INTERNATIONAL

AND ECIALIZED TRANSPORT

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SC&RA Annual Conference preview

Rope and winches

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OFFICIAL MAGAZINI

Industrial lifting

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NTERVIEW. Steve Filipov

LIEBHERR

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KHL CONTACTS

UNITED KINGDOM

KHL Group Southfields, Southview Road, Wadhurst, East Sussex TN5 6TP, UK. Tel: +44 (0)1892 784088 Fax: +44 (0)1892 784086 www.khl.com/ic

USA OFFICE KHL Group Americas LLC 3726 E. Ember Glow Way, Phoenix, AZ 85050, USA. Tel: +1 480 6590578

e-mail: americas@khl.com SOUTH AMERICA OFFICE

KHL Group Américas LLC Av. Manquehue Sur 520, of 205, Las Condes, Santiago, Chile. Tel: +56 9 77987493 e-mail: cristian.peters@khl.com

CHINA OFFICE

Reining Representative Office, Room 769, Poly Plaza, No.14, South Dong Zhi Men Street, Dong Cheng District, Beijing, PR China 100027. Tel: +86 10 6553 6676 or mail: etcherer 2014 e-mail: cathy.vao@khl.com

UK/GERMANY/SPAIN/AUSTRIA/ SWITZERLAND/NORDIC NATIONS Mike Posener, sales manager Tel: +353 (0)86 0431219 e-mail: mike.posener@khl.com

THE NETHERLANDS Arthur Schavemaker Tel: +31 (0)547 275005 e-mail: arthur@kenter.nl FRANCE/BELGIUM/LUXEMBOURG Hamilton Pearman Tel: +33 (0)1 45930858 e-mail: hpearman@wanadoo.fr ITALY Fabio Potestà Tel. +39 010 570/9/8

e-mail: info@mediapointsrl.it KOREA CH Park Tel: +82 (0)2 7301234 e-mail: mci@unitel.co.kr

TURKEY Emre Apa Tel: +90 532 2343616 e-mail: emre.apa@apayayincilik.com.tr CHINA

Cathy Yao Tel: +86 (0)10 65536676 e-mail: cathy.yao@khl.com JAPAN Michihiro Kawahara

Tel: +81 (0)3 32123671 e-mail: kawahara@rayden.jp USA/CANADA

Matt Burk Tel: +1 312 4963314 e-mail: matt.burk@khl.com

Bev O'Dell Tel: +1 816 8861858 e-mail: bev.odell@khl.com **MARKETPLACE**

John Austin Tel: +44 (0)1892 786245 e-mail: john.austin@khl.com



rom the ConExpo exhibitor list of well over 2,000 companies, I counted a good 200 relevant to people interested in cranes, other lifting and specialized transport equipment and services.

While I'd be happy to see all of them, and 10 percent of a total may sound like a small number, it is hardly anywhere even approaching a realistic proposition. I expect the same applies

to most of the visitors at this year's big international exhibition for the construction industry in the USA.

Many of the circa 200,000 ConExpo attendees will have a close focus and may only want to see one or two product types or manufacturers, with a view to buying something. The vast majority, however, will want to take a good look around at the often-spectacular displays of the latest and greatest equipment and services in general.

Most of "our" equipment at ConExpo will be grouped in a new outside area, called the Festival Grounds, so I may well bump into you there. If you are attending the show, to help plan your visit and better target who to see, we have produced our comprehensive show guide, in this issue, starting on page 20. My impression so far is that there will be fewer new cranes to see than usual but maybe there will be more that are still under wraps. I guess a positive from there being fewer of those is a potential for having more time to see other things.

One new crane definitely making its debut at ConExpo is Liebherr's LTM 1120-4.1 wheeled mobile telescopic crane. See our exclusive story on this new 120 tonne capacity four axle all terrain on page 13. It promises many developments and features to maximise capability within the constraints of a four axle carrier.

Someone you may well see at ConExpo is Steve Filipov, one of the most well-known faces in the industry. After 25 years at Terex he moved to Manitex late last year. Find out about him and his plans for the USA-headquartered international crane manufacturing group in our interview on page 30. The interview is courtesy of D.Ann Shiffler, editor at ICST sister magazine American Cranes & Transport and ACT deputy editor, Hannah Sundermeyer. If you are at ConExpo there is a good chance of seeing them there, too.

ALEX DAHM

Fditor





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Correspondence is welcome and should be sent to:

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New Liebherr AT THE MAGAZINE FOR EQUIPMENT USERS AND BUYERS

Brand new at the ConExpo show in Las Vegas next month will be this 4-axle Liebherr LTM 1120-4.1 wheeled mobile telescopic crane. See our exclusive report on page 13.

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FEATURES

EXCLUSIVE PRODUCT NEWS SPECIAL: 13 LIEBHERR ALL TERRAIN CRANE

Maximising performance from a four axle carrier is Liebherr's aim with its new 120 tonne LTM 1120-4.1 all terrain crane. Alex Dahm reports.

CONEXPO: SHOW GUIDE

All you need to know about the crane and transport exhibitors at this year's big show for the industry in North America.



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ICST presents its show guide.

INTERVIEW: STEVE FILIPOV

Steve Filipov is just getting his feet under the table at manufacturer Manitex. D.Ann Shiffler talked to him about what happens now.

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KHL TEAM

FNITOR Alex Dahm e-mail: alex.dahm@khl.com Tel: +44 (0)1892 786206 DEPUTY EDITOR Christian Sheltor e-mail: christian.shelton@khl.com NEWS WRITER Leila Steed GROUP EDITORS

Thomas Allen, Lindsey Anderson, Andy Brown, Steve Ducker, Mike Hayes, Fausto Oliveira, Cristián Peters, D.Ann Shiffler,

Euan Youdale WORLDWIDE CONTRIBUTORS Graham Brent, USA; Marco van Daal, Aruba; Heinz-Gert Kessel, Germany, Richard Krabbendam,

Netherlands; Tim Maughan, Japan; Brent Stacey, Australia; David Weston, UK

SC&RA CORRESPONDENTS Mike Chalmers, Tim Hillegonds **CIRCULATION DIRECTOR** Saara Rootes e-mail: saara.rootes@khl.com SENIOR PRODUCTION EXECUTIVE Anita Bhakta e-mail: anita.bhakta@khl.com PRODUCTION ASSISTANTS Charlotte Kemp e-mail: charlotte.kemp@khl.com Maria Clarke e-mail: maria.clarke@khl.com DESIGN MANAGER Jeff Gilbert EVENTS DESIGN MANAGER Gary Brinklow PRINT & DIGITAL DESIGNER Mitch Logue Jade Hudson

VP GLOBAL SALES Trevor Pease e-mail: trevor.pease@khl.com SALES MANAGER Mike Posener e-mail: mike.posener@khl.com Tel: +353 (0)86 043 1219 MARKETPLACE SALES John Austin e-mail · iohn austin@khl.com Tel: +44 (0)1892 786245 COMMERCIAL DIRECTOR Paul Baker e-mail: paul.baker@khl.com Alison Filtness e-mail: alison.filtness@khl.com Tel: +44 (0)1892 786212 CREDIT CONTROL Carole Couzens e-mail: carole.couzens@khl.com Tel: +44 (0)1892 786250

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Comment from Joel Dandrea, SC&RA executive vice president.

SC&RA NEWS

New technology in the transport industry will define the next decade. *Mike Chalmers* reports.

> **CIRCULATION & DATA MANAGER** Helen Knight e-mail: helen.knight@khl.com Tel: +44 (0)1892 786244 DIGITAL MEDIA DIRECTOR Peter Watkinson e-mail: peter.watkinson@khl.com OFFICE MANAGER Samantha Head Direct tel: +44 (0)1892 786201 e-mail: samantha.h ad@khl.com

EDITORIAL DIRECTOR Paul Marsden

PUBLISHER James King





HIGHLIGHTS

UK crane rental firm Ainscough Crane Hire has extended its fleet with a new Liebherr MK 140 mobile folding tower crane. The fiveaxle model has a maximum lifting capacity of eight tonnes and a maximum radius of 65 metres, at which it can lift 1.9 tonnes. Liebherr also provided training for 40 Ainscough members of staff at its Biggleswade, UK site. They were shown information about the model's technical design which Liebherr said would help them to look for new project applications.

David Phillips will retire as chairman of international construction research and analysis company Off-Highway Research, effective from 1st April 2020. Phillips has been a pivotal figure at the market research company since its inception as part of the Economist Intelligence Unit (EIU) in 1981. Following a management buyout from the EIU he owned and ran the business from the early 1990s until its acquisition by KHL Group in 2015.

Changes to Tadano rough terrain range

Japanese crane manufacturer Tadano has announced three new rough terrain cranes for the North American market: the GR-1000XLL-4; the GR-1000XL-4; and the GR-800XL-4.

The GR-1000XLL-4 and the GR-1000XL-4 will both lift 100 US tons (90 tonnes), while the GR-800XL-4 will have a capacity of 80 tons (73 tonnes). The GR-1000XLL-4 has a longer boom of 167.3 feet (51 metres) compared to the 154.2 feet (47 metre) boom length of its predecessor, the GR-1000XL-3. The GR-1000XL-4 and GR-800XL-4 will both have 154.2-foot (47 metre) booms.

The operator cabs have been redesigned for better visibility and comfort. Inside there is a new 10.4-inch multi-function colour screen touch-panel display which contains crane work information and operation settings. It can be operated when

BIRCH JOINS MAMMOET BOARD

Michael Birch, a director at ALE, has joined the executive board of Mammoet, the world's largest international heavy lifting and transport specialist.

His move follows the completion earlier in January of Mammoet's acquisition of ALE, a UK-based international heavy lift and transport specialist.

Birch has more than 30 years of experience in the heavy transport and lifting industry and was a director at ALE for more than 20 years. His wealth of experience includes business growth in developing markets with responsibility for global projects and fleet of record-breaking super heavy lifting equipment and cranes.

Mammoet's executive board is now composed as follows: Paul van Gelder, chief executive officer; Jan Kleijn, chief operating officer; Kees Voormolen, chief financial officer; Ivonne Verlinde, chief human resources officer; and Michael Birch, chief commercial officer.



Tadano's GR1000XLL-4 rough terrain crane

wearing gloves, said Tadano. The cab instrument panel shape, height, and angle of the glass face have also been modified, with the aim of improving visibility from the driver's seat. A 20-degree cab tilt function is incorporated for the first time. Tadano said this helps reduce operator fatigue when operating the cranes for long periods.

The GR-1000XLL-4 and GR-1000XL-4 both have Tadano's new Smart Counterweight system. It allows the operator to use two counterweight positions to increase capacity. Stability is also increased, by around 20 per cent, said Tadano. These are the first Tadano rough terrain cranes to have this system.

The new GRs have a winch drum monitoring camera as standard. It allows checking of the winding state of the wire rope when the crane is in operation. Cameras have also been installed on the rightfront and rear of the cranes to improve visibility while driving. A buzzer and a flashing icon, called Clearance Sonar by Tadano, notifies the operator if an obstacle is detected behind the crane. All these functions are part of Tadano's View System.

Engine-wise the new GR cranes use a six-speed transmission powered by a dual compliant Cummins EU Stage V / Tier IV B 6.7 with 280 hp (209 kW). When the crane is not being used for a certain period of time a pump disconnect function automatically stops operation of the crane's hydraulic pump with the intended aim of reducing fuel consumption.

Two tower cranes from the fleet of German crane rental, sales and service company BKL Baukran Logistik completed a two-year assignment conducting restoration work at the Linderhof Palace in the Bavarian Alps.

The cranes were a Liebherr 90 EC-B flat-top tower crane and a Liebherr 32 TTR fast erecting tower crane on crawler tracks. The 90 EC-B, with a hook height of 40 metres, a 50-metre radius, and a maximum load capacity of 6 tonnes, was installed directly behind the palace, while the 32 TTR, with a hook height of 24 metres, a 30 metre radius and a maximum load of 4 tonnes, was positioned in front of the palace. According to BKL, the 32 TTR's crawler chassis meant that it could be set up on sloping ground. Once in position, the cranes were then used to lift elements of the Palace's façade and waterfall, which weighed up to 3 tonnes.

Once the renovation work had been completed, BKL's Munich team dismantled the 90 EC-B using a Liebherr LTM 1350-6.1 mobile crane. The on-site conditions meant that the LTM 1350-6.1 had to be positioned on the opposite side of the building to the tower crane. It was used with a hook height of 55 metres and a 40 metre radius.

WORLD CRANE GUIDE 2019-20

The latest version of the most comprehensive crane reference guide in the world, KHL's World Crane Guide, is now available.

It is produced by International Cranes and Specialized Transport from data supplied by crane manufacturers and other sources to make it the definitive reference for equipment buyers and users in the crane and lifting industry worldwide.

GENRE: Directory

SECTOR: Cranes

- **PUBLISHED:** Dec 2019
- **NO. PAGES: 202**
- PRICE: £50.00 / \$80.00 / €60.00
- FORMAT: Print or digital This invaluable tool offers

industry professionals a comprehensive worldwide listing of cranes, related equipment and services, arranged by type and lifting capacity. It contains product information from more than 100 manufacturers in

the industry. To order your copy of the World Crane Guide go to the weblink: shorturl.at/ vAP06





Barnhart Crane to acquire Viant Crane

Tennessee, USA-based lifting, heavy rigging, and heavy hauling specialist Barnhart Crane and Rigging will acquire Viant Crane. Viant provides crane, rigging, logistics and transport services to the Northland and Midwestern United States where it works in the commercial, energy,



Viant will keep its name under Barnhart ownership

petrochemical and pipeline business sectors, among others.

As with other Barnhart acquired companies, Viant will keep its name. "The Viant team has built a strong brand that is well-respected in the marketplace. We would like to build on their accomplishments," said David Webster, Barnhart senior VP of operations.

Barnhart will purchase Viant's rental fleet of industrial and carry deck cranes, with capacities up to 22 tonnes, its rough terrain cranes, with capacities up to 150 tonnes, and its lattice boom crawler cranes, up to 330 tonnes, and its fleet of all terrain and truck cranes with capacities from 50 to 350 tonnes. Barnhart said the acquisition will further enhance its presence in the Midwest, where it already operates branches in Illinois, Indiana, Iowa, Nebraska, Michigan and South Dakota.

