

INTERNATIONAL

# CRANES

## AND SPECIALIZED TRANSPORT

Volume 28 ■ Number 2  
NOVEMBER 2019

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# INTERNATIONAL CRANES AND SPECIALIZED TRANSPORT

VOLUME 28 ■ NUMBER 2 ■ NOVEMBER 2019



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# EDITOR'S VIEW



Sitting here looking at a small selection of (albeit somewhat decrepit) model cranes on my desk, with their intricate detail and working parts, often helps with focus. This can be on a wide range of things...

A recurring theme is the subject of insufficient numbers of people joining and staying in the industry. It will continue to be a problem so it is great to see initiatives in many

quarters trying to do something about it now rather than waiting until it gets even worse.

As ever, though, it is easier to say than do. Last month, at the Construction Plant-hire Association conference in the UK, interesting points were raised providing much food for thought. These included, among other things, recruitment and retention. During the discussion around how to attract people to the industry an important point regarding the lack of women working in the industry was made.

Every time I (and I suspect the same is true of many other people) sit in a room at an industry conference or similar event I am struck by the fact that fewer than 5 per cent of the people there are women. The same train of thought then ensues, culminating with observation of the fact that half the population is almost completely unrepresented and that something should be done to rectify this.

Surely therein lies a solution to a large proportion of, if not all, of the recruitment crisis. For a start, make construction sites a lot less 'blokey'. While this way of thinking may still have a long way to go in the wider world, things are generally heading in that direction, so why not in construction? And why not more quickly, too? Instead of trailing behind, the industry could lead the way in making the necessary changes and get in quickly to secure the best candidates.

Like many things change could begin at home with parents. Don't tell me not to blame the parents... just take it on the chin, everything is already our fault anyway. I encourage all my children to see that gender shouldn't be an issue or even relevant. Continuation of this at school is also vital. The education system has the potential to show career paths that have traditionally been the preserve of men needn't be that way. If this could happen, by the time today's six-year-olds have completed their basic education, in a decade or so, the recruitment situation in our industry could look significantly better.

## ALEX DAHM

Editor



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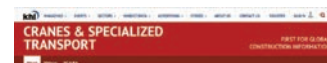
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300 t



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# SENNEBOGEN



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HIGHLIGHTS

■ Joint venture partners Sany and Deutz AG have signed an agreement with representatives of the government of Changsha, China, to build a factory to produce engines in Hunan Province. Deutz and Sany, one of China's largest construction equipment manufacturers signed the agreement to establish a joint venture in June 2019. Hunan Province was reported to be contributing several tens of millions of US dollars in additional funding to the project. Six emissions standards engines and will be built at the new plant, not far from Sany headquarters in Changsha

■ A pair of Kalmar ship-to-shore (STS) and three rubber tyred gantry (RTG) cranes are destined for Mexico's IPM Altamira terminal on the Gulf of Mexico, in the state of Tamaulipas. IPM Altamira already has a Kalmar STS crane, eight Kalmar RTGs and Kalmar mobile equipment. The new STS cranes will be super post-panamax size with an outreach of 21 container rows. Capacity will be 65 tonnes under the spreader.

# NASA in milestone sky crane test

The United States' space agency NASA has reached what it describes as a milestone point on its Mars 2020 rover mission thanks to the use of a sky crane.



In a pivotal test, NASA technicians used a sky crane originally developed for its 2012 mission to Mars, to simulate the landing of its new Mars rover robot. Part of the mission's separation stage, the sky crane will lift the rocket-powered descent stage assembly away after the six-wheeled robot touches down.

The simulated separation test was conducted at NASA's Jet Propulsion Laboratory (JPL) in Pasadena, California, USA. Ryan van Schilifgaarde, support engineer for Mars 2020 assembly at JPL, said, "With this test behind us, the rover and descent stage go their separate ways for a while. Next time they are

attached will be at the Cape next spring during final assembly."

Mars 2020 launches from Cape Canaveral, Florida, in August 2020. The mission will see the rover robot collect samples of the planet's surface, which will be returned to Earth later as part of another mission. NASA said it hoped to find evidence of microbial life and possibly signs of habitable environments.

This latest intergalactic expedition aims to follow the success of NASA's Mars rover Curiosity, which landed on the planet in August 2012. It was this project that led NASA to develop the sky crane landing method. Like the Curiosity rover, the new Mars rover – which is yet to be officially named – will land on the planet's surface using the "sky crane" method.

NASA conducting the separation simulation test for Mars 2020

## Fabio Belli gives keynote at WCTS

Final preparations were underway for the seventh World Crane and Transport Summit (WCTS) in Amsterdam, Netherlands, on 13 and 14 November as ICST went to press.

Highlights include keynote presentations by Fabio Belli, Fagioli CEO, and Erich Sennebogen, managing director at Sennebogen.



