive fix."

Second, the tank was manufactured inside a warehouse, which limited the height of the moving equipment used. This meant cranes were not an option.

And last, the pre-camber of the trailer deck rails created an obstacle for the nozzles on the vessel.

"When not under load, the trailer bows up by several feet in the middle, so that when it is bears weight, it becomes straight rather than sagging," said Zander.

That meant that the load had to be lifted several feet higher to account for the difference.

The Omega Morgan team found unique and effective solutions. They assembled the bowed trailer deck underneath the tank, then built the load saddles so that the nozzles would clear the rails.

Using lift towers, they lifted the deck and the load. Now bearing the weight of the load, the deck of the trailer flattened out. The load was then lowered until the saddles sat on the deck rails and there was less than an inch of space between the nozzles and the top of the deck rail.

"This was a crucial step because it lowered the overall load height, and the route to Sparks included several bridges with low clearance," Zander said.

After arriving at the destination, the team did the same process, only in reverse. The result was a clean and successful move, Zander said.

Mining equipment win

Late last summer, Sterett Heavy Hauling took on the project of disassembling, transporting and reassembling a Hitachi EX3600 mining excavator, two Hitachi EH1700 dump trucks and two Hitachi EH3500 dump trucks. To keep the mine running without interruption, the timeline was set at four weeks. The route was 60 miles from Boonville to Washington, IN.

Unlike traditional hauling operations, Sterett Heavy Hauling approached the task with specialized equipment, keeping the excavator in larger pieces. The typical load count for a disassembled EX3600 is 13 loads.

PROJECT DIGEST SPECIALIZED TRANSPORTATION



Tradelossa hauled various gas components, including a generator and a gas turbine, from the Port of Veracruz to a Mexico City Combined Cycle Power Plant.

But Sterett managed the move with five loads, getting the job completed in two weeks. The bottom and top half of the excavator were hauled in single pieces, while the racks and carbody were hauled on one load and the top engine with side compartments on the other.

The larger bottom half utilized eight lines of dual lane trailer, at 16-feet wide, and hauled the 22-foot wide load, grossing approximately 250,000 pounds. A push truck at the rear assisted with hills and loose terrain inside the mine site. Steerable axles on both the loads enabled the crews to safely navigate two roundabouts and multiple 90 degree turns. Keeping the excavator in larger pieces reduced the risk of mechanical failure and personnel injury, saving time and money.

Maxing out in Mexico

Tradelossa performed the transportation and rigging of gas components for the Jorge Luque Combined Cycle Power Plant. The components were hauled from the Port of Veracruz to Mexico City, the location of the power plant.

The generator measured 5.7 meters long, 3.45 meters wide and 2.65 meters tall. It weighed 77 tons. The gas turbine was 8.4 meters long, 4.74 meters wide, 4.01 meters tall and weighed 50.2 tons.

The cargo encountered many obstacles including bad weather, roadway adequations and removing and relocating pedestrian bridges. The Tradelossa team worked with authorities in every town, following safety and quality standards. At the project site, Tradelossa's team installed the two gas components and a gearbox with a gantry system, lifting them 4.40 meters above the ground.

"The key factor that allowed us to overcome this arduous challenge was our team's broad experience, creativity and

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determination to accomplish the goals set by our customer to deliver top-quality performance making this operation a complete success," said Tradelossa's Hainité Silva Páramo.

Module maze

Last spring, B&G Crane Service, a division of Maxim Crane Works, provided heavy transport services for an expansion project in Point Comfort, TX. The scope of work consisted of offloading nine pipe rack modules that were assembled in Shanghai China. They were offloaded via RORO operations from the first ever selfpropelled barge to enter U.S. waters. B&G Crane Service then transported the nine modules to the project site for performing stacking and retrofitting modifications.

Upon completion of stacking and retrofitting modifications, the remaining work scope consisted of onsite transportation and the setting of eight





modules onto their foundations via selfpropelled modular transporters.

The project lasted about two months, from April to May 2019, and included the RORO operations and inland transportation operations of the nine modules as well as onsite transportation/ installation operations of eight modules.

The largest module was 132 feet long by 50 feet wide by 63 feet tall. It weighed 1,400,000 pounds. The moves were performed with 60 axle lines – 30 axle lines double wide – of Scheuerle self-propelled modular transporters (SPMTs).

Through the combined efforts and teamwork of B&G Crane Service, TXDOT, utility trucks, escorts and state police, the project was executed and completed safely and on schedule.

Nacelle excursion

ML Crane Group company Crane Service Inc. has provided heavy lifting, heavy haul and alternative movement services to the

Maxim's B&G Crane Service provided heavy transport and rigging services offloading and installing pipe rack modules.


SPECIALIZED TRANSPORTATION PROJECT DIGEST



wind industry in New Mexico and Texas for many years. Transporting and hoisting wind turbine components is an integral part of its business.

Recently, the Crane Service Amarillo branch and the Alternative Movement Division (AMD) teamed up to deliver a 136,000-pound nacelle to Mesalands Community College in Tucumcari, NM. What makes this project special is that the nacelle was not installed on a tower, but on the floor of the North American

Wind Research and Training Center where it is a training tool for students in the Wind Energy Technology program.

The Crane Service team used its 9-axle Faymonville HighwayMax extendable trailer and 4-axle heavy haul tractor to transport the nacelle the 275 miles from Garden City, KS to the North American Wind Research and Training Center in Tucumcari, NM. The HighwayMax was the perfect transportation solution as it provided a nimble platform and narrow turning radius required to navigate the 235,000-pound gross load out of the congested storage facility and onto the road.

The chosen route to the training center consisted of multiple two-lane highways, each with elevation changes and height threshold issues. With its nine hydraulically steered pendular axles,



The Crane Service team lowered the Highway MAX and guided the nacelle into the training facility. The nacelle was positioned under an Enerpac gantry for offload and installation.

each with a stroke of 23.6 inches, the HighwayMax was able to stay in lane and hydraulically lower the load when needed.

Upon arrival, the Crane Service team again lowered the Highway Max and guided the nacelle into the 12,385-squarefoot training facility. The nacelle was positioned under a 500-ton Enerpac gantry for offload and installation.



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Dollars and sense

A discussion of equipment finance trends and issues.

avigating the constantly changing realm of equipment finance requires the advice and support of an expert. *American Cranes* & *Transport* convened its 2019 Finance Forum to get answers to timely questions about financing cranes and specialized transportation equipment.

Four long-time finance industry professionals participated in our roundtable discussion, including Tonya Fry, Linda Brown, Doug Fletcher and Jeffrey Whitcomb.

An economics graduate of Stonehill College, Fry has been assistant vice president of Harry Fry & Associates since 2004.

With 25 years' experience financing cranes and heavy equipment, Brown is assistant vice president of Commercial Credit Group.

With Siemens Financial Services, Fletcher is a 25-year finance veteran with a focus on cranes and commercial construction equipment, including heavy haul and all crane support equipment.

Whitcomb has been financing cranes since 1999. He is the construction



TONYA FRY Harry Fry & Associates



LINDA BROWN Commercial Credit Group



DOUG FLETCHER Siemens

Financial Services



JEFFREY WHITCOMB Mitsubishi UFJ Lease & Finance (USA) industry leader at Mitsubishi UFJ Lease & Finance (USA) Inc.

THE FEDERAL RESERVE HAS LOWERED INTEREST RATES TWICE IN THE LAST THREE MONTHS. ARE LOWER RATES BEING PASSED ON TO BUYERS OF CRANES AND OTHER EQUIPMENT?

TONYA FRY: Even though the Fed has decreased interest rates twice, we are not seeing a drastic

decrease in rates from our funding partners. We will see small decreases here and there from our funding partners, but no large drops. Overall, I think rates have stayed very competitive, and it is an excellent time to purchase.