"Viant prides themselves on providing clean, professional, job-ready equipment manned by employees who are dedicated to safety, reliability and performance," added Webster. "The company is an excellent fit for Barnhart. Viant's customers will continue to receive the same quality of service as they have in the past with the added benefit of access to Barnhart's national network of locations, specialty tools, and a dedicated engineering department."

De Haan heads stateside

Dutch manufacturer of lifting blocks and wire rope and chain accessories, De Haan Special Equipment, has appointed a group of companies to represent it in the USA.

The seven companies will give De Haan representation across the country. It is the first time the company has had appointed sales and distribution representatives.

On offer will be hook blocks, snatch blocks, hooks, wire rope sockets and other rigging accessories. Crane owners, crane dealers and original equipment manufacturers (OEMs) will be target customers. De Haan forecasts that within four years it will have a market share of at least US\$7 to \$10 million.

After an initial meeting in October 2019 in the USA, the first representatives' day took place in January at De Haan SE in the Netherlands. As part of



The new US representatives for De Haan stand in front of a 1,000 tonne hook block at the company's headquarters in the Netherlands

its launch the company and its new representatives will be all present at the ConExpo exhibition in Las Vegas in March 2020.

In the picture, from left to right, are the new representatives (except where noted): Mark Romey; Jeroen Hut (De Haan sales manager); Dean Marriott; Joe Payne; Jeff Klitzing; Dirk Stamhuis De Haan commercial director; John Paul Payne; Joe Bridgeman; Fred Tugend; Tony Payne.

HIGHLIGHT

Brazilian crane rental firm Real Guindastes purchased an ATF 400G-6, manufactured by Tadano Faun in Germany. The 400 tonne all terrain crane will primarily be used in the mining and steel industries in the state of Minas Gerais. It is the first ATF 400G-6 sold into the Brazilian market.



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Mammoet CEO to open CATME conference

ICST is pleased to announce Paul van Gelder, Mammoet CEO, as the keynote speaker at the third Cranes and Transport Middle East (CATME) conference.

Van Gelder will open the third CATME on 7 October, at the Waldorf Astoria Dubai Palm Jumeirah hotel in Dubai, United Arab Emirates. It is the same prestigious venue as the last CATME, in 2018, attended by hundreds of crane and transport industry professionals.

CATME is an essential learning and networking event for anyone in the region's crane and specialized transport sector. Topics at the 2020 event will include improving health and safety in lifting and transport applications, productivity and fleet management, best practice

CRANES & TRANSPORT MIDDLE EAST CONFERENCE

and case studies from around the world.

Mammoet has recently further consolidated its position as the world's largest crane and transport company with its acquisition of fellow global specialist ALE. Van Gelder took the job in October 2017, after which a new board was appointed and a new strategy for future development has since been rolled out and implemented.

Following a distinguished career in the Dutch Navy, van Gelder returned to the civilian world in 2004. After a couple of years in the aviation industry he joined BP in the Netherlands as a maintenance manager. Soon after he was made project director and, at the end of 2007, he became managing director.

In 2010 van Gelder changed jobs again to become CEO of the national grid company in the Netherlands. After three years he left to troubleshoot a company in distress. A couple of years later he was approached by SHV, Mammoet's parent company, where he joined the board of sister company Eriks. In 2017 SHV asked him to join Mammoet.

For more details on CATME 2020 see: www.khl-catme.com

HIGHLIGHT

HTC Wolffkran, the UK sales, rental and service subsidiary of Switzerlandheadquartered tower crane manufacturer Wolffkran, has changed its name to Wolffkran Ltd. The company has also announced it is planning to move to new premises near Doncaster, Yorkshire, north of England, in 2022. The name change completes the integration of the UK crane rental business HTC Plant that was acquired by Wolffkran in 2015. The name change will have no effect on the management and organisational structure of Wolffkran Ltd., or the products and services it provides, Wolffkran said.



German crane rental firm Kran Saller, based in the Bavarian town of Deggendorf, used its five-axle, 200-tonne capacity Tadano ATF 200G-5 all terrain crane to erect a 60-metre cable car pylon in Tyrol, Austria.

Before erecting the aerial lift, the crane's first challenge was to reach the job site at the top of the Kaunertal Glacier – an altitude of 2,750 metres. The crane navigated inclines of up to 12 per cent along a road with 10 km of tight turns. The final route along to the job site was just a gravel path.

The approach was made easier, said crane manufacturer Tadano, due to the crane's flexible 12 counterweight system which meant that it could travel light with just one truck carrying the counterweight and base weights. Once at the site the crane had to be loaded with the counterweight and base plates before moving into position to work along the unpaved road.

The crane spent one month working on erecting the aerial lift pylon. The load comprised around 150 steel components, including two bars weighing 12.5 tonnes each. Conditions were tough at the top of the mountain, said Tadano, presenting snow and frost. In addition, work had to stop for two days due to high wind. The crane completed the required work safely.

Berry adds Böcker

Rental company Berry Cranes in the UK has expanded its mobile fleet with a new AK 52 truck crane from German manufacturer Böcker.

It lifts 12 tonnes and has a 52 metre aluminium boom. A 1 tonne load can be lifted to 34 metres and the outriggers can be set at different extension lengths to maximise capability in the available footprint. Its 14 metre hydraulic jib can lift 1 tonne extended horizontally. Conversion into an aerial work platform with personnel basket can be done easily and quickly without needing tools, the manufacturer said.

The AK 52 is mounted on a four axle truck chassis, unlike another AK 52, in the Berry fleet for the last year. That one is on a three axle chassis. On three axles it is in the 26 tonne category and 32 tonnes on four axles.

In 2008 Berry bought its first Böcker, the first AK 32/1500 in the UK. More followed, including the first AK 44/4000 into the country in 2010, followed by an AK 35/3000 in 2012, an AK 36/4000 in 2014 and an AK 46/6000 in 2016.

The new Böcker AK 52 for Berry Cranes



Felbermayr buys ten Demag City cranes

Austrian lifting and transport specialist Felbermayr is extending its fleet with an order for 10 new Demag City class cranes from manufacturer Tadano Demag.

All are the 45 tonne capacity telescopic boom wheeled mobile AC 45 City crane.

The first two units from manufacturer Tadano Demag have already been delivered.

Felbermayr said a key feature in the decision to buy was the

STS CRANES FOR MGTP

Marine container handler Montreal Gateway Terminals Partnership (MGTP) in Canada is extending its lifting capability at the Port of Montreal with the addition of four ship to shore (STS) container cranes.

The new cranes were made by Liebherr Container Cranes in Ireland. The safe working load limit of 65 tonnes under a twin lift spreader with an outreach of 55.38 metres, a span of 15.24 metres, and a backreach of 18.29 metres. The cranes can handle the largest container vessels currently visiting the Port of Montreal and are future-proofed to handle even vessels of up to 21 container rows across the deck. Delivery will be in the third guarter of 2021.



Montreal Gateway Terminals Partnership is expanding

crane's ability to telescope under load, both vertically and horizontally. "An invaluable advantage when used in buildings," the company said. Factory halls and city centres will be typical applications areas. In both cases, the crane's compact design is a major benefit, to make it manoeuvrable. Also impressive, Felbermayr said, was the infinitely variable Flex Base outriggers which allow the crane's outriggers to be extended as far as possible to surrounding obstacles, giving the largest possible outrigger base in any scenario.



SECH starts on UK harbour project

A new 350 tonne capacity crawler crane has been put to work on a project to expand Portsmouth Harbour in the UK.

Specialist rental company SECH is using its Kobelco CKE3000G crawler crane on its first major lifting and foundations contract, having arrived at the site by barge in November. It is the largest CKE series crawler working in Europe, Kobelco said.

The Knights Brown project is a £19 million (US\$ 25 million) investment in cruise and ferry facilities, including increasing the length of the cruise berth to accommodate ships up to 255 metres long. Bigger ships and more of them will help the port achieve its ambition of tripling the number of cruise passengers.

Transport to site from the SECH yard in Essex, south east England, was on eight



low loaders, with the first four taking the base machine, two crawler frames and carbody counterweight to Southampton docks on the south coast. After assembling the components with the help of a yard crane, the crane was driven onto a barge.

When the jib sections and counterweights arrived the crane's own rigging was used to complete the assembly. After a four hour tow to Portsmouth the crane was put straight to work.



Three more speakers have been confirmed for the second Tower Crane North America (TCNA) conference, covering tower crane business cycles, safe assembly and disassembly and industry forecasts.

The conference, which is organised by ICST magazine with event partner SC&RA, will be held in Miami, USA on 23 June, 2020.

Keynote speaker Mike Heacock, vice president, Americas sales – tower cranes at Manitowoc Cranes, will draw on his long experience in the market to discuss business cycles, and how key indicators from manufacturing, rental and end customers change throughout the cycle.

Also looking at business activity will be Kenneth Simonson, chief economist at Associated General Contractors of America. Simonson will outline the latest forecasts for construction activity.

Narrowing in on tower crane operations will be Mike Walsh, president of engineering consultancy Dearborn Companies. Walsh is an authority on tower crane engineering and safety and will discuss the highly topical subject of assembly and disassembly of tower cranes.

The three join six existing speakers already announced, namely Eduardo Estelles, Stephen Jehle, Michael Vlaming, Chris Smith, JR Moran. Other participants to be confirmed.

For more information, including contacts for sponsorship, delegate bookings and the conference programme, visit: www.khl-tcna.com



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JASO GROUP

Maximising what can be achieved within the constraints of a four axle carrier is Liebherr's aim with its new 120 tonne capacity LTM 1120-4.1 wheeled mobile telescopic crane. ALEX DAHM reports

> Liebherr unveils the 4-axie LTM 1120-4.1 wheeled mobile telescopic crane at the ConExpo exhibition in Vegas, USA, 10 to 14 March

Four out in front

anufacturer Liebherr will unveil its new LTM 11204.1 wheeled mobile telescopic crane on a four axle carrier at the ConExpo construction equipment exhibition in March.

The crane Liebherr describes as 'the most powerful 4-axle mobile crane ever' will be

CRANE DATA

WHAT: Liebherr LTM 1120-4.1, wheeled mobile telescopic crane on a four axle carrier MAXIMUM LIFTING CAPACITY: 120 tonnes MAIN BOOM LENGTH: 66 metres MAXIMUM HOOK HEIGHT: 94 metres ENGINE: 330 kW Liebherr inline 6 cylinder diesel to Stage V (Tier 4 or Stage III also available) GEARBOX: ZF TraXon launched at the vast US show which runs from 7 to 14 March in Las Vegas, Nevada. Its 66 metre telescopic boom, in seven sections (6 plus the base section), puts it on an equal footing with 200 tonne cranes, Liebherr said.

LIEBHERR

"There's nothing more on four," proclaims Liebherr's slogan for this new 120 tonner. It is said to break into the performance class previously the preserve of five axle cranes. Its boom is claimed as the longest ever on a four axle crane. It is at an advanced stage of development and testing with deliveries due to start in the third quarter of 2020.

The LTM 1120-4.1 will replace the 110 tonne capacity LTM 1100-4.2 introduced in 2009. That outgoing model set new standards in its class with its 60 metre boom and 10.2 tonne capacity on full boom. With its boom set at 60 metres to match the old one, the new crane is 18 percent stronger than its predecessor. The boom on the new one is ten percent longer, too.

In application

TM 1120-4

Capacity of the new crane is 9 tonnes with the 66 metre Telematik boom fully raised so it is good for tower crane erection and dismantling and putting up radio masts. Adding the lattice boom extensions increases hook height to 94 metres. A 64 metre lifting radius is achieved with a 7 metre lattice extension and the 10.8 to 19 metre double folding jib. An option on this is to have hydraulic adjustment between 0 and 40 degrees. There is also a 2 metre erection jib with a runner which can be swung sideways.

The LTM 1120-4.1 will sit in the range above the LTM 1070-4.2, LTM 1090-4.2.

»



Where it will really score is on jobs previously done with a five axle crane. By eliminating the logistics work of obtaining route permits and licensing associated with five axles, jobs can be done sooner, cheaper and with more flexibility. Reducing the axle count means better access to smaller spaces, on more congested sites.

A standard fitment is the VarioBase outrigger extension optimisation system. VarioBallast, a similar system for the counterweight, is an option. Fitting VarioBallast give a ballast radius of 3.83 or 4.77 metres. Radius can be reduced by 940 mm. In addition to getting into smaller spaces, it means a wider range of work can be carried out, without having to carry around as many slabs of counter weight.

A maximum of 31 tonnes of counter weight is available. Shifting it around can

give evenly distributed axle loads of 12, 13.5, 15 and 16.5 tonnes per axle. At 12 tonnes per axle, the crane includes hook block and 2.1 tonnes of counter weight. In countries where higher axle loads are permitted. At 16.5 tonnes per axle, 20 tonnes of ballast can be carried on board.

Global markets

The new crane is designed as a fully global model. Advantages regarding permitting with a four axle crane can be realised in Texas and some other US states, in Saudi Arabia, in France, Spain and other European countries.

Power for the entire crane is from a 330 kW, six-cylinder inline Liebherr diesel engine mounted in the carrier. Maximum torque is 2,335 Nm. The engine is designed to meet the requirements of the stage V emissions directive in Europe. It can also be built to comply with other requirements,



for example, Tier 4 in the USA or stage III for less regulated countries.

A TraXon gearbox from ZF offers benefits that include quieter running (lower than the ZF AS Tronic by 6 decibels) and high efficiency

at 99.7 per cent, the manufacturer said. Coupled with Liebherr's established Ecodrive programming fuel is saved and the Hillstart Aid makes hill starts easier.

Making savings

For crane operation the Ecomode function is now standard on Liebherr mobile cranes with a load-sensing control system. Engine output is matched to the level of demand from the crane's hydraulics to avoid unnecessarily high engine speed. It saves fuel and the machine operates more quietly overall.

Liebherr aims to get the most out of what can be achieved on a four axle carrier with its new LTM 1120-4.1



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José, engineer

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Largest Database of Cranes

Limited movement hit the majority of the companies in our index over the New Year holiday period. CHRISTIAN SHELTON reports

Festive freeze

ompared to the previous index period, only two companies showed any significant change between weeks 51 to 04. Unfortunately for both of them, Manitowoc and Terex, the change was more than ten per cent in a negative direction.