WCTS keynote speaker Fabio Belli

Belli, who opens the event, will highlight decreases in capital expenditure in the global oil and gas sector – down more than 40 per cent since the last peak in 2014 – and the

knock-on effects.

He will suggest initiatives that the industry could make in response, including

the possibility of more industry partnerships or asset sharing.

For more news see the next ICST and [www.khl-wcts.com](http://www.khl-wcts.com)

## DOUBLE DIGIT RISES AT PALFINGER

Record financial results have once again been reported by manufacturer Palfinger.

The Austrian crane and access equipment maker posted revenue at €1,300.6 million (US\$ 1,443 million) for January to September 2019, up 10 per cent from the €1,182.6 million (\$1,312 million) in the same period of 2018.

EBITDA was up 18.7 %, to €175.1 million (\$194.3 million), from €147.6 million (\$163.8 million) in Q1-3 of 2018. The EBIT margin was posted as 9.2 %. Palfinger said the outlook for 2019 as a whole remains positive with the expectation for another record year. The company forecasts a revenue increase to €1.7 billion (\$1.89 billion) in 2019 and that the EBIT margin will be 9 %.

Continued growth potential sees the revenue forecast rising to €2 billion (\$2.2 billion) by 2022. Andreas Klauser, Palfinger CEO, said, "In spite of the recession fears, we are confident that we will be able to achieve our growth targets for 2022."





# Tower trio new from Terex



The Terex CTLH 192-12 hydraulic luffer, the CTT 172-8 flat top and the new CSE 32 self erecting tower

## HIGHLIGHT

■ Heavy lifting and moving specialist Roll Group, which includes Roll-Lift and RollDock, has opened offices in Singapore, Malaysia, Indonesia, Thailand and Korea. It is the latest stage in the Dutch company's bid to expand its land-based operations and to further make the most of combining land and sea projects, the company said. Robin Koenis has been appointed managing director at Roll Group in the Asia Pacific region. Roll Group APAC has added engineers and sales staff for the region. Self propelled modular transporter (SPMT) from Scheuerle in Germany has joined the fleet and will be put straight to work there, the company said. Cranes from elsewhere will be moved in for the lifting work.

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

The manufacturer previewed the cranes at an event held at its testing site in Polcenigo, close to its Fontanafredda tower crane production facility in northern Italy on 10 October.

Largest of the three is the 12 tonne capacity CTLH 192-12 hydraulic luffer, the first of its type from this manufacturer. Maximum jib length is 55 metres, at the end of which capacity is 2.35 tonnes.

Its out of service radius when parked is 8 metres. It can be mounted on the HD23, TS23, TS21 or H20 tower masts. The

hoist winch is 67 kW and the hydraulic luffing mechanism is 30 kW. Features of the control system include Terex Power Plus and Terex Power Match. Easy set up is promised and Terex said it is ready for fitment of anti-collision and zoning systems. It uses the T-Link telematics platform and has the S-Pace cabin.

The new CTT 172-8 flat top is an 8 tonner (on four falls of rope) with a maximum jib of 65 metres. The 4 tonne version on two falls of rope lifts its maximum out to a radius of more than 25 metres. Maximum freestanding height is 64.9 metres. Compatible tower sections are TS16 – TS21 and the other control system features are as per the hydraulic luffer.

It replaces the CTT 162 with 200 kg more tip load capacity and the new electronic control systems. Set up is faster and easier, and operating speed can be reduced to increase capacity, Terex said. It has a new cabin and the power match function reduces electricity consumption.

The new CSE 32 self erecting tower lifts 4.4 tonnes and has a 32 metre jib. Tip load is 1.15 tonnes and the hook height can be altered between 19.7 and 21.5 metres. Its swing radius is given as 2.25 metres.

Following final testing, the CTT 172-8 will be available from December 2019, The CTLH 192-12 from January 2020, and the CSE 32 from the second quarter of 2020.

## Crane demolition in New Orleans

Explosive demolition of a pair of tower cranes took place on a hotel construction project in Louisiana, USA, in October.

The attempted demolition of the two damaged Liebherr tower cranes, owned by Morrow Equipment, was at the New Orleans Hard Rock Hotel construction site on Sunday 20 October. According to the City of New Orleans' Mayor's Office the reason was to "mitigate further damage" as the tower cranes were in danger of collapsing. The Mayor's Office stated, "the two cranes remaining on the construction site will be brought down in a controlled



Moments after ignition of the explosive charges to bring down a pair of tower cranes after the partial collapse of a hotel during construction

fashion. Expert engineers have developed a plan to conduct a controlled collapse of the cranes that will bring them down in place."

The 18-storey hotel building partially collapsed while under construction. Two people were confirmed dead and more than 30 were injured, including members of the public. The two tower cranes on site were left unstable as a result of the collapse, according to a statement released by the City of New Orleans Mayor's Office.