Since the Fed has decreased the rates twice, more than likely they will remain unchanged or a minimal decrease in the fourth quarter. Regardless, as we approach year-end, it is always an excellent time to take advantage of year-end pricing if you are planning to make purchases.

LINDA BROWN: Interest rates have, for the most part, remained historically low over the past 10 or so years, which has been great news for companies looking to finance equipment. All indicators and projections pointed to an environment of increasing rates, which did not materialize to the degree that was projected. Again, good news for borrowers. With the Fed's recent rate reductions, I am seeing on average, about a 25 basis point reduction with loan rates.

DOUG FLETCHER: Based on the Fed rate being lowered, the rates for equipment finance have been affected positively with lower interest rates, which translates into more spending power for our customers. **JEFFREY WHITCOMB:** Yes, interest rates continue to touch historic lows. The fourth quarter of this year will be a tremendous time to finance new cranes or to refinance prior loans. It is also a very good time to use leasing to reduce taxable income.

In 2017, H.R. 1 "The Trump Tax Law"

Even though there may be an air of uncertainty, the market for new and used cranes is robust.

capped the amount of interest you may deduct. If your company has reached its limit for the year, then leasing (with a capped or fixed residual) is a better option than a loan because 100 percent of your lease payments will be fully deductible. So for a company that has reached its "cap" for 2019, if you lease a \$2 million crane rather than buy it you could save as much as \$150,000 in taxes by leasing, assuming a 48-month term with 25 percent residual. That is real cash for the company – not just an accounting gimmick.

HOW DO YOU CHARACTERIZE THE MARKET FOR CRANE AND RELATED EQUIPMENT SALES, BOTH NEW AND USED?

TONYA FRY: In 2018, 45 percent of our funded transactions were for new units and 55 percent were for used. This was similar in 2017 and we are seeing the same trend in 2019. Overall, the market is strong for both, but we are finding that customers are continuing to price shop. We have seen more and more customers purchasing from end users as well as purchasing from vendors.

LINDA BROWN: It has been my experience that the crane and heavy equipment markets have been strong to steady over the past five to seven years with varying degrees, depending on the geographic market. The transportation markets have slowed the past 12 months, however new and used cranes were strong the past 13 to 15 months, experiencing a slow-down in June. The used crane market has become

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a challenge in California due to CARB Emissions laws. Companies are replacing older units with newer CARB compliant units.

DOUG FLETCHER: The new and used crane market is robust and will continue to grow with the economy as essential infrastructure projects will continue, and remain vital, across the U.S. All crane industry applications are strong and in need of crane services. Manufacturers are building cranes at a record pace to meet the industry demand with build times between six and 12 months. However, acquiring new or used cranes remains difficult for companies struggling to meet project and contract obligations.

Manufacturers are working to improve their build times and supply cranes that are most needed. The used crane market is strong and will continue to be going forward. Financing for used equipment will continue to remain an attractive option for our customers because it offers the possibility of customized financing solutions depending on the type of crane and hours of use.

JEFFREY WHITCOMB: Our company works mainly with middle market-sized companies and with large ENR200 contractors, and the market is robust. We see strength in tower cranes, all terrain cranes and telescopic crawlers, especially. Lattice boom crawler sales are strong also and rough terrain cranes are doing better than two years ago - although the smaller tonnage models continue to be threatened by larger capacity telehandlers. We do not do much used crane financing although we do sale/leaseback transactions and those tend to be based more on financial considerations than on the availability of equipment.

WHAT ARE THE CHALLENGES OF CLOSING FINANCING ON A CRANE OR RELATED PIECE OF EQUIPMENT? WHAT SORTS OF SPECIFICS SHOULD THE BUYER HAVE TAKEN CARE OF BEFORE A LOAN CAN GO THROUGH?

TONYA FRY: The biggest challenges we face when closing loans/leases is the ever-changing banking regulations. The changing regulations have amounted to additional paperwork and additional verifications. The banks and funding sources often have auditors come in to review their files. If they are not in order, the source can suffer penalties. As a result, the extra paperwork can often be passed along to the customer.

For example, funding sources must approve/verify the vendor as part of the

closing process. In doing this, a physical address is needed, and they look for proof of a "brick and mortar" shop, sometimes with signage. In our industry not every seller has an actual dealership or yard with signage. As far as the customer goes, some funding sources require two forms of ID, or a form of ID and a physical address verification. I think the reason for some of these things are because we are in a world that more and more relies on the internet as a means of conducting business. We are losing that personal touch and as a result, it opens the door for more instances of fraud. Funding sources need to verify that not only the asset exists, but the vendor and customer exist as well.

LINDA BROWN: When companies are shopping for crane or equipment financing, it is helpful to have current company tax returns and/or financial statements. I realize it's tempting to put off doing tax returns and filing an extension, but when going to market to borrow, it is helpful and could possibly help secure more advantageous terms. In addition, presenting a brief explanation of how a new unit will enhance or expand your fleet is always helpful. Is it a replacement or addition and what are the projected utilization rates?

DOUG FLETCHER: The challenges are twofold: the customers' budgetary needs and their equipment needs. The crane application and utilization play a vitally important role in identifying the specific type of crane a customer will need.

In general, companies can be prescreened for their purchase by providing all current financial information and industry information in advance. Depending on the financial transaction requested, the customer should consult with their company finance department or CPA to determine if the loan or lease will be the most beneficial for the transaction. Being prepared ahead of time and

Every deal is different, and the key is to remain flexible, think outside the box and know and understand the market.

LINDA BROWN, Commercial Credit Group

As we approach year-end, it is always an excellent time to take advantage of year-end pricing if you are planning to make purchases.

TONYA FRY, Harry Fry & Associates

having all your equipment and financial information in advance will create an effortless customer experience. **JEFFREY WHITCOMB:** The main challenge any time we provide a lease or a loan on a crane continues to be lead times (getting the timing right so that we are ready to fund once the crane arrives in port and will soon be delivered). I would also say that crane company owners need to keep tabs on the liens that are files on their secured loans. Periodically asking your main lenders to provide copies of their UCC-1 filing statements is a wise investment of time. You do not want to have broad lien language or blanket liens on your entire fleet or company because those "get in the way" of a new finance company providing financing to your company and could delay funding and delivery to a job site.

We also see credit quality for smaller companies being an obstacle. I am constantly amazed that crane companies with \$50 million to \$75 million in annual revenues do not have audited or reviewed financial statements. This can really slow down the process. I highly recommend finding an excellent CPA firm through a competitive bidding process based on price and a questionnaire on their qualifications in order to find a firm that can provide timely statements for banks and/or leasing companies to use for underwriting purposes.

WHAT ROLE DOES DEPRECIATION PLAY IN THE REALM OF FINANCING EQUIPMENT?

TONYA FRY: Depreciation plays a very important part in crane financing, especially as we approach year end. The Section 179 Deduction with Bonus Depreciation is in effect for 2019.

Currently, for 2019 the first year write off limit is \$1,000,000. Any purchase amount over the \$1,000,000 is subject to 100 percent bonus depreciation. For example,

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if a customer purchases \$1,250,000 in equipment, they immediately write off \$1,000,000 and then they take 100 percent bonus depreciation for the remaining \$250,000.

This write off and the 100 percent bonus depreciation is a great incentive to purchase now and gives the customer a huge cash/tax savings. When it comes to depreciation and incentives like this, we still encourage customers to double check with their CPA as well.

LINDA BROWN: Yes. Deprecation has played a large role in driving equipment purchases. The Section 179 bonus depreciation can potentially save a company hundreds of thousands of dollars depending on their tax bracket. There is a \$1 million deduction limit and \$2.5 million spending cap for equipment purchases. Companies should talk to their accountants for tax advice.