Manitowoc's shares reached a three-month peak on 27 December, since when the dominant overall trend has been decline. Company company president and CEO Barry Pennypacker has acknowledged "challenging market conditions" although the company has been actively attempting to counter this. In 2019, for example, it introduced ten new cranes to the market and it plans to debut six more new cranes at the forthcoming ConExpo trade show in Las Vegas, USA.

Traditionally, the company has enjoyed a strong presence in the oil and gas energy sectors. These markets have been quieter than in previous years but Manitowoc says a number of its cranes, such as the MLC300, MLC650, MLC16000, and Grove GHC telescopic boom crawlers are finding favour in the wind energy sector. Indeed, the company is promoting these cranes to the wind sector with dedicated attachments available.

The company will elaborate on its business fortunes in the next few days with the release of its 2019 full year statements. Terex is the other company to suffer a significant decline, of 11.6 %, compared to the previous period. Investor uncertainty has lingered following the sale of Terex's Demag brand to manufacturer Tadano and Terex's third quarter results for 2019 showed global sales for the company down by \$1 billion

Terex chairman and CEO, John Garrison, commented, "It has become clear that we are in a softening environment for industrial equipment. Demand in the major markets for aerial work platforms has declined, putting pressure on sales."

The company's fourth quarter and end of year results will be released on Friday 14 February (St Valentine's Day); perhaps these will help light the flames of desire among investors for the streamlined company.

At the other end of the scale, Japanese multinational Hitachi **Construction Machinery has** enjoyed an approximately sixmonth run of generally increasing share prices. Its latest financial report, however, highlights that although demand for construction machinery during the current term remained firm in Japan and North America, demand for construction machinery in Asia, India, Oceania, and other regions was lower than expected. This trend, it said, is expected to continue throughout the fiscal year. For the 12 months ending 31 March, 2020, the company has revised down its forecast demand for construction machinery.

FEBRUARY IC SHARE INDEX

STOCK	CURRENCY	PRICE AT Start	PRICE AT END	PRICE Change	% Change	PRICE 12 MTHS AGO	12 MTH % Change	
IC Share Index*		73.14	73.93	0.79	1.08	51.81	42.69	
Legacy IC Share Index**		269.35	259.67	-9.68	-3.59	250.31	3.74	
Dow Jones Industrial Average		28,455	29,160	705	2.48	23,288	25.21	
FTSE 100		7,582	7,617	35	0.46	6,788	12.22	
Nikkei 225		23,817	23,827	11	0.04	20,554	15.92	
Hitachi Construction Machinery	YEN	3,315	3,245	-70	-2.11	2,516	28.97	
Konecranes	€	27.15	28.69	1.54	5.67	27.38	4.78	
Kobe Steel	YEN	594	546	-48	-8.08	821	-33.50	
Liugong	CNY	6.61	6.61	0.00	0.00	6.62	-0.15	
Manitowoc	US\$	17.26	15.31	-1.95	-11.30	15.20	0.72	
Palfinger	€	28.45	28.70	0.25	0.88	28.45	0.88	
Sany Heavy Industry	CNY	15.49	16.03	0.54	3.49	8.33	92.44	
Tadano	YEN	994	984	-10	-1.01	1,112	-11.51	
Terex	US\$	30.33	26.80	-3.53	-11.64	28.10	-4.63	
XCMG	CNY	4.97	5.19	0.22	4.43	3.32	56.33	
Yongmao Holding	SGD	0.86	0.93	0.07	8.14	0.50	86.00	
Zoomlion	CNY	6.42	6.30	-0.12	-1.87	3.61	74.52	
*/CEbara Index 1 Jan 2011 100 **Largery /CEbara Index and April 2002 (uppl(17) 100								



EXCHANGE RATES – VALUE OF US\$ VALUE VALUE VALUE VALUE 12 12 MTH CURRENCY AT END CHANGE % CHANGE MTHS AGO % CHANGE AT START CNY -0.0709 7 0 1 0 6.940 -1.01 690 0.60 0.0066 € 0.8990 0.9056 0.8812 0.73 2.76 Yen 109.38 109.59 112.64 0.21 0 19 -2.71 UK£ 0.7682 0.7615 -0.0067 -0.87 0.7910 -3.73

Period: Weeks 51 to 04

The big one

All you need to know about the crane and transport exhibitors at this year's big show for the industry in North America.

ICST presents its show guide

urn your eyes to Las Vegas, USA, where next month we will see the ConExpo construction equipment exhibition. More than 2,000 construction industryrelated exhibitors will congregate to display their latest and greatest wares. From 10 to 14 March the city and its vast exhibition and convention centre will be awash with potential buyers of equipment, components and services, and everything in between.

If you get the chance any time during your visit you are very welcome to visit the ICST team at publisher KHL Group's booth in the Silver Lot 1-2, number S-5998.

An interesting event will be the Off-Highway Research Global Briefing on Wednesday 11 March. Speakers include Chris Sleight, Off Highway Research managing director, who will present the latest regional and global trends for the industry. He will be joined by Scott Hazelton, managing director at IHS Markit. Hazelton will discuss the underlying drivers for the equipment industry worldwide, and Alex Woodrow, managing director at Knibb Gormezano Partners, will discuss technical and regulatory changes.

Also worth a visit is the SC&RA booth. The world's largest association for the industry invites prospective and current members to rest, recharge and reconnect in the festival pavilion. Meet subject matter experts on crane, rigging, and specialized transportation and learn the latest developments on legislative and regulatory issues that affect your company. SC&RA will introduce two

EVENT DETAILS

WHAT: North America's largest construction trade show WHEN: 10 to 14 March 2020. WHERE: Las Vegas, Nevada, USA. HOURS: Tuesday to Friday: 09.00 to 17.00; Saturday: 09.00 to 15.00. **REGISTRATION:** To register for a badge, purchase education or to book a hotel room, see: www.conexpoconagg.com/visit/ registration-and-pricing. The early bird pricing deadline is 17 January 2020. The advance price deadline is 9 March 2020. Standard pricing begins 10 March 2020. STATISTICS: 2,800 exhibitors over an area covering 232,000 square metres; 150 education sessions; representation from 150 countries.

www.conexpoconagg.com

new programmes to help your company save money: The Property and Casualty Insurance Program and SC&RA's Retirement Solution (401k) Affinity Program.

SC&RA will show its new website and online learning opportunities, for example, the Bridge Hit & Accident Prevention course, as well as the soon-to-be released, Truck Crane and All-Terrain Crane Boom Dolly Best Practices course. Remember to have your team attend any or all of the 16 education sessions sponsored by SC&RA and their





partners. A full list is available at scranet.org/ConExpo

The National Commission for the Certification of Crane Operators will have its Lift Safety Zone with certification exams, education sessions, and practical examiner training. Also find out about the new NCCCO app and progress with testing in languages other than English.

So this year's show is shaping up well and the mood is buoyant among exhibitors and prospective attendees. If you are making your way there this year then our comprehensive guide to what is new and interesting in the world of cranes and transport should prove useful. Make sure your shoes are made for walking, roll up this magazine, stick it in your back pocket and head out there.

What follows is a roundup of news from manufacturers and service providers, large and small, relevant to our industry.

A version of this guide will appear online at www.khl.com and include a full list of exhibitors with their booth numbers.

Wheeled mobile cranes

Having set up in Virginia in 1970 LIEBHERR celebrates 50 years in the USA in 2020. It will have around 30 machines on display. Cranes on show include the 110 tonne capacity LTM 1110-5.1 on five axles and the 700 tonne LTM 1650-8.1, both of which were introduced in April 2019. The eight axle 700 tonner can be had with 54 and 80 metre main booms.

A brand-new crane making its debut will be the 120 tonne capacity LTM 1120-4.1. It is designed to maximise what is possible on a four axle carrier. For full details see our exclusive product news special story in this issue on page 13, at the end of the news.

CONEXPO SHOW GUIDE

Liebherr's new 120 tonne LTM 1120-4.1 wheeled mobile telescopic crane is featured on page 13



Demag AC 45 City on show in the USA for the first time



DEMAG all terrain cranes shown in North America for the first time will be the 45 tonne AC 45 City and the 300 tonne capacity AC 300-6. An existing model on show, the 3-metre wide AC 220-5, is 14.49 metres long, making it the most compact crane in the 220 tonne capacity class, the manufacturer said. Its 78 metre boom is touted as the longest main boom of any 5-axle crane on the market. It is designed to remain under a 12-tonne axle load limit with a payload of up to 600 kg. Also displayed will be the improved four axle 100 tonne capacity AC 100-4L. It incorporates features to increase lifting capacity, especially when working at steep main boom positions.

USA-headquartered manufacturer MANITOWOC said it will unveil six new cranes and show four models for the first time in



North America. The new cranes will be from Manitowoc, Grove, Potain and National Crane. Manitowoc said the new cranes reflect the company's improved product development cycle. At the time of writing no further details were available.

Cranes on display will include the Grove GRT9165 rough terrain, GMK5250XL-1 all terrain, TMS500-2 truck mounted crane, and a GHC140 telescopic boom crawler crane. The Potain Hup M 28-22 self erecting tower crane with a US-specific transport axle will be shown as will the National Crane NBT60L boom truck.

In the all terrain range, TADANO will show its 100 tonne capacity ATF 100-4.1 and the 120 tonne capacity ATF 120-5.1. Both models use the same 60 metre main boom. The five axle 120 can travel on public roads at just under 10 tonnes per axle – at a total weight of 48 tonnes, which Tadano

> says is unique in its class. From its rough terrain crane range Tadano will show two models, the recently upgraded GR-150XL-3 and GR-800XL-4. With a 78.7 foot (24 metre) boom, a tail swing radius of 4.1 feet (1.25 metres) and asymmetric outriggers, the

GR-150XL-3 was designed to cope with the obstacles of urban environments and congested plants. The 15 ton capacity compact RT has improved single line operation capacity of 7,050 pounds (3.2 tonnes); the longest boom in its class and a 97.4 foot (30 metre) maximum tip height; 360 degree swing cab; new cab; new generation crane control system (AML-E) and added cameras, including rear view and left front.

With a capacity of 80 tons and a boom length of 154.2 feet (47 metres), the GR-800XL-4 has a gross vehicle weight of 99,800 pounds (45 tonnes). It has more capacity than the previous GR-750XL; the longest boom in the 80 ton class and a maximum tip height of 211.3 feet (64.4 metres); a new cab design with 20 degree tilt; a new generation crane control system (AML-E2); and three new cameras, including one on the winch, a right front camera and a camera for reversing.

China's XCMG will show a truck mounted crane in the shape of the XCT40U, which was shown at the previous ConExpo in 2017. It is mounted on a T880 universal chassis from Kenworth and the second axle is a steerable lift axle. Axle load requirements of different

Manitowoc's booth at the last ConExpo in 2017



Franna AT 22 pick and carry crane is new to the US market

US states can broadly be met, the company said.

TEREX FRANNA



will make its North American debut with its mobile pick and carry crane line from Australia. On show will be the AT 22, a mid-sized, mobile pick and carry crane with

Tadano's GR-800XL-4

a lifting capacity of 24 tons (22 tonnes) at a radius of 4 feet 7 inches (1.2 metres). It offers a maximum hook height of 55 feet 9 inches (17 metres).

LOAD KING will show its 80 ton (73 tonne) capacity Stinger on a Kenworth T880 chassis. The crane has a six-section, 160 foot (49 metre) full power boom. It has a new doublekeel design which is lighter and stronger than the old four-plate box boom it replaced. Two single-stage cylinders provide two different operating modes: one focused on stability, and the other for structural capacity, making a better chart throughout, Load King said.

This new crane also introduces a brand new 58 foot (17.7 metre) bi-fold lattice swingaway jib, making the maximum tip height 228 feet (69 metres). The crane will set up





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02



CONEXPO SHOW GUIDE



faster at the jobsite due to increased speed of the outriggers. The crane retains the modern tilt-cab from the 80-126 model, previously known as the (Terex) Crossover 8000.

A highlight from MANITEX will be its 2485T tractor-mounted boom truck. It lifts 24 tons (21.8 tonnes) has an 85 foot (26 metre) boom. The display of Manitex MAC articulating cranes will feature the MAC 38.5 and MAC 65, plus the MPL74 wallboard delivery system. Manitex Valla will show its V80R and 25EL electric industrial cranes.

ELLIOTT EQUIPMENT COMPANY will introduce a new 40 ton (36 tonne) capacity truck mounted crane. The 40142 has a 142 foot (43 metre) main boom with 152 foot (46 metre) tip height. Including the jib gives a 207 foot (63 metre) tip height. With the optional work platform the reach is 210 feet (64 metres).

Its user interface has a touch screen and the machine includes LMI and Bluetooth diagnostics so users and technicians can remotely access the machine to troubleshoot and make adjustments. Another feature is a tilting cab optimised for visibility, ergonomics and low cost of ownership, Elliott said.

Crawler cranes

DEMAG will show its CC 3800-1 lattice crawler for the first time in North America. Capacity is 715 tons (650 tonnes) at a radius of 39 feet (11.9 metres) and its maximum load moment rating is 9,152 tonne-metres. It can be used to erect wind turbines with a hub height of up to 384 feet (117 metres) without the need for a superlift system.

A Boom Booster capacity enhancement kit is available, increasing the main boom's



stiffness and boosting capacity by up to 30 percent. Boom Booster kit lengths are between 79 and 276 feet (24 and 84 metres). With maximum Boom Booster, the CC 3800-1 can reach a hook height of 571 feet (174 metres) and lift 88 tons (80 tonnes).

Strong charts and low cost transport worldwide are the main features of Liebherr's new 880 US ton (800 tonne) capacity lattice boom crawler crane. The manufacturer said it is the most powerful 3 metre crawler on the market. LR 1800-1.0 is designed for use with a luffing jib and derrick system, for example, power plant construction and petrochemical industry projects. Boom section dimensions are such that three sizes can be inserted one inside the other to reduce transport volume. Another feature is the derrick ballast with a VarioTray.