Citadel Builders began construction on the hotel in

2015 and was due to finish in spring 2020. A statement on the company's website said, "We appreciate the outpouring of support and concern over the tragic accident at our future Hard Rock Hotel site in New Orleans. We are shocked and saddened that there was loss of life, but we are equally grateful that the majority of those injured are now resting comfortably at home with their families. We will continue to monitor the condition of those who remain under medical care."

Investigations are under way to determine the cause of the building's partial collapse.

Norwegian company Asbjorn Dahlen Transport has taken delivery of a JF990 articulated crawler crane from Italian mini crane manufacturer Jekko. The JF990 was developed in conjunction with Italian loader crane manufacturer Fassi. It comprises a Fassi loader crane mounted on a Jekko crawler carrier. Norwegian dealer Jekko Norge delivered the crane.

The JF990 lifts 21.5 tonnes and the addition of a jib gives a maximum reach of 41 metres. An auxiliary electric motor enables the crane to operate in electric mode, thus reducing exhaust and noise emissions. A stabilisation system also features and it has a small footprint, which makes it easy to transport, said Jekko. In addition, the crane can be fitted with a two-person basket which can reach 38 metres in height and has a working radius of 34 metres.



HIGHLIGHTS

■ SC&RA and its partners are sponsoring 16 educational sessions at the ConExpo-Con/Agg exhibition in Las Vegas, USA, next March. SC&RA members can register at a discount at [www.scranet.org](http://www.scranet.org). Featured topics include: Practical ways to protect your company from lawsuits and large settlements; Crisis workshop: how to keep your company prepared; Best practices for inspecting and connecting your rigging; Responsibilities of onsite personnel for cranes; Managing crane ground bearing pressures; How to manage a crane accident; Crane inspection - how do you do that?

■ Al Faris has completed work on a wind energy project in Jordan. The company used a 500 tonne capacity Liebherr LTM 1500 wheeled mobile telescopic crane to install wind turbines. The company said the model, which was transported from its Saudi Arabia branch, was chosen as the most suitable to carry out the installation safely. The project, which required advanced planning and technical support, involved lifting loads weighing up to 80 tonnes.

Jan de Nul's 3,000 tonne capacity Voltaire jack-up vessel is destined for the Dogger Bank wind farm



# Board changes at Terex

Terex Corporation in the USA is changing the composition of its board of directors.

Brian Henry, senior vice president, business development and investor relations will leave the company at the end of 2019. Henry led Terex merger and acquisition activities throughout his 29 years at the company.

More than 50 transactions were completed to form Terex as it is today. Randy Williamson takes over as vice president, business development and strategy. He will report to John Garrison, Terex Corp chairman, president and CEO.

Garrison commented, "Brian has been the consummate leader of the Terex's business development and architect of the company's acquisition and disposition strategy. Brian also led Terex's investor relations activities, bringing a unique

knowledge and perspective of the company's business, its competitors and the industry generally. On behalf of the Board of Directors and all Terex team members, I want to thank Brian for his many contributions to Terex over the course of his 29 years with the company. We wish him the best."

Eric Cohen, senior vice president, secretary and general counsel, leaves Terex on 31 December 2019. He will be succeeded by Scott Posner who will join the Executive Leadership Team and report directly to John Garrison. Posner joined Terex in 2004 and has taken on increasing responsibilities in the legal department, most recently as vice president, assistant secretary and deputy general counsel.

Garrison commented, "On behalf of the Board of Directors and all Terex team members,

I want to thank Eric for his extraordinary contributions to Terex over the course of his 22 years with the company. We wish him the best."

Stacey Babson-Smith, vice president, chief ethics & compliance officer, will report to John Garrison from 1 January 2020. She will continue on the Executive Leadership Team. Babson-Smith previously reported to Eric Cohen.

After 19 years in the role Kevin Barr will step down as senior vice president, human resources and chief human resources officer, and leave the company at the end of the year. Amy George will succeed him, reporting to Garrison. She joined Terex in 2007 and has been responsible for company-wide talent management initiatives and the global diversity and inclusion agenda, Terex said.

## 3,000 tonne Voltaire crane vessel for Dogger Bank

Maritime infrastructure specialist Jan de Nul will use its record-breaking jack-up vessel, Voltaire, to install wind turbine blades on the world's largest offshore wind farm.

The Luxembourg-based company's vessel, with a lifting capacity of more than 3,000 tonnes, will stand taller than the Eiffel tower. It is claimed to be the largest of its kind in the

world. Following its 2022 launch from the Cosco yard in Qidong, China, Voltaire will head for the Dogger Bank project 125 km off the UK's northeast coast.

Duties will include transporting and installing 107 metre blades on the world's largest Halliade-X turbines, built by General Electric. The wind farm, being developed by SSE Renewables and Equinor, will be constructed in three elements, between 2020 and 2026. At 3.6 GW it is expected to produce enough power for 4.5 million homes, or about 5% of the UK's energy needs.