DOUG FLETCHER: Depreciation is important based on the industry the crane services, which makes financing a crane very attractive. Due to the higher values set for cranes, the depreciation aspect plays an important role in the finance structure, focusing on better values and possible lower cost related to the transaction. JEFFREY WHITCOMB: It used to be that the value of depreciation for lessors was quite substantial and effectively leveraging that in the fourth quarter of the year could result in substantial savings for the crane company. When our company provides an operating lease to a customer, we gain the tax benefits of ownership and that can result in a "better deal" that you cannot get when you take out a loan. However, with lower corporate and pass-through tax rates the benefits are not as great as they once were.

Bonus depreciation is a tax incentive that

The new and used crane market is robust and will continue to grow with the economy as essential infrastructure projects will continue, and remain vital, across the U.S.

DOUG FLETCHER, Siemens Financial Services

Bonus depreciation is a tax incentive that allows small- to mid-sized businesses to take a first year-deduction on purchases of qualified business property in addition to other depreciation.

JEFFREY WHITCOMB, Mitsubishi UFJ Lease & Finance (USA)

allows small- to mid-sized businesses to take a first year-deduction on purchases of qualified business property in addition to other depreciation. For 2019 it was moved up to 100 percent for qualified property. The new law also allows bonus depreciation to be taken on the purchase of a used crane (which was not allowed prior to 2017). If you have a large profit this year but expect a small one (or a loss) next year then using bonus depreciation makes a lot of sense.

The Section 179 deduction is a second tax incentive for businesses that purchase and use qualified business property, but the two are not the same. The amount for Section 179 has nearly doubled this past year – so it is significant. As with all tax matters, I would suggest that company owners or financial managers consult with their tax accountants to see exactly what is available to them and how to maximize it.

DO YOU SEE MORE OEMS OFFERING FINANCE PROGRAMS FOR THEIR CRANES? DO THESE PROGRAMS COMPETE WITH YOUR CRANE FINANCE PROGRAMS?

TONYA FRY: We currently are not seeing a great deal of OEM financing programs. There are a few manufacturers that may have them, but they are not that common in the marketplace. If an OEM does offer one, we compete with our credit criteria.

An OEM finance program is typically tied to one funding source with one set of credit criteria. Not everyone is going to fit that criteria. We compete with OEM programs because we work with a variety of funding partners. As a result, we can offer very competitive rates, and have much broader credit criteria. We can find financing for a vast majority of customers. LINDA BROWN: Yes, some OEM's have finance programs and occasionally they will compete with the finance products we offer, but too not often. If a borrower is looking for more flexible terms that fall outside the box offered by the OEM's program, we can be helpful. Many times, that equates to limited to zero cash down, longer terms or a possible debt

restructures to cash flow a new unit into the fleet. Every deal is different, and the key is to remain flexible, think outside the box and know and understand the market. In addition, over 50 percent of our financing is done in the used markets. **DOUG FLETCHER:** Siemens Financial Services works with OEMs to provide financing options to distributors and end-users. Crane OEMs typically have approved financing programs that are tied to their dealers or approved financing providers. A typical benefit with these types of financing programs is providers can offer discounted rates. However, due to the current demand of cranes, there are currently no discounted rates within the crane industry that I am aware of. This is not to say that it doesn't happen, or will not happen, because in some instances, manufacturers will occasionally provide subsidy dollars to assist in the financing of the equipment.

JEFFREY WHITCOMB: I do not see this activity as much because interest rates are so low to begin with. When rates are much higher, we tend to see this activity increase. These incentives are also used to move slow moving inventory and we frankly do not see that either.

What we do see is that OEMs are becoming more creative with how they finance their supply chain and the terms they offer to their end user customers. Our company provides supply chain finance as well as retail finance, so we see both. It is now more common than ever for suppliers to offer long duration payment terms on their invoices. Since their carrying costs are not high due to low interest rates, they are better able to pass that along to their customers in the form of favorable terms.

I would not say that these OEM programs compete with us. They might change the timing but companies who need to finance cranes base their volume with us much more on their own market activity and demand and their buying plans for the year (which generally do not change much once they are set).



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PRODUCT FOCUS TOWER CRANES

As the market for tower cranes levels off, product variety across the industry is greatly increasing. Hannah Sundermeyer discusses.

trong, steady and maybe a bit temperamental." That's how Sam Moyer, P.E., general manager, ALL Tower Cranes, sums up the North American tower crane market.

"Thriving in the construction business is all about being nimble," Moyer said. "While you might find some markets are saturated, there are always going to be others where demand is high. They key is to tend to your customer relationships, so you're prepared for the winds of change. Last year, there was growth everywhere. It's unreasonable to expect that to continue indefinitely. But there are still a lot of opportunities out there."

Nick Cantine, director of heavy lift projects at RMS Cranes, has a finger on the pulse of the tower crane market, and he thinks it is strong and growing.

"In the metro areas, these projects allow limited space in work areas which require the utilization of tower cranes,"

Favelle Favco M760D tower cranes operated at the 66 Hudson Yards project in Manhattan.



Steady, but

Tower cranes decorate



said Cantine. "We are able to provide our clients with enough lifting capacity and tip heights without taking up too much ground space on the jobsite."

Sources say 2020 will also be a crucial indicator of the solidity of the market because it's a presidential election year. How business friendly will the man in the Oval Office be? "We are forecasting 2020 will remain strong until the summer," said Stephen Jehle, president, P&J Arcomet. "With the U.S. presidential election coming, there is typically a pullback in demand. This lasts for about four months or so. Once the outcome is decided in the fall, the market returns to normal."

But Morrow Equipment Company forecasts that 2020 is going to be quite similar to what customers saw this year,



with no dramatic increase or decrease.

"We see no real declines," said Christian Chalupny, president, Morrow Equipment Company. "This year has been a little bit weaker than last year, but it was an excellent year. We would forecast next year to be pretty much the same as this year, but no declines like 2008, or 2009, nothing like that on the horizon. We certainly don't want to see that again."

Safety dialogue

With tower crane accidents making headlines over the past year, tower crane safety is a hot button topic. As the market demand evolves, it's important that tower crane safety stays at the forefront.

"Recently, we've started having our technicians take turns observing each other," said Moyer. "It encourages sharing of best practices, asking questions and starts a dialog about safety protocols. Our people are also encouraged to freely share their own ideas and observations about what they encounter on the job. If there's a better way to do something, we want to know about it. Safety is about total awareness and total engagement on the job."

Recent tower crane accidents have put these machines in the spotlight.

temperamental

"The industry is mostly self-reporting and the 'outside' experts are typically less knowledgeable than the tower crane houses themselves," said Jehle. "We find that some tower crane rental companies do not function with the same safety standards and training of technical people as others. This can lead to accidents, which is bad for all of us."

Forces of nature and human error are where fingers are pointed.

"Wind speeds are one of the biggest issues we see today," Cantine said. "Tower cranes work long term projects varying anywhere from six months to three years in duration. Unpredictable weather will often occur during these times. As long as we pay attention to these issues and the safety measures we put in place are consistently adhered to, tower cranes are safe."

Chalupny highlighted concerns in relation to erection, dismantling and climbing tower cranes. Training is needed to ensure these processes are completed safely and correctly.

"This is when an accident is potentially more likely to happen," he said. "It usually involves human error when it comes to following certain procedures. So, it involves a lot of training on the customer side."

The good news for the market is the number of new players and the variety of cranes now being produced. The *ACT* team surveyed many of the leading North American crane manufacturers for the low-down on their most recent products.

Favelle Favco

Favelle Favco Cranes is introducing its new model M900F-ST tower crane to the U.S. market for 2019-2020. This crane will supersede the popular M760D model which has been around for 20 years and was used in many prestigious projects such as the World Trade Center Hudson Yards and One Vanderbilt in New York City.

Similar to the M760D, the M900F-ST has 2 winches with a 141,000-pound capacity on the main line, based on two falls. The auxiliary has a 26,400-pound capacity on a single line. This crane will have a shorter tail swing of 25 feet compared to the conventional M760D which has a tail swing of 30 feet.