Another LIEBHERR on show, in the 200 tonne category, is the HS 8200 duty cycle crawler crane, based on its predecessor, the HS 895 HD. Its new drive system design gives a 15 % increase in drive system efficiency. Lifting capacity is also up by as much as 15 %.

In the telescopic boom crawler crane segment US manufacturer LINK-BELT will unveil its TCC-800. For exclusive news on this see the February issue of ICST sister magazine American Cranes & Transport.

TADANO MANTIS will exhibit the new GTC-1600, a 160 ton (145 tonne) telescopic »





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boom crawler that expands the GTC product line to six. It has a 6-section, 42.8 foot to 200.1 foot (13 to 61 metre) hydraulic boom. There is a 33.8 foot to 59.1 foot (10 to 18 metre) bi-fold jib with offsets at 0, 20, and 40 degrees. Jib length of up to 105 feet (32 metres) is possible with two 23 foot (7 metre) optional lattice inserts, giving a maximum tip height of 305 feet (93 metres). An optional 11.8 foot (3.6 metre) heavy lift offset jib is available for tiltup work.

Moving down the capacity scale, Italian manufacturer JEKKO, via North American dealer Fascan, will show its 21.5 tonne capacity JF990, which it calls a "real evolution." Dimensions are 6.75 x 2.14 x 3.45 metres, vertical reach is 41 metres and horizontal outreach is 38 metres. It is claimed to be is easy to transport and use.

Also shown will

be the flagship model, the SPX532, which lifts 3 tonnes and reaches 17.3 metres on the full main boom and jib. Others to see include the SPX429, SPX527 and SPX1275.

In a similar size range MAEDA will have four new models, including the new generation MC285-3 with multi-angle outriggers, wireless remote control, new generation touch screen moment limiter, and a removable electric motor package for maximum versatility, all the while maintaining single doorway access to buildings.

Tower cranes

Europe-headquartered international tower crane specialist ARCOMET, part of the Uperio Group, will be exhibiting at ConExpo for the first time in its 64-year history. Its primary focus will be its A50 Eco self erecting tower crane which it builds in Belgium. Arcomet cranes are available in North America from P&J Arcomet. Self erecting tower cranes offer many advantages over both mobile or truck cranes and conventional tower cranes, Arcomet said.





The Maeda MCO90 mini crawler fits through standard doorways

> Manufacturer WOLFFKRAN will show its new Wolff

166 B US luffing jib tower crane. It is designed to meet US electrical standards and all requirements regarding structural components. Instead of a conventional rope

and winch luffing gear it has an hydraulic mechanism. This eliminates the classical tower top and reeving of the luffing rope, Wolffkran says. Another benefit is a smaller out of service radius.

Capacity of the 166 B US is 26,460 pounds (12 tonnes) in two-fall operation and 13,230 pounds (6 tonnes) in single-fall. Jibs are from 82 to 180 feet (25 to 55 metres) and can be extended in 16.4 foot (5 metre) increments. With a 164 foot (50 metre) jib it achieves a best-in-class tip load capacity of 7,270 pounds (3.3 tonnes) the company claims. Its 60 kW





hoist winch gives a line speed of 377 feet/min (115 m/min).

Spanish manufacturer JASO will show its J265PA luffer. New to the US market, it offers a maximum line speed of 366 m/min and can be set freestanding up to 312 feet (95 metres). Features include a clamp type secondary brake system on luffing, an optional secondary brake on the hoist; a reduced free slewing device and park radius system, slack rope detection and a load levelling system.

COMANSA will have its LCL310 luffing jib tower crane with the new Cube cab. Three versions are available, with capacities of 12, 18 and 24 tonnes. Maximum jib length is 60 metres, adjustable in 5 metre increments. The company says it is a compact design with reduced out-of-service position making it ideal for use in cities or congested jobsites.

LIEBHERR will show the 340 EC-B flat top tower. Capacity is 26,450 pounds (12 tonnes) and maximum radius is 256 feet (78 metres). Maximum hook height is 301 feet (84.7 metres). Three models in the range first shown last year are optimised for the use of synthetic fibre hoist rope.

New in Liebherr's fast erecting crane range is the 17,630 pound (8 tonne) capacity range-topping 125 K. Its maximum lifting radius is 180 feet (55 metres) and maximum hook height is 215 feet (41.5 metres). Civil engineering projects, for example, road traffic bridges, commercial and industrial building construction are expected applications.

Transport

GOLDHOFER's STZ-P 9 highway semitrailer has a loading length of 90 feet (27.4 metres) and 3x3 pendular axle bogies. It has hydromechanical steering up to an angle of 60 degrees. Suspension stroke is 23.6 inches

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(600 mm). The STZ-P 9 was designed to handle narrow roads with tight bends as well as uneven and potholed road surfaces. The rear bogie can be retracted under load making it possible to reduce the length of the vehicle as required and then use a tractor to re-extend it. That makes it possible to negotiate obstacles and tight bends in, for example, city centres. The hydraulic axle compensation of the STZ-P 9 is designed for easy loading and unloading with a wide range of cargos, with or without the use of a crane. Also, axle spacing between the bogies can be adjusted for operations in locations where different approval regulations apply.

NELSON MANUFACTURING will unveil its NextGen boom launch trailer, which includes hydraulic suspension and eight lines of kingpin steering axles. Axle spacing is configured to allow up to 20,000 pounds (9 tonnes) per axle and is legal in California. Nelson said this trailer will eliminate the need for removable stinger axles and front jeeps for the larger cranes, greatly reducing the launch and trailer set-up time.

The trailer will include Nelson's "Boots on the Ground," option allowing the operator to side shift the front trolley and pin to the front of the boom via a wireless remote control. The outrigger levelling legs are also on the remote control to allow the operator to position him or herself as needed. The new NextGen can be configured to handle multiple different crane booms and configurations, and it provides storage space for various boom saddles and adapters to remain on the trailer deck.

SCHEUERLE will show its new SPMT PowerHoss, which replaces the previous designation of SPMT Light. The SPMT PowerHoss is compact and has a high payload with four axle lines and a diesel drive. Payloads of up to 86 or 176 tons are possible

CONEXPO SHOW GUIDE



with two or four axle lines. The top of the platform has fastening points to fix special transport stools for long material transport, and it is available with either diesel or electric power drive.

LANDOLL CORPORATION will show a new option for its 400 series travelling axle and 900 series Traveling Tail trailers, namely air disc brakes. Air Disc 17 brake system has been integrated with a new custom air ride suspension. The collaboration between Dexter Axle and Landoll has developed a whole new system designed from the ground up.

TALBERT MANUFACTURING will feature a 3+3+2 configuration, raised-centre version of the 65SA modular trailer. It has a 28 foot (8.5 metre) deck and is rated for 65 tons (59 tonnes) in a 13-axle configuration. Capacity increases to 70 tons in 15 feet (64 tonnes

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CONEXPO SHOW GUIDE



in 4.6 metres) with a 4-axle close-coupled configuration. The trailer can also be designed to accommodate an additional 10- or 15-foot (3 or 4.6 metre) section of deck, from beam to drop side.

It is engineered for customised axle configurations, including 2+3+2, 3+3+2. Adding a tri-axle jeep allows 3+3+3. With a 60.5-inch (1.5 metre) axle spacing, as well as an airlift on axle 3 and a chain lift on axles 1, 2, 4 and 5, the trailer is capable of running with 3, 4, or 5 axles in a row without a booster.

The base model offers a 120 inch (3 metre) swing radius with connections for up to 70 inch (1.78 metre) gooseneck extension and can be custom-designed to provide a larger swing radius if necessary.

Talbert's E2 or E3 Nitro axle extension can also be engineered into the design. It uses a combination of hydraulic fluid and nitrogen to equalise axle pressures, providing proportionate weight distribution of each axle grouping. It optimises the range of suspension movement, which minimises stress and provides a smooth ride. In addition, the ENitro system features a bearing pivot and pivot lockout for backing the trailer. Users can also hydraulically lock in axle loads regardless of the terrain.

TRAIL KING will show a perimeter expanding frame trailer. Designed for multiple load configurations, the trailer expands from 12 to 20 feet (3.7 to 6 metres) wide. The TK160

is decked out with hydraulic hat boxes on front and rear goosenecks which allows navigation of unpredictable terrain. Trail King will also be launching updates to its travelling trailer series.

Industrial lifting

SHUTTLELIFT will debut its Shuttlelift DB Series rubber tyred gantry crane as well as its new E-Series electric RTG cranes. These cranes eliminate emissions at the point of use while maintaining lifting power.

A highlight from ENERPAC will be the lifting display with cube-jack selfcribbing lifting system. Another will be a puller display with lock-grip pullers

and sync-grip pullers. Tools for construction equipment repair include hands-on displays showing high force tools in action. A bucket maintenance display will demonstrate the Mirage line boring machining for pin hole refurbishment, nut cutter tooth replacement and metal straightening using the MS2-1020 maintenance set. A vehicle maintenance display will demonstrate track bolt tightening and loosening using an hydraulic torque wrench and slew-bearing facing with Mirage portable facing machines.





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After 25 years at Terex **STEVE FILIPOV is still getting** his feet under the table at US crane manufacturer Manitex. which owns Italian crane brands PM and Valla, D.ANN SHIFFLER, editor at sister magazine American Cranes & Transport (ACT), asked him about what happens now

A whole new

ell-known industry figure Steve Filipov spent 25 years at Terex. Early in 2019 the news broke about crane manufacturer Tadano acquiring Demag from Terex. During the Bauma exhibition in April, the German tradeshow grounds were humming with conversations about what the future had in store for both companies. Speculation was rife about whether Steve would stay at Terex, move with Demag or go somewhere else entirely. It was several months later when Filipov made the news again as he announced his move from president of Terex Cranes to chief executive officer and director at Manitex International.

While he has always been a man in high demand, Filipov attributes the move from Terex to Manitex to the right timing and a little bit of destiny. He has hit the ground running, concentrating on aligning the company's core competencies. Much of his time there has been appointing dedicated teams for the branches of the business. As a fresh set of eyes coming in, he has maintained synergy across the many facets of the company while also paving the way for growth across the board.

Refocusing, expanding and innovating. These three words resonated throughout our conversation with Filipov. He has big plans for Manitex, both in the North American market and globally. Among other things, Manitex makes boom trucks and owns Italian crane manufacturers PM articulating (knuckle boom) hydraulic cranes and Valla, which makes industrial vard cranes.

> Personable and knowledgeable, Filipov leaves a legacy wherever he goes. When speaking to shareholders, he is often on the receiving end of the guestion, "What's next and

how do we grow the company?" While he has no plans to purchase what is left of Terex right now, he strongly believes he has everything that he needs to grow Manitex. Every day the company takes a step forward and does something a little bit differently, he said.

"Of course, we'll make mistakes," said Filipov. "But we are going to try to do things differently and change the game where we can."

Self-aware, energetic and intelligent, Filipov is equipped with the prowess and expertise needed to turn Manitex into a global business. With years of industry experience under his belt and an eagerness to keep Manitex innovative and productive, the future of the company looks bright. We think you'll be equal parts impressed and interested to learn what he had to say.

ACT: HOW DID IT EVOLVE THAT YOU LANDED AT MANITEX INTERNATIONAL?

Steve Filipov: That's a good question. It was not predicted. As you can imagine, I get calls all the time which has been encouraging, but [at Terex] we were so focused on getting the Demag transaction closed, that I passed on a few opportunities. Getting the transaction closed and keeping the business stable was my number one focus. Once it closed, it was time to exit Terex and to put together my bucket list.

Terex treated me right. They were a really great company to work for 25 years and I had some time in front of me to think about what I wanted to do. My first priority was to take time off, which I did not do very well.

Dave Langevin [Manitex chairman] and I have known each other for over 20 years, and he called me about the CEO role at Manitex. I asked him to wait a little bit but I quickly saw a great opportunity in front of me. Dave has done a great job in cleaning up the portfolio and strengthening the balance sheet. When I looked at the opportunity, I felt it was right

Of course we'll make mistakes but we are going to try to do things differently and change the game where we can.

Steve Filipov, Manitex CEO

chapter starts

in my strike zone. The Manitex business is running well, but some other businesses needed more focus.

My global experience is really where I can help, and that's where we came together. But at the end of the day, it's a little bit about destiny, as I can hit the ground running, knowing the crane business, the customers, and have had public company experience the last 25 years. Dave has given me 100 percent freedom to take it to the next place – a much bigger Manitex business. Clearly, we can't change the end markets. It's going to be a challenging market for the next couple of years. That said, we have great opportunity to grow our Italian business and leverage the strength we have in our North American Manitex business.

WHAT WILL BE YOUR PRIMARY FOCUS?

Growing the business. The first thing I noticed when visiting our Italian operations was that we had to refocus on our core competencies. We needed a dedicated team in each of our businesses to drive accountability and focus. The knuckle boom crane and truck mounted aerial business have completely different end markets and distribution channels but had been merged. I separated them, and each now have dedicated teams with shared back office functions to keep costs down.

I'm also spending a lot of my time outside North America. I have asked Steve Kiefer to keep focused on our North American operations, so I can spend more of my time with PM, Oil and Steel and Tadano to grow our business internationally.

The other focus is manufacturing excellence. I have seen a lot of opportunity to streamline and improve things like quality, cost and delivery in our operations. Sometimes you have a lot of things going on, and it takes a fresh set of eyes to look at things differently and challenge the team. A perfect example of this was on my first visit to our Georgetown facility, I noticed some areas where we could be better organised on the shop floor. The team quickly picked up on my observations and started to drive change.

Another good example is what we did with MAC. For us to bring PM as a separate brand is crazy. Clearly, Manitex has a great brand in North America and has a facility that we can leverage to produce and assemble product. We put in place a dedicated team, as it is a different market, a different manufacturing process and a completely



different sales process. There's a pretty big difference between selling a 50 tonne-metre knuckle boom crane and selling a 50 tonne boom truck.

BETWEEN MANITEX BOOM TRUCKS AND THE OTHER BRANDS, THERE'S A LOT TO THINK ABOUT.