Philippe Hutse, offshore director at Jan De Nul group, said, "We are delighted to be selected as the transport and installation contractor for the next generation of turbines at Dogger Bank. The size of this

giant project coincides perfectly with the capacities of our jack-up vessel Voltaire. It underlines that we are entering a new phase of OWF [offshore wind farm] construction. We are proud to be at the forefront of offshore wind construction at Dogger Bank."



A 51 tonne capacity (at a 2.5 metre radius) rough terrain crane has been launched by manufacturer Kato in Japan. The SR-500LX is ready for delivery with its 42 metre, five section telescopic boom. For full details see the rough terrain crane feature starting on page 19.



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# **LIEBHERR**



**HIGHLIGHT**

■ Austrian crane and transport specialist Felbermayr will get a new group headquarters in Wels-Oberthan, Austria. Horst Felbermayr, group CEO, said the occasion marked the end of many years searching for the right location, "We were looking for a long time, had to overcome many hurdles and also make some compromises. Today I am delighted to be able to give the starting signal for future generations." The new build will include an employee restaurant, fitness area and a childcare facility. "This will create an ideal working environment for balancing work and family," Felbermayr continued. Completion is planned for the second quarter of 2021. It will accommodate the 700 employees in 100,000 square metres of space on a 40,000 square metre footprint.

# V-frame gets it done

A tricky bridge lift was made possible by crane owner Emil Egger in Switzerland using a special ballasting system on its Liebherr LR 11000 crawler crane.

It was the first time the V-frame and VarioTray had been used. Egger mounted the hydraulically adjustable folding frame for the suspended ballast on the 1,000 tonne capacity crane.

A shortage of space on the bridge job meant that without the V-frame it would have been significantly more expensive, the company said. In addition to limited room there were protected trees and the heavy bridge had to be lifted into place over a river after slewing through 180 degrees while at long radius.

Commenting on the job

Emil Egger on the bridge lift with its liebherr LR 11000 and, Inset, Michael Egger, managing director, in the thick of it



Michael Egger, company managing director and crane enthusiast, said, "Without the hydraulically adjustable ballast radius, hoisting the bridge would have been significantly more expensive. First, it would have required much more expensive work on the embankment to get closer to the abutments with a crawler crane. And then we would also have required a much longer crane track to complete the bridge immediately in front of the abutment."

V-frame allowed a reduction in suspended ballast radius to 13 metres after lifting the 380 tonne load. The ballast pallet could be guided past a row of protected trees as the crane slewed. Having placed the railway bridge at a radius of 38 metres, the 440 tonne derrick ballast pallet was at a distance of 28.5 metres.

Using the VarioTray detachable ballast function helped speed up the operation. Unbolting the central section of suspended ballast means no mobile crane is needed.



Western Pacific Crane and Equipment in the USA celebrated its purchase of a new National Crane NBT30H-2 TM boom truck at the International Construction & Utility Equipment Exposition (ICUEE). The crane was displayed on the Manitowoc booth at the 2019 show, which was held in October at the Kentucky Exposition Center in Louisville, Kentucky.

Western Pacific said it added the crane to its fleet because of its great value in oil field work and utility applications, as well as everyday taxi crane service.

"We're excited to have this crane in our fleet," said Bob Johnson, Western Pacific president. "The combination of high capacity and best-in-class boom length makes this crane a perfect fit for utility companies. The longer boom enables customers to pick up loads at the rear of the trailer without detaching from the kingpin."

## Strong rise at Cargotec

Hiab and Kalmar led the growth for crane and materials handling equipment group Cargotec in the first three quarters of 2019.

Sales overall for the Corporation were up 11 per cent, to €2,669 million (US\$ 2,968 million), from €2,394 million (\$ 2,662 million) in the first three quarters of 2018. Operating profit was €162 million (\$ 180 million), up from €129.1 million (\$ 144 million), representing 6.1 % of sales instead of 5.4 % a year earlier.

Sales in the Hiab hydraulic loader crane segment were €982 million (\$1,092 million), up an impressive 18 % on the €831 million (\$ 924 million) in the same period a year earlier. Kalmar

port crane sales were up 7 % to €1,252 million (\$ 1,392 million) from €1,174 million (\$ 1,306 million). Sales in the MacGregor offshore crane and deck handling equipment segment also increased, by 12 %, to €436 million (\$ 485 million), from €389 million (\$ 433 million).

Commenting on the results, Mika Vehviläinen, Cargotec CEO, said, "I am pleased with the good development that continued in Kalmar and Hiab in the third quarter. Kalmar's comparable operating profit increased by 24 per cent and Hiab's by 41 per cent. Our actions to solve Hiab's supply chain challenges which we started earlier this year proceeded as well.