While the winch has the same line pull of 70,400 pounds as the M760D, the M900F-ST has a significantly better load chart compared to the M760D, Favco said. With a 225-foot boom length, the M900F-ST has a tip load of 21,700 pounds compared to 12,800 pounds for the M760D. The maximum hook speed is 623 foot per minute. The heavy lift and high-speed capabilities of the M900F-ST makes it ideal for use in high rise steel construction, the company said.

Comansa

This year at Bauma, Comansa displayed the new 21LC1050-50T, the largest flat top crane at the show. The 1050 and its larger brother, the 21LC1400-66T, are designed for large construction projects, commercial and residential projects following precast construction methods, infrastructure, industrial and shipyard projects. Since its introduction over 20



machines have been sold, including two in the U.S. market. The 21LC1050 uses the D36 size tower, the same as the 21LC75, allowing for fast, safe erection and dismantle.

With this tower the standard maximum free-standing height is 240 feet. The crane is standard with a 262-foot jib and optional lengths of 278 and 295 feet. Maximum capacity is 110,230 pounds in 6-part configuration. The newly developed Quick Set is another feature with this crane allowing electronically set limits with a known load reducing set up time from 3 hours to less than 45 minutes.

Liebherr

Liebherr's newly introduced 125 K and EC-B series cranes offer substantial hook height, easier transport and features that enhance operator comfort and safety, the company said.

The 125 K has been specially developed for civil engineering work, such as road bridges and commercial building construction. It is the largest fast erecting crane in its class. The 125 K and 340 EC-B flat top will be displayed at ConExpo in March.

Five tower sections can be inserted to increase the 125 K's hook height from just under 97 feet to 136 feet. If more reach is needed, the crane's 30-degree luffed jib position can reach a hook height of nearly 215 feet.

The two largest cranes in the series, the 340 EC-B 12 and 370 EC-B 12 Fiber, each have a reach of nearly 256 feet. The 340 EC-B is also available as a 12-ton and a 16-ton crane.

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Terex

Terex Cranes rolled out three new tower cranes during its October preview event in Italy. The new lineup includes the company's first hydraulic luffer, to broaden its offering, a flat top and a self-erector. The largest of the three is the 13.2-ton capacity CTLH 192-12 hydraulic luffer, the first of its type from this manufacturer. Maximum jib length is 180 feet, at the end of which capacity is 2.6 tons. It's out

TOWER CRANES PRODUCT FOCUS

of service radius when parked is 26 feet and it can be mounted on the HD23, TS23, TS21 or H20 tower masts. The hoist winch is 67 kW and the hydraulic luffing mechanism is 30 kW. The new CTT 172-8 flat top is an 8.8 ton (on four falls of rope) with a maximum jib of 213 feet. The 4.4ton version on two falls of rope lifts its maximum out to a radius of more than 82 feet. Maximum freestanding height is 213 feet. It replaces the CTT 162 with 441 pounds more tip load capacity and the new electronic control systems.

JASO

To meet the demand for larger tower cranes, JASO introduced a luffer and a hammerhead, in the past two years. Using heavier prefinished prefabricated volumetric construction (PPVC) when erecting tall buildings is on the rise. As a response to this trend, JASO designed the J1400 hammerhead model that features a 260-foot jib and lifts a maximum load of 141,095 pounds with a 23,150-pound tip load. In 2018, JASO introduced one of the largest electric luffing cranes in world – the J780PA. The target markets for this crane are high rise construction



The Potain MDT 809 has a capacity of 44.1 tons and the jib can reach up to 262.5 feet.

(steel buildings), PPVC construction and mining. The all electric J780PA is a solid replacement for the commonly used diesel fired hydraulic cranes. The J780PA has a max load of 165,350-pounds, hoist winch options of 110kW or 220kW motors, a boom of 180 feet and a tip load of 24,690 pounds. JASO also designed a fly jib attachment with a 19,840-pound line pull for the U.S. market.

Manitowoc

Manitowoc's latest tower crane model is the Potain MDT 809, the largest flat top crane it has built to date. This model was developed specifically for industrial projects and large-scale infrastructure





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jobs. This specific design was based on the topless concept, with low space requirements to adapt to multi-crane jobsites.

The MDT 809 boasts a capacity of 44.1 tons and the jib can reach up to 262.5 feet. The crane also has a new 26-foot cross base that offers the performance characteristics of a 33-foot chassis but requires only one container for transport. The MDT 809 typically assembles twice as fast as other 40-ton cranes, the company said. With its full jib, the crane can be assembled at a 164-foot working height in less than three days.

ENG USA

ENG's brand new derrick EDKH 185 features 27 tons of maximum capacity, 35 feet of jib length and 4.63 tons of maximum tip load. The EDKH 185 was created to be a stand alone derrick to dismantle internal climbing cranes. It's 24 tons of maximum capacity make it one of the most powerful derricks on the market, the company said. The EDKH 185 also stands out with its 360 degrees of slewing radius and no counterjib, differentiating it from traditional derricks. The jib can

dismantle itself and is also available as a luffer version of the crane.

Zoomlion

Zoomlion is enjoying market success with its T8030-25, which is specially designed for the North American market as a result of the joint efforts of Zoomlion and P&J Arcomet. The crane has a 308foot maximum freestanding hook height, 55,125 pounds maximum capacity and 268 foot 11 inches as the max jib length.

Zoomlion will also unveil a new tower crane at ConExpo 2020. Compared to the T8030-25, the Zoomlion T600-32R features a 279-foot maximum jib length and a capacity of 70,548 pounds. While both models share the same tower sections, the combination of current tower section X23D and upcoming X25 would make its freestanding height reach as high as 290 feet, the company said.

Wolffkran

New from Switzerland-headquartered tower crane manufacturer is the Wolff 133 B. It's a small hydraulic luffing jib crane which succeeds the Wolff 100 B. The hydraulic luffing system allows for an



even smaller out-of-service position than is possible with the conventional ropebased luffing system, the company said. It also means faster installation, as no luffing rope reeving is required. This model is available in two versions: one with a capacity of 6.8 tons and a tip load capacity of 2.9 tons, with a maximum jib radius of 148 feet; the other has a capacity of 8.8 tons and a tip load capacity of 2.5 tons.

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Our involvement in the crane manufacturing sector has made Favelle Favco a leader in the industry. Our Global network and associations with key players in the industry has seen Favelle Favco improvising and raising standards in Power, Speed, Reliability and Performance of our crane range. Favelle Favco cranes are well known as high speed diesel hydraulic luffing cranes. The M-series crane sizes range from 60 meter tonnes to 2000 meter tonnes. The reputation of this series, with a track record of building 9 out of 10 of the world's tallest buildings, is indisputable. It is also especially suitable for remote areas where electricity is not readily available. The latest introduction to our crane models is the all electric MK series, which is the combination of the best of Favelle Favco and Kroll technologies. The MK series delivers the load charts from the M-series whilst using the winch technology from Kroll.



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IFTING **SITE REPORT**

A Maeda MC405 mini crane works on the expansion of a crucial San Francisco ferry terminal.

ith a population of nearly one million people and continual urban growth, San Francisco is as bustling as it is beautiful. However, its status as both a coastal and densely inhabited city often make construction projects a unique challenge as workers must manage congested boulevards and smaller-scale jobsites.

Power Engineering Construction (PEC) is utilizing its Maeda MC405 mini crane on the expansion of the downtown San Francisco Ferry Terminal's South Basin. The small crane is predominately hoisting materials inside the very confined jobsite in the newly constructed plaza and promenade area, which is adjacent to the busy street side of Embarcadero.

Heavy piling and dock construction work is primarily being completed from the water using PEC's fleet of floating equipment including material barges, derrick barges and sectional flexi-float barges. By utilizing waterside project mobilization, this prevents traffic interruptions and allows current ferry

The Maeda MC405 can easily maneuver and position around materials, then hoist them into place for installation in the congested workspaces.