You are right! We have a lot of opportunity. Take the Valla product. I'm really excited about it. We have all known the Valla brand for decades. We're going to put more focus on it. It's not a huge number of cranes, but it's a very good specialized crane business that will diversify our portfolio. I started to really gain interest in it when I visited our Crane and Machinery team in Chicago. We put a few small 2.5 ton electric cranes in our rental fleet, with a special application for installing windows in large buildings with a remote control. I started to look at the returns and the utilisation of the product, and see a great rental opportunity going forward. We now have over a dozen in North America, and are continuing to grow our fleet, so imagine the potential later down the road.

We also recently signed up a couple of nice orders for a rental business in North America, an order from our dealer Empire Crane for New York and an order in Qatar. Valla's Zero emission compact cranes have much more opportunity. Again, it's all there. When you look at the PM business, there hasn't been a lot of focus on it. So, I've been spending a lot of time and effort on it.

WHAT MORE CAN BE DONE TO IMPROVE THIS PRODUCT LINE IN TERMS OF QUALITY, PERFORMANCE, PRICE AND LONGEVITY?

We need to do all of these and it all starts with quality. I have spoken to many customers and we can do better with our quality, but I did not hear about anything that I do not think is fixable. We are going to start with improving our final test process and implementing metrics like defects at the end of the line and defects in the first 30 days.

Getting this feedback will help us understand where we need to focus our efforts. We must be focused on our costs. We buy 70 percent of what we build, and we have much more opportunity to take cost out of our products. We need to be relentless in the pursuit of getting the best quality, at the right time, and at the best price.

CAN BOOM TRUCK SALES BE TAKEN ANY FURTHER GLOBALLY?

The boom truck market outside North America is fairly limited. We will look at opportunities, but not right now. We need to

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continue to strengthen the Manitex brand in North America and continue to develop new products. The market here has stabilised but it is a much smaller market than knuckle boom cranes. We are currently around 1,000 boom trucks sold in North America and the global market for knuckle booms is over 50,000 so you can see where the market potential really is.

IT'S A CONEXPO YEAR. WHAT CAN WE EXPECT IN NEW PRODUCT DEVELOPMENT?

We had an opportunity at ICUEE to show some of that, as it's a much smaller show, and much more focused on rental and utility. I think ConExpo gives us more of a global Left: Filipov believes his global exerience will help drive the Manitex business forward Below: Manitex's Valla brand holds a lot of opportunity, says Filipov



exposure. We're going to have MAC, new stick boom products and show some new industrial cranes. We're also going to have the A62 and Oil & Steel product there.

I think it's going to be an opportunity to show the breadth of the portfolio we have and start to change. I'm trying to change the perspective of customers and investors and show that we are much more than just a stick

INTERVIEW: STEVE FILIPOV

boom crane business. Manitex definitely has the potential to grow in North America with product we can assemble in Georgetown, Texas, and Winona, Minnesota and in turn we can leverage those facilities. But our facility in Italy also has the potential to be much bigger.

WHAT IS YOUR BUSINESS PHILOSOPHY?

We say, we do. Whether to customers or external shareholders, we need to have the credibility that people will trust we will get the job done. If a crane is planned to be delivered on a specific day, we need to make it happen. We need to fix problems and continue to challenge the status quo. I try to spend time with the team and make sure we are making a difference every single day. What did you do today to change the future of Manitex? If we all make a small change every day, it means a huge change over time. Everyone needs to do their part and be accountable.

I have learned that one of the greatest gifts we can ask for is feedback, so I like to spend time with customers and understand what we are doing right, and what we need to do to improve. I'm passionate about what I do. If I wasn't passionate, I wouldn't have stayed with this business. It is hard work and a very competitive market but you have to have fun while doing it!



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SPECIALIZED TRANSPORT NEWS

New Cometto 1.000 tonner

Self propelled trailer manufacturer Cometto has launched the Eco1000. a 1.000 tonne capacity transporter system with integrated power packs.

It is available in modular units and is intended for in-plant transport projects. "The connect and drive principle allows quick and easy connections of several vehicles up to a payload capacity of 1,000 tonnes," explained Alessandro Giordano, Cometto product manager.

It is available as a 2-axle type with two driven suspension units, as a 4-axle type with two or four driven units, as a 4-axle type with two or four driven units as a long frame, and as a 6-axle type with four driven suspension units.

"Up to four units can be combined together with interchangeable components, different power pack technologies and a wide selection of accessories," added Giordano. Arranged side by side, two vehicles of the same length and engine can be combined. As end-to-end combinations, units of different length can be combined. Each vehicle has quick couplings to link two vehicles together.

Units in the new Ecol000 powered heavy transporter system from Cometto can be combined to carry up to 1,000 tonnes

The Eco1000 can use a combination of traditional hybrid and electric propulsion. "Our hybrid solution is the first technology to be implemented in this specific transport sector,"said Giordano.

The hybrid technology enables the performance of a traditional engine to be combined with the cleanliness of an electric motor. In addition to using a charging station, the lithium battery can be charged while driving using energy recuperation technology. The power pack unit is designed for applications where there is a mix of indoor

and outdoor use, where fully electric operation is only needed for working indoors. Eco1000 has an hydrostatic drive system for precise and progressive movement in all directions,

Cometto said. Power regulators in the system allow the maximum available torgue to be exploited. The suspension stroke through its full range of travel is 700 mm. Steering is through +135 / -135 degrees.

A new radio remote control system is used which allows full synchronisation even when different Eco1000 families are mixed in the same convoy, the company said.

Third Methanex plant contract for Mammoet

Utrecht, The Netherlands-headquartered heavy lift and transportation company Mammoet has been awarded a heavy haul and levee crossing contract as part of the construction of Geismar 3 methanol plant in Louisiana, USA, owned by Canadian methanol producer Methanex. Geismar 3 will be built next to Geismar 1 and Geismar 2 and is expected to produce 1.8 million US tons (1.6 million tonnes) of methanol annually.

Mammoet said it will receive all oversize and overweight breakbulk cargo over 100 tons

SARENS TRANSPORTS A 1,050 TONNE SPLITTER 47 KM

Kazakhstan Petrochemical Industries (KPI) commissioned Belgium-headquartered international heavy lift and transportation specialist Sarens to transport a large propylene splitter, weighing 1,050 tonnes, a distance of 47 km in Kazakhstan for use at a new gas-chemical complex.

The splitter, which measured 105.3 metres long, 9.78 metres wide and 11 metres high, was transported using 64 axle lines of SPMT which, Sarens said, moved at a speed of 3.5 km/h. Various obstacles along the route, including power lines, traffic lights, lamp posts, road signs, rail lines, gantry gates and traffic, were navigated safely.

In addition, highways along the route had to be partially closed and a diversion made around a highway bridge that could not support the splitter's weight.

🔠 A video of the job can be seen here: shorturl.at/pCDKY

that will need barge transportation to reach the site. It is also responsible for the barging, unloading and final inland transport, which is just under a half-a-mile to the staging area.

Robert Roest, Mammoet commercial manager for special projects, said, "This will be phase three of the continuing relationship between Methanex and Mammoet for the Geismar facility. Phase 1 and Phase 2 had their challenges but, by taking an active interest in our client's success, great outcomes have been realised."

Mammoet was previously involved in the relocation of the Geismar 1 and Geismar 2 plants, which were moved 8,720 km from Punta Arenas in Chile to Louisiana.



As part of the Geisma 1 and 2 relocations Mammoet moved almost 400 components

7,000 km transformer move

Croatian transport specialist Velebit Promet overcame a series of challenges in its long distance move of a 103.5 tonne transformer from Slovenia to Sweden.

It was a journey of 7,000 km across Europe completed in 20 days after a total of two months planning everything down to the smallest detail.

Velebit left Croatia for Ljubljana, Slovenia's capital city, to collect the transformer. The 103.5 tonne unit was already loaded. Its dimensions were 7.29 metres long, 2.62 metres wide and 4.13 metres high.

The transformer was moved on a Faymonville CombiMax trailer in a 5+7 axle low bed combination. Including the tractor unit, overall length was 36 metres and total weight was 170 tonnes. Ivica Bergovac, Velebit sales director, said, "The modular concept is impressive because it offers the optimal ratio between tare weight and payload."



From Slovenia the combination headed for Rotterdam in the Netherlands. It was loaded on a ferry for the journey to Scandinavia. In addition to precise manoeuvring, full use was made of the 600 mm suspension stroke of the trailer's pendular axles. A similar procedure was followed on arrival at Sundsvall port in Sweden. The final 200 kilometres was covered in the daytime and it attracted many onlookers. Final unloading was at an electricity substation near Länsterhöjden in the Swedish forests.

Cracker installation

To further reduce atmospheric particle emissions ALE installed a new fluid catalytic cracker (FCC) at the Repsol refinery in A Coruña, Spain.

The refinery employs around 1,000 people and produces 120,000 barrels of oil per day. The nearby port's oil terminal accounts for 60 percent of its traffic.

ALE was contracted for the transportation and the lifting of a separator vessel. By combining the work, ALE said it was able to manage the project's multiple contractors and provide a smoother operation, completing it within two consecutive days.

A preliminary transport engineering and technical study helped ALE identify the port most capable of receiving the vessel and the best route to the refinery.



The transport plan saw the load moved overnight to minimise disruption. A major challenge, said ALE, was to move large items through city centres not designed to accommodate them. In addition, space was also limited at the refinery destination.

ALE provided detailed engineering and procedures for the lift. Permits were obtained and obstructive street lights and power lines were cleared. ALE also arranged for civil works to allow the load to cross a traffic island. The load was a 137 tonne third stage separator vessel and part of the FCC. Its dimensions were $12.1 \times 7.5 \times 7.4$ metres (LWH). Its unusually large diameter helped make it the largest item ever transported through the streets of A Coruña.

Self propelled modular transporter was used to carry the load for several kilometres of the route. It was 12 axle lines in a 6 x 4 configuration, ALE said. SPMT enabled ALE to complete the transport in the port, on public roads and in the refinery without altering the transport's configuration or changing the equipment type.

At the installation site in the refinery a pair of cranes (1,000 and 350 tonnes each) lifted the separator before its final installation on a concrete pedestal.

ALE moves the 7.5 metre diameter vessel through the streets of A Coruña, Spain



Croatian heavy and over-sized cargo transportation company Zagrebtrans has extended its trailer fleet with the purchase of four UltralightCombi modules from modular vehicle manufactuer Scheuerle, part of the TII Group.

The modules can be configured with five axles at the front and seven axles at the rear. Between the axles there is a slab deck with a loading length of 800 cm in the low deck. According to Scheuerle, this combination enables a payload of around 120 tonnes with a dead weight of 46.3 tonnes.

"The decisive factor for the investment was the technical sophistication of the product and the particularly favourable dead weight per axle line in this vehicle segment," explained Davor Radenić, technical manager at Zagrebtrans.

Depending on the version, the lightweight transport modules of the UltralightCombi series are available with a dead weight of around 2.2 tonnes per axle line, said Scheuerle.




Appetite for production

The world's continued reliance on industry, in all its forms, means there is plenty of appetite for machines designed to lift in industrial environments. CHRISTIAN SHELTON reports

round the world modern society is dependent on a range of service and manufacturing industries. No matter how diverse these industries are, though, they all share one thing in common: at some point they require the use of lifting services. The cranes used for these jobs vary almost as much as the industries themselves, evidenced by these latest products on the market.

Gantry series

One of the most common cranes used for industrial lifting applications are hydraulic gantries. Italian manufacturer Custom Lifting Products (CLP) has expanded its hydraulic gantry range, focusing on small to medium lifting categories from 60 to 200 tonnes with its LG gantry series rather than its traditional heavy lifting remit.

The company said that with its LG gantries it is looking to minimise transport size and weight while still providing a significant capacity at an impressive height. There are five gantries in the series, all of which are less than one metre wide and lift up to heights of between 5.05 metres to 7.5 metres.



The SmartJack jack synchronising system from Buckingham Structural Moving Equipment being used to push an overpass into position in Tennessee, USA

The new LG series uses the same lift control system as CLP's larger capacity gantries. This control system includes lift synchronisation between the four towers and a radio remote control that displays the lift height on a colour LCD screen. The LG gantries are equipped with a safety limiting valve designed to avoid overloading the towers, even when side shifting the load. Each LG gantry has a self-contained power pack in each tower. The towers have been designed for ease of maintenance with the oil reservoir being made separately and then assembled in the tower frame. This, CLP explains, means that, if required, it is easy to remove. The lifting cylinders have incorporated feed and return lines rather than flexible hoses which can hang around the gantry tower.

Synchronising jacks

Pennsylvania, USA-based company **Buckingham Structural Moving Equipment** manufactures hydraulic jacking systems, hydraulic jacks, and heavy lifting accessories. Its most recent advancement is the design, programming, and production of the SmartJack synchronising system which allows multiple jack machines to be interconnected to work as one large unit. This system brings both financial and efficiency savings, Buckingham Equipment claims, as it negates the need for a large, rarely-used jack machine with dozens of ports and instead allows smaller jack machines from different crews to be synced together on a single project, as needed.

Buckingham Equipment has already rented its SmartJack system out for a project in Tennessee where five spans of a new railroad overpass were constructed beside their new location and then pushed into place using four jack machines to synchronise the hydraulic push rams. This, it says, kept the downtime for the track usage to a minimum.





Also expanding its jack range is USAheadquartered high-pressure hydraulics specialist Enerpac Heavy Lifting Technology. "Our focus is on broadening the options for industrial movers with new developments such as the self-locking cube jack," says Pete Crisci, product line director, Enerpac.

Testing on the SCJ50 Cube Jack was completed towards the end of 2019, where four of the compact, portable hydraulic jacks were connected together via a Split-Flow Pump to lift a 226.5 tonne test load up to two metres. The SCJ50 Cube Jack is designed to provide an alternative to traditional climbing jack systems, says Enerpac, offering contractors a safer alternative to jacking and packing with wooden cribbing.

The SCJ50 Cube Jack works in a similar way to its other jack-up systems but is



simplified as electrical controls are not required. Blocks are stacked manually, with a mechanical lock on the up stroke and down stroke. The operation is incremental; at the end of the up stroke the lock engages. Once engaged, the lift cylinder is retracted and another block can be added.

The SCJ50 lifts up to two metres and has small footprint compared to traditional climbing jack systems, Enerpac added, making it suitable for space-restricted sites.

'We also subjected the cube jacks to a 1.5 percent side load at its maximum two metre height to successfully demonstrate the stability of the cube jack even with an oversize load," added Crisci.