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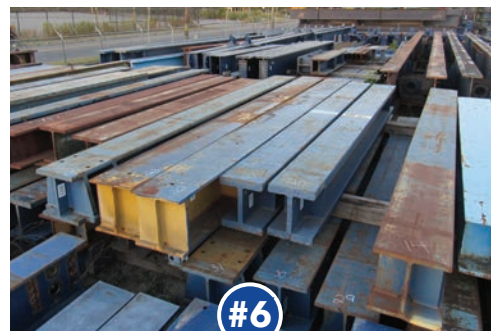
**BID ONLINE: NOV. 25 - DEC. 10**



#5

**Shop Tools & Equipment**

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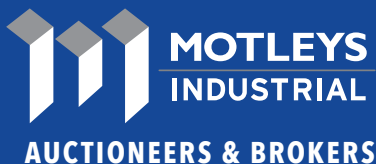
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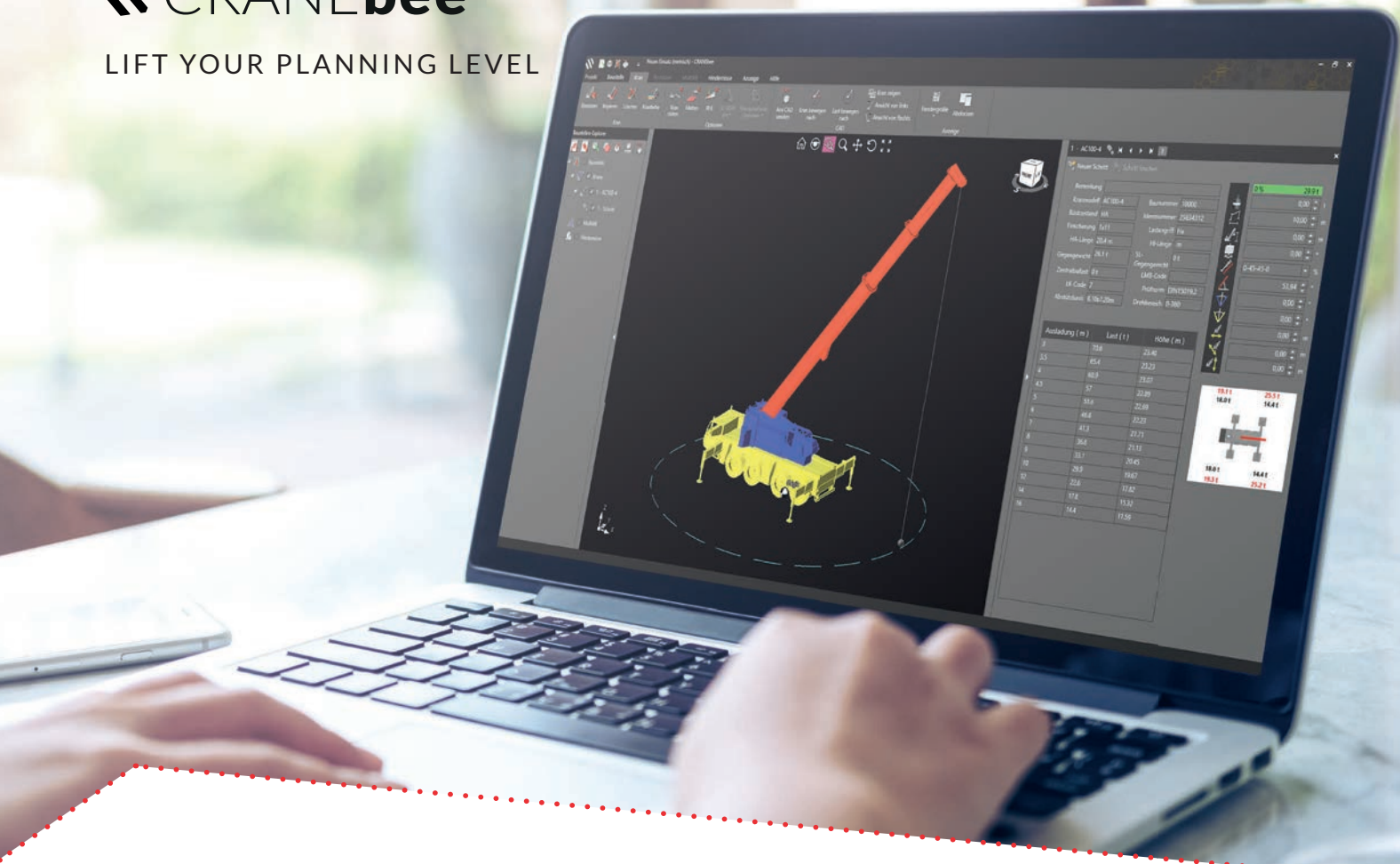


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The first pieces of the Mammoet Focus 30 crane

# Focus build begins for Mammoet

Steel has been cut for the first unit of Mammoet's heavy lift Focus crane.