Heavy piling and dock construction work is primarily being completed from the water using PEC's floating equipment including material barges, derrick barges and flexi-float barges.

service to remain in operation during the entire course of the project.

According to the Water Emergency Transportation Authority (WETA), the company partnered with the Port of San Francisco to execute the project in support of the Implementation and Operations Plan, which calls for the expansion of ferry service throughout the San Francisco Bay

area. In addition, this project will also aid WETA's Emergency Water Transportation Management, which sets forth the framework for WETA's emergency operations in the event of a regional disaster.

Master maneuvering

In the plaza and promenade area, lighter materials must be handled in the small and busy workspace, where materials are being staged, according to John Carpenter, sales and rental manager of Maeda USA.

"PEC's Maeda MC405 excels in these conditions," Carpenter said. "The rubber tracked Maeda mini crane is able to maneuver and position around materials, then hoist them into place for installation. In addition, multi-position outriggers make it possible to set up the MC405 for lifting in extremely tight spaces."

By working directly within the plaza workspace, the busy adjacent Embarcadero roadway and pedestrian sidewalks remain open and unobstructed by larger cranes that would work from the perimeter. Roadway and sidewalk blockage are also prevented. The larger barge derricks were freed up to be utilized for the heavy lifting from the waterside.

SITE REPORT LIFTING



By working within the plaza workspace, the Maeda crane can maneuver quickly and perform the required lifting.

Throughout the project, the MC405 is at work handling a variety of materials including rebar, steel concrete forms, granite and stone pieces and steps, according to Jeff Van Meter, PEC project manager.

"This project is sandwiched between historic buildings and the San Francisco Bay, which limits our laydown area," Van Meter said. "Without much space for storage and staging materials, the small footprint and mobility of the crane is extremely beneficial. The compact size of the crane when traveling allows us to use it on all areas of the jobsite for a variety of



tasks. Additionally, the rubber tracks limit the stress applied to the pier structure."

Versatile and compact

The crane is also utilized for general cleanup of excess material on the jobsite once an area has been constructed. At the end of the workday, the MC405's compact size allows it to be folded up and stored in a small area of the worksite, Carpenter said.

The machine is estimated to be on the job for approximately two to three more months until the project is completed.

PEC has also used this Maeda unit on other confined space and unique projects such as the rebuilding and refurbishment of the Alcatraz Landing area and emergency repair work at Moffett Field.

"This crane was originally purchased for its compact size, weight and mobility," Van Meter said.









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RIGGING **SITE REPORT**

Delicate lifting

Greiner Industries used its Demag AC-500 to remove an historic bridge that was heavy and rickety.

The first challenge was to get Greiner's 600-ton Demag AC-500 with super lift and 75-ton Link Belt truck crane on the jobsite at the same time.

reiner Industries recently performed a tricky job removing a 190-foot long wooden bridge. The 100,000-pound bridge, which was more than 150 years old and very rickety, needed to be removed and set on a causeway for dismantling. The challenges were the length of the bridge, determining the center of gravity and tight site conditions.

A landmark in Lenhartsville, PA, the old bridge spans Maiden Creek.

"The site was very tight," said Dan Haulman, crane division manager for Greiner Industries. "The first challenge

Prior to the bridge lift, a house

moving company came in

and raised the bridge off its

foundation. INSET: Bracing

was used to strengthen the

100,000-pound bridge.

was to get our 600-ton Demag AC-500 with super lift and 75-ton Link Belt truck crane on the jobsite at the same time. The access road was very unlevel and created difficulty setting up both cranes."

Super lift

The Greiner team rigged the Demag AC-500 all terrain crane with 352,000 pounds of counterweight. The Link-Belt 8675 was used to help rig the larger crane.

"Due to the length of rigging, 136 feet per leg, we needed to run all 183 feet of main boom," Haulman said. "At a 75-foot lift radius, the super lift greatly increased the capacity of the crane. Basically the capacity went up from 87,000 pounds to 138,000 pounds."

There was a concern that the old bridge wouldn't stay intact throughout the lift, Haulman explained. Before the bridge was lifted by the crane, a house moving company came in and raised the bridge off its foundation. For further safety, bracings were used to strengthen the bridge structure.

"We knew the bridge would be completely free when we picked it," Haulman said. "This added a tremendous safety factor as we then knew the bridge would not get hung up anywhere when

lifting."

Based in Mount Joy, PA, Greiner Industries' Crane Division has a fleet of 11 cranes. The company acquired its Demag AC-500 to compete in the bridge market, Haulman said. Greiner purchased the crane from Empire Crane based in Syracuse, NY.

"We chose this crane because of its fantastic chart and the ease of setting the machine up in tight spaces," Haulman said.

When restored, Greiner's team will set new steel I-beams in place and install the re-engineered bridge back in place.













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Bill Smith discusses how to protect your company from a frustrating legal trend.

n the book, Reptile: The 2009 Manual of the Plaintiff's Revolution, Don C. Keenan and David Ball make a case for persuading jurors by appealing to their "reptile brains," the "oldest" part of the brain and the part responsible for primitive survival instincts. In their books, videos and seminars, Keenan and Ball advise plaintiff attorneys to demonstrate to jurors the immediate danger posed by the actions of defendants because, as they write, "when the reptile sees a survival danger, even a small one, she protects her genes by impelling the juror to protect herself and the community."

According to various sources, Reptile strategy has taken the plaintiffs' bar by storm. This is at least in part because Reptile theory asserts that you can prevail at trial by speaking to – and scaring – the primitive part of jurors' brains, commonly understood as the part of the brain they share with reptiles.

How it works

At this point, Reptile strategy is no longer new, and it has been widely used in negligence cases, including those involving personal injury, products liability and commercial transportation. In Texas, Reptile theory is often used, with varying degrees of effectiveness, and it is being spread throughout the other 49 states.

The common thread amongst these varied types of litigation is that each category of defendant – healthcare providers, manufacturers and those who transport goods on public roadways – all have potential impact on every single juror. Everyone needs healthcare.



THE AUTHOR

Bill Smith, executive vice president, NBIS, is an expert on risk management and safe crane operations. He was a member of C-DAC, which assisted writing the

OSHA Crane & Derricks Standard.

Everyone purchases goods. Everyone travels on roads. These make for ideal characters in the Reptile narrative because they not only impact (positively or negatively) the individual jurors and their loved ones, but also the community as a whole.

Make no mistake: Reptile strategy is designed to take your business and tear it apart from within. Plaintiff attorneys are trained to look at everything you say you do, find what you actually *didn't* do and then use it to paint a picture of your company that makes it appear that you're more concerned with profit than safety.

The ideal defense

While Reptile theory is frustrating and alarming, it's also something that you can prepare for in your day-to-day business. Here are a few of the many ways you can bolster your protection efforts.

1 MAKE SURE YOU KNOW EXACTLY What's in your safety program.

When was it created? Are there things in the manual you no longer do? Are there things in there you have never done? Be sure it's current, effective and won't be used against you. Do what you say you do or take it out of your manual.

2 MAKE SURE YOUR AGREEMENTS, CONTRACTS AND WORK TICKETS

ARE SIGNED. If it's not signed, it's not executed. If it's not executed, it can't protect you. Don't make the mistake of going through the effort of having a contract, rental ticket or agreement and then not following through with getting it signed. There's far too much on the line.

3 MAKE SURE THE CONTRACT LANGUAGE IS RIGHT. If you're going to the trouble of getting something signed, make certain the language can actually protect you. Your terms and conditions should be up to date, state-specific and provide optimum company protection.

4 TRAIN, TRAIN, TRAIN. Continual training is critical. Take advantage

Instead of preparing for the probability of an incident by implementing prevention strategies, companies often end up reacting to an incident after it's happened. This is what Reptile Strategy thrives on – scrambling after something has happened.

of online training programs that allow employees to train when it's most convenient for them. Have employees take advantage of training on bad weather days, whenever there's down time on the job, when they're waiting for loads or when they're sitting in a crane for hours with an empty hook. Be sure to document the training as well.