Top picks

Ormig is an Italian manufacturer of cranes that have become popular for use in industrial environments. The company was founded in 1949 and has continuously been developing its portfolio ever since. In recent years its range of electric cranes, with capacities between 30 to 60 tonnes, have become popular for indoor industrial load moving applications due to their pick and carry capabilities, compact dimensions and light weight. The company's indoor electric cranes rotate on a patented system with a very reduced steering radius, so much so they can turn-in on themselves. The company started using this system on its larger cranes and is gradually migrating it to its smaller crane models.

Stability, especially when travelling with a load on the hook, is provided by four points of

Left: The LG202-0670 lifting gantry from Custom Lifting Products



Valla's eight-tonne capacity electric pick and carry crane

wheel contact with the ground. A kinematic mechanism prevents the wheels from sliding, in turn improving steering accuracy, claimed Ormig. Although available globally, Ormig said the most number of sales to date have come from within Europe.

Italian crane manufacturer Valla has launched a new eight-tonne capacity electric pick and carry crane: the V80R. The crane has full radio control and front wheel drive. Its overall width is 1.4 metres.

An 80 V, 560 Ah lead-acid battery with automatic water refill provides the power for the 4.2 kW electric motor driving the front wheels with their large-diameter 250-15 size tyres. White non-marking tyres are also available. Maximum gradeability is a 14 degree slope and travel speed is stepless from 0 to 6 km/h. The twin 23 x 9-10 inch rear tyres offer a 180 degree steering angle for a rear tail swing of only 2.8 metres.

The crane has a three-section full-power boom with a maximum angle of 70 degrees and a maximum height of 9.4 metres, at which it can lift 2.5 tonnes.

Maximum forward outreach from the centre of the front tyres is 5.5 metres with capacities of up to 1.8 tonnes. The boom also offers negative angles of up to -10 degrees. For increased reach, a three tonne capacity two metre long hydraulically-offsetable jib is offered. Maximum lifting capacities are achieved by deploying the hydraulic crossbar stabiliser which comes as standard.

Hot to handle

Spanish specialized and industrial crane manufacturer Jaso Industrial Cranes has manufactured two large cranes for use in the iron and steel industries. The first crane is already being used by steel maker Tata Steel at its Port Talbot plant in the UK. It is a 41 metre slab crane that handles freshly

INDUSTRIAL LIFTING



The tight turning capabilities of Ormig's electric pick and carry cranes have made them popular for industrial applications



Jaso's slab crane for Tata Steel

cast steel slabs with temperatures of up to 800 degrees centigrade. It is an outdoor open-winch double-girder crane that can lift 135 tonnes. The crane's winch is equipped with alternative rotation and an independent control cabin.

The second is an EAF charging and ladle handling crane which is currently being assembled and is due for completion early this year. It has a main lifting capacity of 500 tonnes and an auxiliary lifting capacity of 105 tonnes and comprises four 23 metre girders and an open-winch hoisting mechanism with two engines connected to a central planetary gearbox. This way, Jaso Industrial Cranes explains, if a component stops the crane will be able to move the load at half the speed but with the same FEM M8 classification. It has a CCTV system, an uninterruptible power supply, a vibration gauge, Ewon WiFi to manage and monitor it, heat shields around the control area, as well as two interconnected air conditioning systems.

Heads-up

South African manufacturer Condra Cranes and Hoists has developed a fully automated overhead crane. The first one has been delivered to mining group Lonmin. According to Condra, the crane provides an alternative to traditional pendant and remote control and is in line with a general trend away from manual control in industry and mining.

Lonmin is using the crane at its platinum mine in Marikana, near Pretoria, South Africa. The crane is a 16 tonne capacity, 16 metre

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span electric overhead travelling grab crane, featuring a customer-specified mechanical rope grab in place of the hydraulic alternative. There are dual hoists in the design; one to raise and lower the load, the other to mechanically close the grab by means of an internal sheave arrangement to overcome the spring-loaded open state.

Variable speed drives are fitted throughout the crane, delivering maximum speeds of 10 metres per minute on the lift, and 20 and 40 metres per minute on the cross-travel and long-travel respectively. Four longtravel motors deliver the materials handling equivalent of four-wheel-drive, enabling automated control of all four wheels for precise crane positioning accurate to within five millimetres.

The crane is fully automated with a manual override. It is programmed by an operator from a remotely located control room, where on-screen monitoring is complemented by a visual monitoring capability via CCTV.

Another industry benefitting from lifting automation is the rail industry. Rail network owner Network Rail was looking to increase productivity and enhance safety in the lifting and handling of rail tracks at its Eastleigh depot. The automated solution came from Spanish smart lifting solutions company Elebia. After gathering key information regarding the current lifting solution and the lifting requirements, Elebia consultated with Network Rail before delivering a concept model for real-time trial. The response from Network Rail was positive and, following a few tweaks and tests, 26 rail lifting clamps



INDUSTRIAL LIFTING

were produced. Elebia says these were then officially implemented by Network Rail as its preferred solution for the safe lifting and handling of rail tracks. A video of the rail lifting clamps in action can be seen here: shorturl. at/txQS8.

Another supplier to the rail industry is Sheffield, UK-based swing jib crane manufacturer, Mechan. The company worked with main contractor BAM Nuttall to design, built and install an eight-tonne capacity jib crane, the Powermaster 270, for a renovated rail depot in Liverpool, UK, New trains from Swiss train manufacturer Stadler will be kept and maintained at the depot.

The underbraced crane stands six-anda-half metres tall and spans six metres. It has a capacity of eight tonnes and a powered 180-degree slew.

Because the crane is located outside it has been supplied with stainless steel pins and rollers to prevent corrosion.

The variety of cranes presented here provide just a glimpse of the demand there is for lifting solutions from industries large and small around the world.

As long as modern life relies on having its needs met via industry, then industry can rely on equipment manufacturers to meet their lifting requirements.









The annual SC&RA Annual Conference is almost upon us; here's a taster of what to expect at this year's event. CHRISTIAN SHELTON reports

Meeting of minds

he Specialized Carriers & Rigging Association's (SC&RA) 2020 Annual Conference will be held 14 to 18 April at the Amelia Island Plantation resort on Amelia Island, Florida, USA. More than 700 crane, rigging and specialized transport industry owners, CEOs, and leaders from around the world are expected to attend the event.

The 2020 Annual Conference promises to be packed with high quality presentations and education sessions from leading industry figures. The conference has also been scheduled to enable plenty of time for recreational activities. In addition to being great fun, they are a good opportunity for networking, team bonding or for simply switching-off and recharging your batteries.

Tuesday 14 April

The first day of the event, Tuesday 14 April, for example, primarily comprises tennis and golf tournaments, plus a meet and greet evening bar. If it's your first time at an SC&RA event, don't be nervous; there are others in the same situation and the welcoming SC&RA team will look after you. Meet the other newcomers and get to know who does what at the SC&RA with the First Timers' Reception on Tuesday evening between 19.00 and 20.30.

Wednesday 15 April

On Wednesday 15 April, early risers can start the day in a healthy way with the Lift and Move USA 5k fun run or walk, sponsored by Buckner Companies. Committee meetings start from 07.00. Most committee meetings will have concluded business by the early afternoon, just in time for the conference's opening session. While the committee meetings are being conducted, event spouses are invited to take some time out, grab a mid-morning snack and make some salt scrubs.

The opening session, The Buried Life Movement, will be presented by Ben Nemtin, a Canadian producer, writer, speaker and television personality. He's also co-founder and member of The Buried Life, a group of four friends that have set out to do everything on their bucket list and help others do the same. He's had a hit show on MTV called 'The Buried Life', and a New York Times bestseller called What Do You Want to Do Before You Die? In this session, Nemtin will expound the notion that articulating and prioritising one's personal goals is not a selfish act but one that creates a positive ripple effect that inspires others to live their best life.

This will be followed by an insurance and risk management educational panel session comprising speakers: Billy Smith, NBIS; Peter Juhren, Morrow Equipment Company; Dan Keenan, National Interstate Insurance Company; and Shawn Los, National Interstate Insurance Company. Scott Bragg, president and CEO at Bragg Companies, will moderate two talks titled Current Priorities in the Tower Crane Sector and The Pros and Cons of Risk Financing Techniques.

Wednesday concludes with the popular President's Reception, where SC&RA president Tom Bennington will host a drinks reception. It's a great chance to seek out clients, old friends, and introduce yourself to new members. The President's Reception takes place between 19.00 and 20.30 and the dress code is professional attire.

EVENT DETAILS

WHAT: SC&RA Annual Conference 2020 WHEN: 14 – 18 April 2020 WHERE: Amelia Island Plantation, Amelia Island, Florida, USA WHY: Connect with industry leaders, attend committee meetings, learn from high quality speakers and education sessions, visit the Products Fair, plus the Awards and Recognition Dinner and after-party

Thursday 16 April

Thursday 16 April commences at 7.30 am with the Association Nominating Committee meeting. A breakfast provided by Link-Belt will set you up for the day, before comedian and inspirational speaker Scott Burrows will provide a motivational pick-me-up with his presentation, How to Stand Up to Any Challenge. Burrows will reveal how to drive results using the same mental focus that helped him reinvent his life after a catastrophic accident left him paralysed from the chest down.

This will be followed by the Crane & Rigging Group Membership and Governing Committee which will incorporate the Pinnacle and safety Awards.

The Ladies Group Annual Membership Meeting & Brunch provides an opportunity for all registered spouses to take some time out. The members-only Communications Advisory Committee meeting takes place between 11.30 am and 12:30 pm followed by a open team building session called Build a Bike. Bikes built in this session will be donated to the Boys and Girls Club – a national organisation of local chapters which provide after-school programmes for young people.

Fête en Blanc

More key committee and board meetings precede the much-anticipated Specialized Carriers & Rigging Foundation evening fundraiser event.

The Foundation is a non-profit organisation committed to fostering research projects, scholarships and grants, and education in the heavy haul transportation and crane and rigging industries. The Foundation is affiliated with the Specialized Carriers & Rigging Association and dedicated to serving its member companies.

This year the event is called Fête en Blanc and the suggested attire is, yes, white!. Fête en Blanc is based on the Diner en Blanc supper club, founded in Paris in 1988 when Francois Pasquier wanted to host a dinner party but didn't have the space. Pasquier invited friends to a picnic at the Bois de



Boulogne public park and told them all to wear white to identify each other.

The SC&RA's Fête en Blanc will begin with a short reception followed by a delightful picnic dinner complete with a live band, the Adrian Duke Project, plus a diverse set of performance artists and dance professionals.

Friday 17 April

Friday starts with further motivation at the Trail King-sponsored breakfast called Transforming Fear into Flow by American electric violinist and singer-songwriter

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 - XL Specialized Trailers
 - Yak Mat

Valerie Vigoda. Vigoda's presentation aims to resonate with anyone who has ever felt insecurity and stagnation, inspiring participants to be their truest, most innovative and fearless selves.

Between 9 am and midnight the Conference's popular Products Fair takes place. 94 booths have already been confirmed providing visitors with a great chance to get to know the latest products and services in the crane, rigging and specialized transportation industry, as well as the faces behind the brand names.

Spouses can escape to downtown Amelia Island for the afternoon with a 'Booze and Bites' activity tour between 2 and 5.30 pm while SC&RA leaders gather stock with their Foundation Board of Directors meeting between 12 pm and 1 pm.

A perpetual Annual Conference highlight is the hotly contested Rigging Job of the Year competition, which runs between 1 pm and 5.30 pm.

An early evening International Members Reception is open to the international SC&RA members who travelled to the USA for the event, while the main bar opens between 8 pm and 10 pm. Entertainment is courtesy of a group of SC&RA's own members.

Saturday 18 April

The fifth and final day of the Annual Conference, Saturday 18 April, starts at 8 am with the Annual Membership & Board of Directors Meeting. Most SC&RA members, however, will surface a bit later in time for the Hauling job of the Year competition, which runs between 10 am and 2.30 pm.

An invitation-only Board Reception starts at 5.30 pm with the Annual Conference finale, the Awards & Recognition Reception and Dinner, starting at 6.30 pm. Here the winners of the crane and rigging and transportation competitions are announced, as well as the Environmental Award, Golden Achievement Award and the President's Award. The dress code is black tie optional.

For more on SC&RA events see: www.scranet.org/events and for more on the awards go to: www.scranet.org/awards



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Solite was launched for series production at Bauma 2019, along with three Liebherr 'Fibre' cranes that utilise Solite

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17.3 m

18,1 m

107-

2,15t

2,45 +

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65.0 m

60.0 m

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New or traditional? Two different approaches, both pushing the boundaries of possibility, especially for tall tower crane applications. CHRISTIAN SHELTON reports

Bounds of possibility

D ne of the biggest developments in the rope sector in recent times comes from a co-operative relationship between Austrian-based rope manufacturer Teufelberger and Switzerland-headquartered crane manufacturer Liebherr. Together they developed Solite fibre rope which went into series production in 2019, along with Liebherr's new Solite-equipped EC-B 'Fibre' flat top tower cranes (240 EC-B 10 Fibre / 240 EC-B 12 Fibre / 370 EC-B 12 Fibre).

Both companies believe Solite will prove to be a game-changer, especially for the tower crane sector, by enabling the current boundaries of possibility to be pushed. The companies also say Solite has benefits for mobile crane and crawler crane applications.

According to Teufelberger, the safety and operational advantages Solite offers over steel wire include an up to 80 per cent lower rope weight, the crane components do not wear, and the rope does not need to be

Solite can reach up to ten times the service time in multi-layer windings

BJÖRN ERNST, R&D manager for Solite, Teufelberger lubricated. The rope's point of discard is easy to determine, it adds, as this is indicated via the rope's red core. When this can be seen the rope must be discarded, even though it still maintains 100 per cent of its breaking load at this point.

Teufelberger also says Solite's life cycle is much longer than wire rope. Björn Ernst, R&D manager for Solite at Teufelberger claims, "Solite can, compared to a steel cable, reach up to ten times the service time in multi-layer windings."

"The fact that Solite could revolutionise a market that has been dominated by wire rope technology excites me," adds Erich Rührnössl, one of the Teufelberger team behind the development of Solite.