The Focus 30 is a 2,500 tonne capacity class lattice boom crane particularly suitable for use in confined areas and congested sites. It can be erected vertically without large areas of clear ground in which to assemble and lay out a long boom.

Around 1,000 tonnes of steel will go into the new crane which will be built by several

subcontractors. Underway at the time of writing were the work packages for the under and upper carrier, boom systems, erection frame, drive and control systems, winching components and hoist blocks, Mammoet said. Liebherr will supply the winch system.

Jacques Stooft, Mammoet director of market development and innovation, said, "We are confident that the selected vendors will provide the high-quality components necessary

## FINES FOR SEATTLE TOWER COLLAPSE

Three companies were fined a combined total of US\$107,200 for safety violations related to the collapse of a tower crane in Seattle, Washington, USA, on 27 April 2019.

An investigation by the Washington Department of Labor & Industries (L&I) "determined that the crane collapse was caused by the companies not following the manufacturer's procedures for dismantling the structure, including prematurely removing nearly all of the pins and sleeves that helped hold the crane together.

"With the pins removed, the tower was significantly weakened, making it susceptible to the 45-plus miles per hour wind gust that toppled it. When the pins are in place, tower cranes can withstand much stronger gusts," the statement read. Crane owner Morrow was fined \$70,000, GLY Construction, which leased the crane for the job, \$25,200, and the company providing the crew for the dismantling, Northwest Tower Crane Services, \$12,000.

Four people died when the crane collapsed. Joel Sacks, L&I director, said, "This tragic event must not be repeated. We expect all companies to follow manufacturers' procedures and have a single point of authority overseeing crane assembly or disassembly. There has to be one person on site who knows the rules and is in charge."

to bring our Focus 30 to reality. We believe that a good relationship between contractor and supplier is the foundation for a high-quality product. For this reason, we have chosen

many local vendors to ensure close interaction throughout the building process."

The first Focus crane is scheduled to be available in the second quarter of 2020.



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We return to a decline for most of the companies in our Index compared to the previous period. CHRISTIAN SHELTON reports

# Mixed fortunes

**M**anitowoc displayed the largest percentage decline between the weeks 38 to 41 compared to the previous period.

Manitowoc's share price has been turbulent. Low plant utilisation rates and a depressed oil and gas sector, an area in which the company has traditionally been particularly active, have been attributed to undermining investor confidence. This may, however, be offset by the company winning a \$28.2 million contract to provide Grove GMK4060HC all terrain cranes to the US Army. It has also appointed a new sales director, Luciano Dias, for Manitowoc Brazil.

The company's third quarter

earnings are released after the close of the market on Thursday 7 November 2019 and should provide further insight.

The second biggest decline was displayed by Terex. Investor uncertainty following Tadano's purchase of the Demag brand and Terex's sale of its USA crane business perhaps remains, although the company's streamlined crane portfolio, now comprising tower cranes and rough terrain cranes, fits with its 'focus, simplify, and execute to win' philosophy. Whether Terex's streamlined portfolio translates into renewed market vigour and increased investor confidence only time will tell.

Positivity for the company's

fortunes was voiced by many attendees at a recent customer event in Italy where Terex showcased three new tower cranes, although this could be a view to be expected from loyal customers. In addition, the company has also effected a flurry of board changes but how this will affect investor's mindsets is hard to second guess.

In the company's third quarter results it reports global sales are down \$1 billion, down 7 percent compared to Q3 2018. John Garrison, Terex Chairman and CEO attributes this to a softening environment for industrial equipment. "Looking ahead to 2020, we are operationally planning for sales to be approximately 10 percent lower than 2019 due to the softening macro environment for industrial equipment," he said.

At the other end of the spectrum, Zoomlion has shown a positive price change on the previous period. The Chinese-based manufacturer has announced it will debut access products for the US market in December this year, fuelling investor confidence. Plus, the company has just sold 47 ZRT850s rough terrain cranes worth nearly \$14 million to an undisclosed buyer from the Middle East.

Yongmao Holding shows the biggest positive change on the previous period, fuelled by a heady mix of large orders, a buoyant Asia Pacific tower crane market, and government infrastructure investment. ■