Don't scramble, prepare

Many of the companies I come across are really good at what they do. However, instead of preparing for the probability of an incident by implementing prevention strategies via training, documentation, intervention or even discipline, they often end up reacting to an incident after it's happened. This is what Reptile strategy thrives on – the fact that you're scrambling after something has happened. The best way to counter this is through basic, run-of-the-mill preparedness.

If you're looking for additional ways to be counter Reptile strategy, or if you'd like to learn about other ways you can train your employees to protect your company from plaintiff attorneys, reach out to me or one of the other risk management team members at NBIS.

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Changes ahead

Workplace safety gets a new weighting system.

nder the Occupational Safety and Health Act of 1970, employers are responsible for providing safe and healthful workplaces for their employees. OSHA's role is to help ensure these conditions for America's working men and women by setting and enforcing standards, and providing training, education and assistance.

As part of that ongoing mission, OSHA has implemented a new weighting system for workplace safety for fiscal year 2020. Effective October 1, the new OSHA Weighting System (OWS) takes the place of the former time-centric program – implemented in 2015 – and is based on an evaluation of the existing program and recommendations from a working group.

The move comes from the growing concern that the current reliance on the factor of time does not provide a holistic evaluation of a workplace's safety and health. OSHA understands time is not the only factor to assess when considering the potential impact of an inspection. Other factors – like types of hazards inspected and abated and effective targeting – also influence the impact on workplace safety and health. The new system includes enforcement initiatives, like Site-Specific Targeting, to the weighting system.

OWS will encourage the appropriate allocation of resources to support OSHA's balanced approach of promoting safe and healthy workplaces, and continue to develop and support a management system that focuses enforcement activities on critical and strategic areas where the agency's efforts can have the most impact. According to OSHA, under the current system, OSHA weights certain inspections based on the time taken to complete the inspection or, in some cases, the impact of the inspection on workplace safety and health. Ultimately, OWS recognizes that time is not the only factor to assess when considering the potential impact of an inspection. The system will continue to weight inspections, but will do so based on other factors, including agency priorities and the impact of inspections, rather than simply on a time-weighted basis.

A balanced approach

In a recent piece for *Construction Dive*, Edwin G. Foulke Jr., former assistant secretary of labor for OSHA under President George W. Bush, noted that it's too early to tell how OWS, and its changes, will impact the construction industry.

Foulke Jr. pointed out that some areas of "high-hazard emphasis," like the Fatal Four, could certainly "come into play."

In the construction industry, certain hazards are present daily on the jobsite – falls, electrical exposure, struck-by and caught-in/between situations – resulting in nearly 600 worker fatalities in the U.S. each year.

If those hazards, indicated Foulke Jr., or any other construction focus areas, are given high enough weighting, it could prompt area offices to put more emphasis on them, meaning more inspections.

The *Construction Dive* piece revealed that OSHA's 2015 weighting system assigned enforcement units (EUs) for various kinds of inspections. As an example (not a full listing), inspectors would assign 2 EUs for Federal Agency Inspections, 7 EUs for Process Safety Management Inspections, 5 EUs for Ergonomic Hazard Inspections, 3 EUs for Fatalities and Catastrophes, 3 EUs for Significant Cases and 3 EUs for Workplace Violence Hazard Inspections.

Expanding outward, the new OWS approach reinforces OSHA's balanced approach to occupational safety and health (i.e., strong and fair enforcement, compliance assistance and recognition) and will incorporate the three major work elements performed by the field: enforcement activity, essential enforcement support functions (e.g., severe injury reporting and complaint resolution) and compliance assistance efforts.

Regardless of the systems OSHA uses for compliance and enforcement, safety and risk management experts continue to agree that every company must maintain a proactive, top-to-bottom safety culture. Owners and managers should work with their insurance and risk management teams to thoroughly review OSHA data, industry trends and company-specific records, and should conduct ongoing training and education to protect employees and all other company assets.

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How well do you know

The answer could be the difference between your business surviving and thriving.

ike Whitlock, a recognized leader in financial, marketing and strategic planning services, training and consulting, and president at Tannian Consulting, has spent the better part of the last two decades guiding SC&RA member companies through financial management, training workshops and seminars.

Association members will also recognize him as a lead authority at the SC&RA Financial & Risk Management Forum – an event that, in past years, has brought together CEOs, CFOs, comptrollers, owners and safety & risk managers in the specialized transportation, crane, rigging and millwrighting industry, with the goal of identifying financial strategies that grow business, increase profits and eliminate inefficiencies.

Whitlock believes that part of what makes financial strategy such an important component of SC&RA membership is the fact that Association members, by and large, represent a vast assortment of very complex companies.

"A lot of times, you're either an assetbased company or a service-based one, but in this case, many SC&RA members are both," he said.

To that end, Whitlock believes the economy is just as complex, and sees tremendous financial pressure on today's industry companies.

"As companies have grown and succeeded since I've been involved, new layers of complexity on the financial side have emerged," he admitted. "It has become more intergenerational, multistate in some cases, and some of these companies have simply become very large, which requires a higher degree of understanding of the financials."

Current trends

An unofficial tag line Whitlock likes to use is: Every Number Tells a Story. "It's understanding the connectivity between decisions and actions, and how that translates onto the financial statement. Again, SC&RA member companies are often in a unique position, where they're

heavily asset reliant, but also very service dependent. So it's extremely important to have a complete understanding of what the numbers are telling them and what direction those numbers are pointing the company."

Whitlock has spent a lot of time working with Association members on their operating ratios – especially as they compare to the crane, rigging and specialized transport industry overall.

"I'm looking for trends with regard to margins, what's driving revenue, overall profitability, cash flow," he indicated. "A good example would be AR [accounts receivable] days, collection cycle time, or job cycle time – that's a key indicator of success. But that can also destroy a company, if AR gets so far out, and a company can't operate with cash. So I'm looking at financing trends as well. What are we seeing in this regard to the amounts that are being financed, the terms that are being offered by banks and lending institutions? I'm really trying to get a sense for where the industry is moving based on



It's understanding the connectivity between decisions and actions, and how that translates onto the financial statement. Member companies [are often] heavily asset reliant but also very service dependent.

MIKE WHITLOCK, President, Tannian Consulting







Financial strategy is an important component of SC&RA membership.

the financial trends that we're seeing from the most recent history."

The most common mistakes Whitlock comes across with industry companies he works with? "Not managing gross profit margin [GPM] – just sort of letting it happen as opposed to driving it," he pointed out. "Letting overhead expenses get out of control is another. And not managing equipment utilization as well. Also, not managing AR close enough. Again, just sort of letting these things happen versus driving it."

Whitlock believes that such mistakes are often made because owners are often afraid to look at numbers because they don't know what they're looking at. "And that's why consistent review is so effective - so that a company can understand it's current financial position, but also point itself in the right direction in terms of what to be looking for down the road. "And I think people also just get too busy - or perhaps they think that someone else is looking at it within the company, or 'I'll do that next month. What people should realize is that this should be their first priority instead of their last priority during the month."

NEWS SCRA

your financials? **F** Crane and







With that in mind, Whitlock also pointed out that monthly financial reviews are critical. "A lot of folks just wait for the year to end, but you need to be managing your company every single month by looking at

financial statements," he emphasized. "It's the report card of a company – revealing: here's where you've been, here's where you are – and most importantly – here's where you're headed."

True costs

Jim Sever, president and CEO at PSC Crane & Rigging, has worked with Whitlock many times over the years and always comes away with a better understanding of where and how he wants to move his company forward.

"Whether it was through the financial ratios portion of a seminar or even the training with Mike, it really allowed me to dial in on the things that can make a difference quickly – areas where we needed to take better control," he noted.