Component choice

Tried and trusted technology is preference of tower crane manufacturer Moritsch Cranes when it comes to its choice of tower crane componentry and, in particular, its winch drums. Although the company is relatively new, having being launched in 2015, it was founded by Mariano Moritsch who, along with his family, has a long history in the tower crane industry.

The company's range of luffing jib (RTL), flat-top (RTM) and low-top (RTT) cranes from 100 to 600 tonne-metres cranes can be found in cities around the world. All of the engineering is carried out in-house and Mariano prides himself on using high quality components. "I strongly believe that if we did not have top quality components we could not have had the success that we have had over the past three years," he says. "It is very important that I can tell my customers we only use premium components."

Moritsch's winch drums come from Bavaria, Germany-headquartered company Lebus International Engineers. The Lebus system is well known in the lifting industry for ensuring wire rope spools continuously onto and off rope drums in multiple layers. The Lebus groove differs from a conventional helical (screw thread) groove in that the groove runs parallel to the flanges (edges) of the drum except for at two points on opposite sides of the drum where the groove is slightly angled, just enough to keep the rope moving along to the drum face. This geometry was designed and patented in the 1950s by Texas oil field equipment supplier Frank LeBus. The design patent has long since expired and similar-style parallel grooved drums have become widespread. The Lebus brand, however, remains protected by Lebus Inc, the US parent company, and its subsidiaries in Germany and the UK.

"I tried a Lebus copy once but the performance was not the same," Mariano says. "When we started Moritsch Cranes we decided to ensure that all of the drums should be Lebus, for their quality and reliability."

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Seeing the difference

Genuine Lebus engineering is especially important for the tallest cranes, Moritsch says. The more rope you need to spool onto and off the drum, the more scope there is for rope to get caught, damaged or twisted, bringing site operations to an expensive halt.

"If we have a crane that is 30 or 40 metres high, maybe you won't see the difference," Mariano says. "But with the highest cranes, especially the luffers, you see the difference."

Thanks to Lebus, he says, the biggest Moritsch cranes carry up to 1,100 metres of wire rope spooled in seven layers "and we have never had any problem".

The drum that Lebus supplies is a key component of the overall winch system. Moritsch makes its own winches from supplied components. Components that are not tailor-made for Moritsch, such as the Brevini gearboxes and Stromag brakes, have characteristics that make them specifically suited to the application.

The drums, however, cannot be purchased off-the-shelf and are all tailor made. "We share technical information and find the solution together," Mariano explains.

Communication is important because the size and shape of the winch drum is integral to the overall design of the crane, adds Lebus.

"When we start to manufacturer a new crane, the organisation of the spaces on the frame and counter jib is very important," Mariano says. On larger Moritsch cranes, with more than 400 metres of rope, the winches are designed with the reduction gear inside of the drum, so this calls for even closer working with Lebus. "We study together the best technical solutions," he says.

Lebus receives technical instruction from Moritsch, with full details of the rope to be spooled including its length, diameter, strength, type of construction and manufacturer. Lebus then designs a drum with specific grooving to match Moritsch's criteria. The key for Lebus is determining the precise depth and width of the grooves that guide the rope spooling action so as to



guarantee a lifetime of smooth spooling.

Every wire rope type behaves differently especially when spooled in multiple layers, says Lebus, and so needs different grooving geometry to get the best from it.

"We study the behaviour of wire ropes under working conditions for the given application," says Cris Seidenather, who describes himself as "semi-retired" from the role as managing director of Lebus. Lebus simulates the winch application in its workshop in Finning, Bavaria, observing the impact on the rope and measuring how much the lower layers on the drum change shape under pressure from upper layers.

"Even if the wire rope construction is the same but comes from another manufacturer, the dimension behaviour can be different," Seidenather says. "For example, the diameter reduction under tension might vary from manufacturer A to manufacturer B. That's why in many cases it is important for us to know the name of the manufacturer."

From this analysis, the drum design is produced. "We finally send our complete drum drawing to Moritsch and he transfers the Lebus technical dimensional values in his drawings," Seidenather continues. "Each time there is a new crane design and-or change in rope specification, rope manufacturer or construction it is our

The quality of the drum is as important as the quality of the rope

MARIANO MORITSCH, founder, Moritsch Cranes



technical know-how to design the new groove and pitch dimensions."

Different Moritsch crane models require different winch drum designs from Lebus, each custom-made for the application.

The hoisting winch of Moritsch's RTL 265A luffing jib crane, for example, holds 900 metres of 22 mm diameter wire rope, spooled in seven layers and with a maximum rope pull of 110 kN. For this, Lebus supplies a drum width of 941 mm between the flanges and a pitch circle diameter of 922 mm. Knowing Lebus says knowing the optimum grooving pattern – the depth and width of each groove machined into the drum face – is the result of its long industry experience.

For other crane models, the winch drum might be a different shape altogether. On the low-top RTT 470–24, for example, the drum has a smaller pitch circle diameter of 870 mm but a longer face, with a length between the flanges of 1020 mm. This crane carries 850 metres of 20 mm-diameter wire rope spooled in six layers.

Quality counts

It is the geometry of the grooves on the drum face that keeps the rope behaving properly, assuring layer upon layer of perfect spooling, maximising rope life, up-time and return on investment, explains Lebus. "The quality of the drum is as important as the quality of the rope," concludes Mariano.

In this way we can see the impact the choice of componentry has and the relationship between them, too, has upon the crane's overall functionality.

In this way we see how the choice of components directly impacts the crane's operating abilities. The interaction between the rope and winch drum, as outlined by Lebus, is complex and it will be interesting to see how rope developments of the future integrate with the widespread use of traditional component technology.

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Aware of the cold

orkforce safety is a top-of-the-list priority for industry companies around the world, as it should be. While much focus is placed on technical acumen, there's still a lot to be said for operating safely in various types of weather.

First and foremost, it's paramount that everyone on the jobsite understands and accepts that safety is a both

a team and individual effort – at the same time. Especially in winter, communication is vital – without a doubt, if you see something, then say something.

Icy conditions are a no-brainer, but what about signs of hypothermia? Do you or your crew know what to look for – as well as what to do about it? Signs of hypothermia or cold stress comprise a fairly deep list: shivering, poor co-ordination, slurred speech, pale skin, compromised breathing and a creeping feeling of exhaustion. Worksite leaders and all workers should be aware of what to look for and be confident enough to make suggestions when they see somebody who may be at risk or already succumbing to the cold.

Initial treatment involves gently helping the person out of the

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cold, removing any wet clothing, covering the person with blankets and-or insulating the person from the cold ground (if indoors isn't an option), monitoring breathing, providing warm beverages if possible, and, if available, using warm, dry compresses. If required, be sure to seek medical assistance.

That said, what might sound like an obvious decision – wear proper clothes and accessories – can often slip the mind of even the most focused of employees.

Some points to remember include: layer up; avoid frostbite by covering the mouth, neck, ears and face; warm headwear should be mandatory; goggles or sturdy glasses are also helpful in windy conditions; waterproof gear and especially footwear is also a must; and, without a doubt, wear insulated work gloves.

First steps

Clothing and hypothermia awareness are great, but it doesn't help if the jobsite is the larger danger.

Just like monitoring for construction debris, loose equipment and tools, and any other risks, walking the site in order to look for dangerous spots caused by cold weather is just as crucial. In fact, OSHA General Industry Standard 1910.22 requires that worksite managers maintain an environment where the "walking-working surfaces" are "free from trip and slip hazards" – including ice and snow. This includes inspecting all walking-working surfaces before each shift and, on a regular basis, and carrying out risk-mitigation efforts immediately.

Your first step can be to begin ice and snow removal as soon as it starts and continue regularly.

Obviously, staying on top of your equipment is another priority in cold weather. Winterise your engine oils and hydraulic fluids. Tools with tanks should be drained completely after each use so any moisture inside doesn't freeze.

You might also consider anti-freeze tool oil to keep air hoses and pneumatic tools fully protected from cold-related damage that could put the operator at risk. And for sure, equip every fleet with winter emergency gear.

At the end of the day nothing goes as far towards risk-reduction as a steady eye on outdoor conditions. Pay close attention to where you are and what time of year it is. Don't brush off weather reports; site managers should know what conditions to expect onsite each day. And they should have an efficient way to spread the word to the crew about conditions on the ground throughout the day.

Ultimately, this time of year, workplace safety can be a little trickier than usual. It pays for you and your organisation to reduce as much risk as possible by remaining cognisant and focused on the coldweather dangers at hand.



CHIEF EXECUTIVE OFFICER

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Jechonthe

The impact of new technology on the specialized transport industry will define the next decade. MIKE CHALMERS reports

echnology's role in specialized transportation throughout the next decade will be a central theme of this year's SC&RA Specialized Transportation Symposium which runs from 18 to 21 February in Charlotte, North Carolina, USA. For the benefit of SC&RA members in attendance from around the world – especially regarding permitting – the educational track will highlight presentations that largely focus on what members should be expecting from technology, including solutions for employing new tech by 2030.

"There are so many exciting things happening in our space from the technology side," said Steven Todd, SC&RA vice president transportation. "Especially in recent years – to the extent that the twenty-twenties will see a wide range of advancements. On the permitting side, specifically, we're seeing technology play a role in a way that will truly drive our industry forward."



One particular session at the Symposium, What the Future Holds: Permitting in 2030 – Part 1, will see Mike Morgan, CEO at Pit Row Transportation Solutions (PRTS) join Tim Pilcher at ProMiles Software Development Corporation, and others, elaborate on what to expect and how to position for success in the next ten years in oversize and-or overweight (OS/OW) permitting.

Noting that the mantra for state government since 2010 has been to "do more with less," Morgan pointed out that the amount of automation involved in all aspects of the permit ordering process has exploded over the last ten years.

"A decade ago, ordering OS/OW permits for a trip spanning a handful of states would almost certainly involve paper maps, multiple telephone calls and even fax machines," he explained. "Today, in some states, with the help of the newer state permit systems, we can instantly order a variety of state



Looking ahead at the permits process in 2030

In the next decade, I hope to see more states implement technological solutions to make our

lives easier.

MIKE MORGAN, CEO at Pit Row Transportation Solutions



permits with only a computer and an internet connection. In the next decade, I hope to see more states implement technological solutions to make our lives easier – especially in regards to quickly obtaining safe routes for OS/OW loads moving through the state."

Morgan added that most states can have automated systems if they have the resources. "These systems require significant investments and some of the very small states may find it challenging to make this

> investment based on their small permit counts. Additional resources to help these smaller states would be helpful."

> While most states have introduced automation to some degree in their permit-ordering process, said Morgan, there are still some states that refuse to consider change

and prefer human interaction with every permit ordered.

"This does nothing but slow down progress in our industry and create more headaches and hassle than is necessary," Morgan stressed. "The SC&RA and its members are still attempting to inform and educate these straggling state officials of the considerable benefits that automated permitting systems provide in hopes that one day, specialized carriers can order any routine permit without telephones and fax machines."

Pilcher indicated that, while true geographic information systems (GIS) automated routing was very limited at the start of the decade, a large number of automated routing systems have now **INDUCE**



been implemented, changing the face of the industry.

"I feel that virtually all states will have this capability by the end of the two thousand twenties," he said, "and these systems will be able to push the OS/OW route out to the truck driver in the cab – improving safety."

A huge difference

In terms of what SC&RA members should be excited about both now and in the 2020s, Pilcher feels that getting route-following technology for the driver in the cab of the truck is the top area of improvement. "Following the complex routes is challenging, and I think the technology is becoming available and can make a huge difference for safety and infrastructure protection," he said.

"Bridge hits and other issues with the truck not following the route continue to be a major problem, but I feel the vast majority of these are due to driver error or difficulty following the route. This technology will enormously simplify the process of following these complicated routes and provides the capability for route-change notifications to go directly to the driver."

Pilcher also sees e-credentials as an area that has begun to emerge, which will make it easier to comply with all regulations and have the current credentials in the truck – where they are needed.

"An additional item that would be helpful is for the states to provide interfaces into their systems, allowing the routing and permit submission to be incorporated into the dispatch process," he said. "This will improve efficiency for the industry, and I feel it will improve compliance by making it easier to get routes and permits. If this could I feel that virtually all states will have this capability by the end of the two thousand twenties, and these systems will be able to push the OS/OW route out to the truck driver in the cab – improving safety.

TIM PILCHER at ProMiles Software Development Corporation

be incorporated for annual permits, I feel it would be a huge improvement in safety and infrastructure protection."

Incredible savings

With that in mind, Pit Row will be announcing its entry into the permitting industry this month. Morgan revealed that Pit Row has partnered with ProMiles, Nova Permits & Pilot Cars and AXYS Permits to produce what is called Permit Manager, a state-of the-art, comprehensive, full-service product designed to eliminate thousands of labour hours dedicated to manual processes, planning, ordering and managing OS/OW permits, trip and fuel permits and more.

"The PRTS Permit Manager will allow customers to interact with the various state permit and routing systems in a way that no other product can today," explained Morgan. "While state permitting systems have expanded tremendously over the last decade, the requirement to use each specific state system when ordering permits for a trip that spans multiple states has been a 'problem' that the industry still must tackle. The PRTS Permit Manager, powered by ProMiles, will allow its customers to interact with multiple state permit and routing systems from a single web page. This will greatly reduce the amount of data entry and, most importantly, time required to order multiple permits. This

product will allow carriers to order more permits with less time and effort, whether in-house, through a permit agency or both."

Todd added, "These types of products may reduce the amount of labour and data entry. When you think about these big companies that are doing thousands of permits a month, and you reduce that data-entry time, it could be a significant saving."

Morgan agrees, noting that specialized carriers of all sizes face a maelstrom of challenges in a highly dynamic environment. "These include labour-intensive permitting processes combined with a lack of uniformity of required load attributes and constant modifications to state and federal permitting procedures, shortage of qualified staff, the struggle to stay current with rule and policy changes and aggressive fines and penalties," he claimed.

Ultimately, however, Morgan believes that states should spend more time allowing technology to provide a better overall customer experience. "Automated routing and permit delivery have been proven to be safe and efficient and it seems like a matter of time before the technology is in every state," he said. "There are multiple vendors and products available to these states, and I would imagine nearly every carrier who orders permits would be in favour of automation. So, why wait?"