## NOVEMBER IC SHARE INDEX

STOCK	CURRENCY	PRICE AT START	PRICE AT END	PRICE CHANGE	% CHANGE	PRICE 12 MTHS AGO	12 MTH % CHANGE
<b>IC Share Index*</b>		<b>67.89</b>	<b>64.85</b>	<b>-3.05</b>	<b>-4.49</b>	<b>55.44</b>	<b>16.97</b>
Legacy IC Share Index**		245.56	223.60	-21.96	-8.94	341.70	-34.56
Dow Jones Industrial Average		27,095	26,346	-749	-2.76	26,654	-1.16
FTSE 100		7,354	7,168	-186	-2.52	7,367	-2.70
Nikkei 225		22,079	21,552	-527	-2.39	23,675	-8.97
Hitachi Construction Machinery	YEN	2,660	2,478	-182	-6.84	3,710	-33.21
Konecranes	€	30.28	26.18	-4.10	-13.54	32.61	-19.72
Kobe Steel	YEN	582	560	-22	-3.78	965	-41.97
Liugong	CNY	6.49	6.34	-0.15	-2.31	10.72	-40.86
Manitowoc	US\$	13.50	10.70	-2.80	-20.74	25.95	-58.77
Palfinger	€	5.90	23.70	-2.20	-8.49	30.30	-21.78
Sany Heavy Industry	CNY	14.82	14.42	-0.40	-2.70	8.68	66.13
Tadano	YEN	1,056	995	-61	-5.78	1,274	-21.90
Terex	US\$	27.71	23.37	-4.34	-15.66	42.21	-44.63
XCMG	CNY	4.66	4.52	-0.14	-3.00	3.90	15.90
Yongmao Holding	SGD	0.76	0.84	0.08	10.53	0.50	68.00
Zoomlion	CNY	5.91	6.06	0.15	2.54	3.71	63.34

\*IC Share Index, 1 Jan 2011 = 100

\*\*Legacy IC Share Index, end April 2002 (week 17) = 100

## EXCHANGE RATES - VALUE OF US\$

CURRENCY	VALUE AT START	VALUE AT END	VALUE CHANGE	% CHANGE	VALUE 12 MTHS AGO	12 MTH % CHANGE
CNY	7.088	7.125	0.0378	0.53	6.85	4.07
€	0.9051	0.9076	0.0025	0.28	0.8515	6.59
Yen	107.98	107.42	-0.56	-0.52	112.56	-4.57
UK£	0.7979	0.8176	0.0197	2.47	0.7851	4.14

Period: Weeks 38 to 41



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#### **GRT655/GRT655L**

Capacity: 51 t (55 Ust)

Main boom (GRT655): 34,8 m (114.3 ft)

Main boom (GRT655L): 43,0 m (141.2 ft)

#### **GRT880**

Capacity: 80 t (80 Ust)

Main boom: 41,1 m (134.7 ft)

#### **GRT8100**

Capacity: 100 t (100 Ust)

Main boom: 47 m (154.3 ft)

#### **NEW GRT9165**

Capacity: 150 t (165 Ust)

Main boom: 62,5 m (205 ft)

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Link-Belt's  
new 120|RT

# Pick and mix

**A depressed oil and gas sector translates into a slow market for rough terrain crane manufacturers.**

**CHRISTIAN SHELTON reports**

**R**ough terrain cranes have traditionally been particularly popular in the oil and gas sector. Yet as these industries have experienced a general global decline the rough terrain crane market is not as buoyant as it has previously been. This was perhaps most starkly illustrated by lack of rough terrain crane launches at this year's Bauma trade show in Munich, Germany, with USA-based company Link-Belt being the only large manufacturer to launch a totally new model.

There are signs of positivity, however, as nearly all the main manufacturers had some type of rough terrain representation on their stands at Bauma and, as we approach the next large trade show, ConExpo, new models are starting to make their way onto the market.

## Kato

The most recent rough terrain crane on the market is the SR-500LX from Japanese crane manufacturer Kato. It has a 51 tonne capacity at a 2.5 metre radius. Its five-section telescopic boom extends to 42 metres. It has a 9.4 metre to 13.7 metre telescopic luffing jib, called EJib, which can be used with the main boom at any length. Capacity is 4.2 tonnes with the main boom set at 72 degrees and it gives a maximum lifting height of 57.1 metres. The jib can be offset between 5 and 60 degrees. Outriggers can be set at four positions, from a fully retracted

2.48 metres up to 7 metres fully extended.

Power is from a 200 kW, 7.5 litre Mitsubishi 6M60-TL straight-six diesel with electronically-controlled common rail fuel injection. Maximum torque is 785 Nm at 1,400 min<sup>-1</sup>.

Accommodation and controls are all improved over the previous model, Kato said. A touchscreen allows monitoring and adjustment and there is an Eco switch function to optimise engine speed according to what is required for the crane's activity. Data logging is included and the new ACS moment limiter keeps capacity within a safety margin and allows working range limits to be set.

Dimensions for road travel are 2.9 metres wide, 12.76 metres long, including the boom overhang at the front, and it's 3.88 metres tall. Gross weight is given as 37.075 tonnes.

Prior to this most recent launch, at the Bauma show, Kato launched a 25 tonne capacity CR-250RV Cityrange model. It is a two-axle mini rough terrain or city class hydraulic telescopic crane with 29 metre full power boom. Fly jib extensions give from 5.3 to 8.2 metres of extra reach with hydraulic telescoping and offset to 60 degrees and all under load.