Over the years, Sever has absorbed a wealth of takeaways from Whitlock. "Cash flow is huge, and coming up with new tools and knowledge that you can use to help secure your team – from contracts to terms of payment," he said. "Also, honing in on what your true costs of the job are – and being able to leverage that to make sure you're not selling yourself short in connection to what your real costs are. And even, most recently, calculating what a reasonable gross for your company should be."

Dave Wittwer, senior vice president at Hays Companies, has attended one of Whitlock's Forums, and knows that successful companies carefully manage the balance sheet both from a cash and debt perspective. "Crane and transport are cash-intensive businesses – cash fuels expenses, purchases assets and services debt," he said. "Hence, the most successful companies adeptly manage cash."

Smart growth

Ultimately, Whitlock sees financial management as a safety measure against future downturns. "Balance sheets need to be well structured; companies need to be cautious when using debt," he said. "Owners need to be preparing for the next downturn, which will happen – we just don't know when. Solid financial management will allow companies to survive."

Working with numerous SC&RA companies over the years has afforded

GG Cash flow is huge, and coming up with new tools and knowledge that you can use to help secure



your team – from contracts to terms of payment.

JIM SEVER, President and CEO, PSC Crane & Rigging transport are cash-intensive businesses – cash fuels



expenses, purchases assets and services debt.

Senior Vice President,

Hays Companies

Whitlock an abundance of "aha" moments. "Let's say we're comparing your company's gross profit margin with what a ratio study says it could be," he explained. "So we not only show you what the percentage difference is, but then we go back and apply that to your company, with your numbers, to show you how much additional profit you could have if you could achieve that level of profit margin. Sometimes, what may seem like small percentages translate into very big numbers – and yes, an aha moment."

The companies that do it well, Whitlock added, are in a position to both survive and thrive. "Growing just to grow isn't always good – smart growth is better: efficient utilization of current capital assets, understanding rate structure as well as fixed-cost structure, understanding ancillary benefits you can bring the client. It's easy to get complacent during good economic times. But smart companies don't just rely on the economy to pull them along. They're managing, watching every penny, hiring intelligently, not spending recklessly. I think the things that separate the successful from the not-as-successful: stronger growth margin, better financing practices and better management of AR - those three stick out."

All the more reason to perform regular strategic financial assessments, according to Whitlock. "It's truly an opportunity to steer your company – to point it in a direction where you're improving profit, improving cash flow, improving growth. It's a preemptive approach so companies can get a sense for what's happening in the industry and how they can be better prepared for both challenges and opportunities."

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PEOPLE

Caldwell Group hires Malcolm Peacock

Caldwell Group has named Malcolm Peacock its business development specialist. Caldwell, a manufacturer of below-the-hook lifting solutions for crane and material handling applications, conducts most of its work in North America but is targeting global markets.

Deason joins Yoder & Frey

Yoder & Frey Auctioneers has appointed **Chris Deason**

to assist in expanding new markets and establishing the Y&F brand as a preferred U.S. supplier,



the company said.

Deason is an accomplished sales and management professional with over 23 years of experience in organizational management and business execution in the heavy equipment industry. Deason's interest in heavy equipment began as a child, spending time with his grandfather who was a heavy equipment operator for the U.S. Forest Service. Deason also spent ten years with IronPlanet as sales director and then spent an additional 18 months with Ritchie Brothers during the transition of IronPlanet into the Ritchie Brothers portfolio, where he assisted in the transition of the sales team and served as Caterpillar dealer manager.

While developing the Yoder & Frey home market, Deason will be responsible for business development in the U.S, linking with global buyers and sellers in the Euro Auctions portfolio. Peacock will work from Abu Dhabi, United Arab Emirates where he is well placed to capitalize on demand generated by the oil and gas market in the Middle East, while targeting other hotbeds around the world, Caldwell said.

"Malcolm's appointment allows us to extend our existing plans to leverage our Caldwell and Renfroe intellectual property in lifting applications globally," said Doug Stitt, president and CEO. "Over the past 50 years we have developed great business in North America but would like to take that renowned expertise in engineering and product application further afield."

Peacock's primary area of expertise is adjustable spreader beams, but he will represent the entire range, including lifting beams, vacuum attachments, remote releasing



Malcom Peacock and Doug Stitt

hooks, and gantry cranes.

"I was in a transition period and the Caldwell opportunity met and exceeded the criteria I was looking for in my next challenge," said Peacock. "Combined with my existing knowledge of the below-thehook industry, it's exciting to represent a much broader product range that can help existing and future partners with their varied lifting-related challenges."

The U.S. Department of Labor selected Scott Ketcham as the new director of the Occupational



Safety and Health Administration's (OSHA's) Directorate of Construction (DOC) in Washington, D.C. Ketcham had served as deputy director of DOC since February 2017.



After working for JJ Curran as an operator for 25 years, Chad McComas

has taken over dispatch responsibilities for the JJ Curran fleet.



Rohit Saha, machine simulation-senior technical specialist with Cummins received the SAE/AEM Outstanding Young Engineer award for 2019.

Frank Bagouet has been



appointed senior vice president of lubricants for Total Specialities USA.

■ SC&RA Vice President of Transportation **Steven Todd** participated in a wind power panel discussion at Breakbulk Americas. The panel included David Ferebee, Lone Star Transportation and Gregory McComas, BNSF. The panel weighed in on challenges and opportunities as wind power continues to grow in importance.

Konecranes appoints new CEO

Rob Smith is president and CEO of Konecranes, effective February 1, 2020. CF, Teo Ottola, who also serves as deputy CEO, will be acting as the interim CEO until Smith starts in the role.

"Konecranes has concluded the integration following the MHPS acquisition that took place almost three

years ago," said Christoph Vitzthum, chairman of the board, Konecranes. "The company is now ready for the next phase in its development, and for that I am pleased to extend a warm welcome to Rob Smith, who is a global leader with a track record in achieving market leadership positions through innovative business strategies, deep expertise in digitalization and strong customer focus."

Smith joins Konecranes from AGCO Corporation, where his latest position was been senior vice president and general

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Demonstrating safety in Latin America

CCCO took center stage in the demonstration area at the second CONEXPO Latin America, held October 2- 5 in Santiago, Chile. Working closely with the show organizer AEM, NCCCO shared how improved operator qualification and certification improves construction site safety.

More than 600 exhibitors spread themselves over almost half a million square feet of exhibition space, giving the 20,000 attendees an opportunity to view the latest trends in heavy machinery, equipment, technology, and innovations, and connect with other professionals and leaders in the industry.

The new Demo Area featured elements of the NCCCO Tower Crane Operator certification practical exam using a SAEZ TLS 65B tower crane and operator provided by Santiago based crane rental firm, M10. Practical exam demos were held four times a day to enthusiastic audiences. NCCCO Commissioner, Jorge Vial's Santiago, Chile-based companies Vial Equipment and CEOP Training furnished the test course, test weight and presenters for the demonstrations.

"These co-located educational and learning events brought additional value to the show, and we greatly appreciate their participation to share their



knowledge and expertise with attendees and exhibitors," said Fred Vieira, CONEXPO Latin America Show Director and AEM Director, International Exhibitions and Events.

"Although Latin America does not have any requirements for crane operator certification like those in the U.S., we've seen an obvious desire for higher worker qualification standards here," observed NCCCO Director of Operations, Joel Oliva. "Hats off to our partner AEM for showcasing NCCCO's approach to testing and certification as a proven way to improve crane safety."

NCCCO also participated in the inaugural CONEXPO Latin America in 2015. The show will now move to a three-year cycle, in line with other major industry events of its kind.

WHAT: Why Do Crane Accidents Happen? and How to Manage a Crane Accident WHEN: CONEXPO 2020, March 10-14 WHERE: Westgate Las Vegas, Nevada

> **REGISTER ONLINE:** nccco.org/ce2020save

in the event you are faced with a serious crane accident on your project. Very Ш П

often, the rescuers become victims themselves, or make things worse because they don't have a well-thought-out plan before starting the equipment recovery.