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Agreement with PTS for Lankhorst rope & slings

The Lankhorst brand of rope manufacturer WireCo WorldGroup has signed an exclusive strategic supply agreement with Texas, USAheadquartered rope supplier **Precision Tension Solutions** (PTS). Under the agreement, PTS will supply project engineered ropes to the offshore construction, subsea installation, heavy lift, commercial marine, seismic, mining and utility industries in the Gulf region. It will also provide sales support and undertake rope confection.

The two companies have



Kampen, The Netherlands-headquartered trailer manufacturer Broshuis has launched a new single extendable hydraulically steered platform trailer which it said has a low tare weight of 8.4 tonnes.

Broshuis said the new lightweight trailer has the same quality as its other trailers but that the low tare weigh enables more load to be carried without requiring a permit (in countries where the maximum combination weight is 40 tonnes).

The light weight of the trailer also helps save fuel, said Broshuis. The trailer uses three nine-tonne axles with single mounting tyres, air suspension and TÜV certified components and parts.

The load floor height is 1,370 mm and net load capacity is 36. 6 tonnes. For more information see: www.broshuis.com already collaborated supplying heavy lift slings to Seaway Heavy Lifting, under the Seaway 7 brand, which, transports and lifts offshore structures.

The slings will be used on the Dolphin Accommodation Upgrade Project (DAUP) for oil company Shell Trinidad and Tobago. The Dolphin Platform is located on the East Coast Marine Area, offshore of Trinidad and Tobago. The project comprises provision of a Permanent Living Quarter (PLQ) module, consisting of a control room, living quarters and helideck, designed and constructed to facilitate a single lift installation.

Shell Trinidad and Tobago contracted transportation and installation of the PLQ module to Seaway 7. The slings were used to lift the 1,110 tonne module onto the Dolphin platform.

Lankhorst supplied three Lankoforce slings with a different diameter rope for each sling. One 520 tonne minimum breaking load (MBL) sling measured 104 metres long, with a rope diameter of 64 mm. The second



520 tonne MBL sling was 47.2 metres long, with a rope diameter of 76 mm. The third sling used 108 mm diameter rope, was 46.1 metres, and had a 1,300 tonne MBL. Length tolerances of +/-1 % of nominal length were required. Working with Precision Tension Solutions, Lankhorst said it got +/- 0.1 %.

Tight tolerances are critical to heavy lift projects, Lankhorst said, as variations in sling lengths can lead to uneven load distribution (skew loading) and as such can impact the structural integrity of that object.

"With the slings for Seaway 7, we've shown that unprecedented levels of tolerance accuracy can now be achieved with fibre slings even where different diameter ropes are used to prepare the slings," said Wilco Stroet, managing director, Lankhorst Ropes. Where excessive tolerance deviation was observed during testing, slings were re-spliced to achieve the smallest possible tolerance.

For more information see: www.lankhorstoffshore.com

Fleet software updates

A1A Software has updated its iCraneTrax fleet and personnel software. The fleet map now offers a colour-coded overview of the key service intervals for a fleet. In addition, with user permissions, Link-Belt and Manitowoc dealers can access the telematics interface to schedule maintenance.



The second new feature is that all iCraneTrax documents can be saved as PDF files for improved document management.

"With the enhanced fleet map feature, managers at rental companies or dealers could set up maintenance schedules for internal teams or customers to remind them about upcoming service due items," said Tawnia Weiss, A1A Software president. For more information see: www.alasoftware.net

Crane dealers can schedule maintenance according to usage



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UBERT PALFINGER SENIOR 2020



We regret to report the death of **HUBERT PALFINGER SENIOR**, former leader at crane, aerial work platform and material handling equipment manufacturer Palfinger Group.

He died on Sunday 19 January 2020, at the age of 77, after an emergency operation.

A joint statement issued by the members of the company's executive board, read, "Palfinger has lost an extraordinary person and a visionary entrepreneur who developed the Palfinger Group into a global corporation employing around 12,000 people. Making people a top priority is an integral part of the corporate culture, and it was Hubert Palfinger Sr who laid the foundation for that philosophy and was key in its implementation."

CHRISTIAN CHALUPNY 2020



With regret ICST reports the death of CHRISTIAN CHALUPNY, Morrow Equipment president and CEO. Born in Innsbruck, Austria,

Chalupny graduated with a business degree from the University of Vienna. He married his wife, Karin, in 1965 and served in the Austrian Army. In 1967 he joined Liebherr Austria, in Bischofshofen. A move came in 1971 to the USA for Liebherr America in Newport News, Virginia.

After more than a decade there he moved to Oregon and joined tower crane specialist Morrow in 1982. As Morrow president for 38 years he was key to the success of the company throughout. Christian Chalupny died on 12 January 2020, aged 78.

PEOPLE NEWS



Wire rope manufacturer WireCo WorldGroup appointed KEITH WHITE as chief executive officer, effective 1 January, 2020. White will also serve on the board of directors. Interim chief executive officer, Jay Townsend, will step down but remain actively involved with WireCo as lead independent member of the executive committee of the board of directors. White was most recently senior vice president of industrial at Kiewit Corporation, a

leading construction and engineering company to the transportation, power, oil and gas and chemical endmarkets. White has a Bachelor of Science in physics from the United States Naval Academy and served in the United States Navy for seven years.

Please send picture of the month entries and all other back page-related information to International Cranes and Specialized Transport, KHL Group, Southfields, Southview Road, Wadhurst, East Sussex TN5 6TP, United Kingdom, or by e-mail to alex.dahm@khl.com. Entries for Picture of the month should include: the month and year taken, the place, type of crane, owner and project, plus any other relevant information.

sister publication American Cranes and Transport's (ACT) new 'legendary' page, which pays tribute to machines ACT deems worthy of the 'legend' status. Pictured is the ubiquitous Link-Belt LS-98 crawler crane, which was produced by the Kentucky, USA-headquartered manufacturer between 1954 and 1997, during which time more than 7.000 were made.

In 1958 an LS-98 cost \$26,000. Three attachments were available: a lift crane; a dragline; and a shovel. With a capacity of 25-27.5 tons, this machine had an angle boom length of 100 feet and tip height of 104 feet.

The example in this image was modified for logging work in the tough environment of British Columbia, Canada,

For more about the LS-98 see: shorturl.at/eTW06



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60

60

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	Manufacturer	Туре	Year	Drive/Steering	Boom/jib (m)	Delivery
450 t	Liebherr	LTM 1450 N	1992	16 x 8 x 14	50 / 61 / 84	direct
400 t 200 t	Liebherr Terex-Demag	LTM 1400	1988 2009	16 x 8 x 12 12 x 8 x 10	50 / 61 / 84 67,8 / 25	direct direct
200 t	Liebherr	LTM 1200	1993	12 x 8 x 8	54,5 / 22	direct
200 t	Liebherr	LTM 1200	1990	12 x 8 x 8	54.5 / 22	direct
160 t	Liebherr	LTM 1160-5.1	2007	10 x 8 x 10	62 / 22	direct
160 t	Faun	ATF 160 G-5	2006	10 x 8 x 8	60 / 5.4+runn.	direct
160 t	Liebherr	LTM 1160/2	2000	10 x 6 x 8	60 / 29 45 / 20 / 52	direct
160 t 130 t	Liebherr	LTM 1160	1986	12 x 8 x 8	45 / 20 / 52	direct
100 t	Grove	GMK 5130-1	2007 2009	10 x 8 x 10 8 x 8 x 8	60 / 18 50 / 19+1,5+r.	direct direct
100 t	Terex-Demag Terex-Demag	AC 100/4	2009	8 x 8 x 8	50 / 19+1,5+1.	March
100 t	Grove	GMK 4100 L	2008	8 x 6 x 8	60+7 / 17	direct
100 t	Liebherr	LTM 1100-5.2	2007	10 x 6 x 8	52 / 19	direct
100 t	Terex-Demag	AC 100	2006	10 x 8 x 8	50	direct
100 t	Terex-Demag	AC 100	2005	10 x 6 x 8	50 / 17	direct
100 t 100 t	Liebherr Liebherr	LTM 1100-4.1 LTM 1100-4.1	2005 2004	8 x 8 x 8 8 x 8 x 8	52 / 19 52 / 19	direct direct
100 t	Demag	AC 100	2000	10 x 6 x 8	50 2 / 17	direct
100 t	Demag	AC 265	1989	8 x 8 x 8	50,2/17 37/17	direct
90 t	Liebherr	LTM 1090/2	1997	8 x 6 x 8	52 / 19	direct
80 t	Terex-Demag		2007	8 x 8 x 8	50 / 17,6	direct
80 t	Terex-Demag	AC 80-2 GMK 4075-1	2007 2005	8 x 8 x 8 8 x 6 x 8	50 / 17,6 43,2 / 17	direct
80 t 80 t	Grove Terex-Demag		2005		43,2 / 17 50 / 17,6+runn	direct
80 t	Liebherr	LTM 1080/1	2002	8 x 8 x 8	48 / 19	direct
80 t	Grove	GMK 4080	2001	8 x 6 x 8	43 / 13	direct
80 t	Demag	AC 205	1996	8 x 8 x 8	50/17,6	direct
80 t	Demag	AC 205	1996	8 x 6 x 6	50/17,6	direct
70 t	Liebherr	LTM 1070-4.1	2007 2005	8 x 6 x 8 8 x 6 x 8	50 / 16 50 / 16	direct
70 t 70 t	Liebherr Liebherr	LTM 1070-4.1 LTM 1070	1990	8 x 8 x 8	42 / 18	direct direct
65 t	Tadano Faun	ATF 65 G-4	2006	8 x 6 x 8	42 / 10	direct
60 t	Terex-Demag	AC 60-3 L	2008	6 x 6 x 6	44	direct
60 t	Liebherr	LTM 1060/2	2005	8 x 6 x 8	42 / 17	direct
60 t	Liebherr	LTM 1060/2 LTM 1060/2	2004	8 x 6 x 8	42 / 17 42 / 17	direct
60 t 60 t	Liebherr	LIW 1060/2	2004	8 x 6 x 8	42/1/	March
60 t	Faun Faun	ATF 60-3 ATF 60-3	2004 2003	6 x 6 x 6 6 x 6 x 6	40,2 / 16 40,2 / 16	direct direct
60 t	Liebherr	LTM 1060/2	2003	8 x 6 x 8	40,2/10	direct
60 t	Liebherr	LTM 1060/2	2002	8 x 6 x 8	42 / 17	direct
60 t	Liebherr	LTM 1060/2	2000	8 x 6 x 8	42 / 17 43 / 15	direct
55 t	Grove	GMK 3055	2006	6 x 6 x 6	43 / 15	March
55 t	Grove	GMK 3055	2006	6 x 6 x 6	43 / 15	direct
55 t 55 t	Liebherr Liebherr	LTM 1055-3.1 LTM 1055-3.1	2005 2005	6 x 6 x 6 6 x 6 x 6	40 / 16 40 / 16	direct direct
55 t	Liebherr	LTM 1055/1	2003	6 x 6 x 6	40 / 2 5+runn	direct
55 t	Liebherr	LTM 1055/1	2003	6 x 6 x 6	40 / 16	direct
50 t	Faun	ATF 50 G-3	2008	6 x 6 x 6	40 / 16 40 / 16	direct
50 t	Terex-Demag	AC 50-1	2007	6 x 6 x 6	40/17,6	direct
More machines, crane details and photos on: www.homar.nl						



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2x 220 t	Tadano ATF 220G-5	2012/2016
1x 220 t	Liebherr LTM 1220-5.2	2016
1x 250 t	Demag AC 250-5	2019
2x 250 t	Grove GMK 5250L	2016/2017
2x 250 t	Liebherr LTM 1250-5.1	2017/NEW!
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ALL IERRAIII-CRAILES	,			
Make / Type	y. o. m.	Drive	Boom / Fly Jib	
30 t Faun ATF 30-2L	2004	4x4x4	28,50m + 8,00m	
35 t Liebherr LTM 1030-2.1	2005	4x4x4	30,00m + 15,00m	
40 t Terex-Demag AC 40 City	2008	6x6x6	31,20m + 13,00m + 1,20m	
45 t Faun ATF 45-3	2006	6x6x6	34,00m + 15,00m	
45 t Liebherr LTM 1045-3.1	2007	6x6x6	34,00m + 16,00m	
50 t Tadano Faun ATF 50G-3	2008	6x6x6	40,00m + 16,00m	
50 t Grove GMK 3050	2003	6x6x6	38,10m + 15,00m	¥
50 t Terex-Demag AC 50-1	2007	6x6x6	40,00m + 17,60m	Export
55 t Liebherr LTM 1055/1	2004	6x6x6	40,00m + 2,50m	0
55 t Liebherr LTM 1055/1	2003	6x6x6	40,00m + 16,00m	iiii
55 t Liebherr LTM 1055-3.1	2005	6x6x6	40,00m + 16,00m	
60 t Faun ATF 60-3	2004	6x6x6	40,00m + 16,00m	÷
60 t Liebherr LTM 1060/2	2004	8x6x8	42,00m + 17,00m	Import -
60 t Liebherr LTM 1060/2	2005	8x6x8	42,00m + 17,00m	0
80 t Terex-Demag AC 80-2	2007	8x8x8	50,00m + 17,60m	Ξ
80 t Terex-Demag AC 80-2	2007	8x8x8	50,00m + 17,60m	_
80 t Liebherr LTM 1080/1	2002	8x6x8	48,00m + 19,00m	
90 t Liebherr LTM 1090/2	1997	8x8x8	52,00m + 19,00m	
100 tLiebherr LTM 1100-4.1	2004	8x8x8	52,00m + 19,00m	
100 tTerex-Demag AC 100	2005	10x8x8	50,00m + 17,00m	
100 tTerex-Demag AC 100-4	2009	8x8x8	50,20m + 19,00m + 1,20m	
100 tGrove GMK 4100 L	2007	8x6x8	60,00m + 22,00m	
130 tGrove GMK 5130-1	2007	10x8x10	60,00m + 18,00m	
160 tTadano Faun ATF 160G-5	2006	10x8x8	60,00m + 5,40m	
160 tLiebherr LTM 1160-5.1	2007	10x8x10	62,00m + 22,00m	
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