Participants will learn how to assist emergency first responders, discover how to identify and preserve evidence and develop techniques to safely recover and remove damaged cranes and equipment.

Crane accidents the focus of CONEXPO

How do you prevent crane accidents, and what do you do if you have one?

Two presentations slated for CONEXPO's Crane & Rigging Education Track to be held next March address those topics in turn. Taking the position that the best way to prevent crane accidents is to understand how they are caused, Jim Wiethorn, Ph.D, Chairman/Principal Engineer at Haag Engineering, will unveil the results of an ongoing study of almost 1,000 crane accidents over 25 years in his presentation *Why Do Crane Accidents Happen*? He will identify the primary reasons and underlying factors that result in crane accidents including crane turnover, dropped load and boom/jib collapse. The responsibilities of primary parties will also be explored.

But what do you do if and when a crane accident does happen? That's where Joe Collins, Heavy Lift Division Manager at Becht Engineering comes in. His session, *How to Manage a Crane Accident*, will provide information and procedures to ensure preparedness *before* something happens, and outline what steps to follow AMERICAN CRANES & TRANSPORT



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WLL (tons)	MODEL	ROPE SIZE (in)	A (in)	в	с	Е	E2	F	G	н	1	J	к	WT. LBS.
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5	HB8-2N	5/8	13.56	8	20.38	1.61	1.31	1.81	2.50	1.28	1.56	1.00	1.19	100
8.5	HB9B-2N	3/4	16.31	9	25.56	2.27	2.00	2.59	3.25	1.41	1.94	1.25	1.50	130
8.5	HB10B-2N	3/4	16.31	10	25.56	2.27	2.00	2.59	3.25	1.41	1.94	1.25	1.50	170
8.5	HB11B-2N	3/4	17.19	11	26.44	2.27	2.00	2.59	3.25	1.41	1.94	1.25	1.50	215
8.5	HB12-2N	3/4	17.19	12	26.44	2.27	2.00	2.59	3.25	1.41	1.94	1.25	1.50	265
8.5	HB13B-2N	3/4	18.19	12	27.44	2.27	2.00	2.59	3.25	1.41	1.94	1.25	1.50	330
10	HB13C-2N	7/8	22.06	13	32.81	3.02	2.75	3.00	4.25	1.66	2.84	1.72	1.81	363
10	HB13-2GN	9/16 - 1-1/4	21.84	13	32.59	3.02	2.75	3.00	4.25	1.78	2.75	1.25	2.00	363
15	HB13-2GGN	9/16 - 1-1/4	21.88	13	32.63	3.02	2.75	3.00	4.25	1.78	2.75	1.25	2.00	363
15	HB13D-2N	1	21.75	13	32.50	3.02	2.75	3.00	4.25	2.03	2.78	1.94	2.13	363
25	HB13E-2N	1-1/2	25.56	13	37.75	3.25	3.25	3.62	5.00	2.31	2.88	2.25	2.38	413
35	HB13F-2N	1-1/2	25.56	13	41.50	3.00	3.00	4.56	5.38	2.31	2.88	2.25	2.38	487
10	HB16-2N	7/8	24.56	16	35.31	3.02	2.75	3.00	4.25	1.66	2.84	1.72	1.81	600
10	HB16-2GN	9/16 - 1-1/4	24.34	16	35.09	3.02	2.75	3.00	4.25	1.78	2.75	1.25	2.00	600
15	HB16-2GGN	9/16 - 1-1/4	24.38	16	35.13	3.02	2.75	3.00	4.25	1.78	2.75	1.25	2.00	600
15	HB16B-2N	1	24.25	16	35.00	3.02	2.75	3.00	4.25	2.03	2.78	1.94	2.13	600
25	HB16C-2N	1-1/2	26.94	16	39.63	3.25	3.25	3.62	5.00	2.31	2.88	2.25	2.38	650
35	HB16D-2N	1-1/2	26.94	16	44.00	3.00	3.00	4.56	5.38	2.31	2.88	2.25	2.38	720
10	HB18G-2N	7/8	25.19	18	37.71	3.02	2.75	3.00	4.25	1.66	2.84	1.72	1.81	800
10	HB18-2GN	9/16 - 1-1/4	24.97	18	37.49	3.02	2.75	3.00	4.25	1.78	2.75	1.25	2.00	800
15	HB18GG-2N	1	24.87	18	37.40	3.02	2.75	3.00	4.25	2.03	2.78	1.94	2.13	800
15	HB18-2GGN	9/16 - 1-1/4	25.00	18	37.53	3.02	2.75	3.00	4.25	1.78	2.75	1.25	2.00	800
15	HB22GG-2N	1	29.25	22	40.03	3.02	2.75	3.00	4.25	2.03	2.78	1.94	2.13	1300
15	HB22-2GGN	9/16 - 1-1/4	29.38	22	40.16	3.02	2.75	3.00	4.25	1.78	2.75	1.25	2.00	1300
25	HB22H-2N	1-1/2	32.19	22	44.50	3.25	3.25	3.62	5.00	2.31	2.88	2.25	2.38	1400
35	HB22HH-2N	1-1/2	32.19	22	48.13	3.00	3.00	4.56	5.38	2.31	2.88	2.25	2.38	1450

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Rigger responsibilities

ASME offers clarification on Rigger safety standards.

SHA Standard 1926.251 outlines inspection criteria for rigging equipment used for material handling. The standards states: Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during its use to ensure that it is safe. Defective rigging equipment shall be removed from service.

The OSHA standard goes on to address everything from minimum sling lengths to safe operating temperatures; however, it doesn't provide clear answers to questions of Rigger responsibility, which fall upon not just the Rigger, but the Site Supervisor and Lift Director as well. For clarification on responsibilities, it's important to look to ASME.

The heavy construction industry has long relied on ASME standards to lessen the possibility of unclear liability in the event of incidents involving cranes or related equipment. ASME B30.5 is one of ASME's most-requested safety standards, and its role in the building, construction and crane and rigging industries is significant. As with most standards, B30.5 has evolved a number of times over the years. It's first iteration was published in 1968, and then revised in 1989. The latest version, released in 2018, contains a new section called Rigger Responsibilities.

Rigger responsibilities

Chapter 5-3 of ASME B30.5 states that riggers at a load-handling activity are (at a minimum) responsible for the following:

- Ensuring the weight of the load and its approximate center of gravity have been obtained.
- Selecting and inspecting the proper rigging equipment and ensuring said

THE AUTHOR



Bill Smith, executive vice president, NBIS, is an expert on risk management and safe crane operations. He was a member of C-DAC, which assisted writing the OSHA Crane & Derricks Standard.



The construction industry relies on ASIME standards to lessen the possibility of unclear liability in incidents involving cranes or related equipment.

equipment complies with the applicable ASME B30 Volume.

- Ensuring the rated load of the rigging equipment is selected and configured such that it is sufficient for the load to be handled.
- Properly attaching the rigging equipment to the hook, shackle,or other load-handling device.
- Ensuring the rigging equipment is protected from abrasion, cutting or other damage during load-handling activities.
- Rigging the load to ensure balance and stability.
- Knowing and understanding the applicable signals for equipment in use.
- Installing and using a tag line when additional load stabilization is necessary.

When it comes to a safe and successful lift, everyone must play their part. Having a new standard for Rigger responsibilities makes creating a culture of safety and properly managing your risk easier than ever. Make sure you've thoroughly read and reviewed ASME B30.5 and OSHA Standard 1926.251 and make sure your team has too.

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DUAL LINE TRAILER THP/DC TAILORED TO MEET AMERICAN REQUIREMENTS

THE VEHICLE AT A GLANCE

- Reduced transport time widening under load while rolling
- Safety first and foremost operation (widening, levelling, steering) via wireless remote control
- Low maintenance and long service life new ideas combined with proven ball bearing race ring technology