Power is from a 205 kW Cummins QSB 6.7 litre Stage V diesel. Axle loads are less than 12 tonnes, the manufacturer said, and suspension on both axles is hydro pneumatic.



Kato SR-500LX

A camera system is fitted as standard and in the cab there is a new 300 mm colour touchscreen control system. Its short tail swing radius of 2.42 metres is designed to allow use in confined spaces and urban areas.

## Link-Belt

The new Link-Belt crane launched at Bauma is the 120|RT. It has a capacity of 110 tonnes (120 US tons) provided via a six-section 11.6 to 50 metre (38.3 to 164.1 foot) pin and latch formed boom.

It typifies a trend toward manufacturers producing larger capacity rough terrain cranes. "Right now it seems the larger you go in capacity the more active the market," confirms Kelly Fiechter, product manager rough terrain cranes, Link-Belt.

The 120|RT has a two-piece 10.7 to 17.7 metre (35 to 58 foot) on-board offsettable fly with manual offsets at 0, 15, 30 and 45 degrees. The fly boom has been designed to be erected by one person with the aim of minimising work at height. It has ground controls for fly assist and boom hoist cylinders. Two 4.9 metre (16 foot) lattice insert extensions provide a maximum tip height of 79.8 metres (261.7 feet).

The six-speed transmission is powered by a Stage V/Tier IV compliant Cummins QSB 6.7L 232 hp (173 kW) diesel engine. A Tier III Cummins QSB 6.7L 240 hp (179 kW) diesel engine is also available.

The axles are mounted to the carrier via a greaseless four-link suspension system. Routine service is aided by centralised electrical locations, remote mounted filters, and easy-access fluid checks, said Link-Belt.

The 24 volt electrical system uses controller area network (CAN bus) wiring. This, Link-Belt said, enables multiplexing between the crane's five modules, which

control key functions, including outrigger beams and winches. This means that in the event of a module being out of use other modules compensate and enable the crane to keep on working.

Access to the carrier deck is facilitated via new ladders. Link-Belt says that regardless of slew angle the operator has easy access to the flat deck from the cab. The 120JRT has textured paint and slip-resistant finish on the carrier deck.

The crane uses Link-Belt's V-CALC (Variable Confined Area Lifting Capacities) system. This has 81 outrigger configurations with real-time 360-degree charts. Once outriggers are set, Link-Belt explained, its Pulse 2.0 control system indicates the crane's available capacity. The system then previews the operator's real time capacities given the crane's current configuration at the next five radii for a set boom angle. When selected, the Pulse 2.0 can provide a live view of the working area with colour-coded quadrants. If the chart exceeds capacity at a given slew angle, swing arrest will initiate five degrees prior – allowing the crane to come to a smooth stop, Link-Belt explains.

Information is displayed via a 254 mm (10 inch) touch screen display. The Link-Belt Pulse 2.0 system is customisable and can be updated and serviced remotely.

The crane's upper frame is built from high strength steel and houses a new winch design. Link-Belt said the new winch has 'ultra-wide' drums for increased line pull at higher working layers. The maximum winch line pull is 105.1 kN (23,632 pounds). The system uses hydraulic outboard routings and the wiring harness is designed to be easier to service, explained Link-Belt.

The standard counterweight comprises three removable slabs weighing a total of 13.2 tonnes. The crane has the same cab that was launched in 2017 on Link-Belt's 75JRT, meaning it can tilt 20 degrees.

Lighting-wise, Link-Belt said it has fitted the crane with dual amber strobe lights,



Manitowoc's GRT 8100 is now also made at the company's Niella Tanaro factory in Italy

LED working lights and outrigger lights. A camera vision package is available to enhance on-board site monitoring. It includes a back-up camera, as well as cameras for viewing winches and the right side of the upper.

With a fully-equipped base unit, minus modular counterweights, the crane weighs 42 852 kg (94,472 pounds). It has a height of 3.91 metres (12 feet 10 inches).

### Manitowoc

The trend towards larger rough terrains is also noted by John Bair, product manager for Grove cranes at USA-headquartered crane manufacturer Manitowoc. "The market has shifted over the last decade or so from the 60 to 70 tonne class being the most popular models in rental fleets to the 100 tonne class. Versatility is key for fleet owners. Having flexibility in reach and capacity is pivotal to ensure high utilisation."

Earlier this year Manitowoc displayed its 100 tonne capacity Grove GRT8100 and 51 tonne capacity GRT655L. The GRT8100 has a five-section full power boom, and a range of boom and insert options providing a reach of up to 77 metres. Both 10 metre and 17 metre manual and hydraulic offsettable extensions are available, as well as a heavy-duty three metre jib that is offsettable to 40 degrees.

The GRT655L is a smaller, 51 tonne capacity crane yet with a 43 metre, five-section boom. Its maximum working radius is 36 metres. A regular boom version of the crane,

the GRT655, is built on the same platform as the GRT655L, but with one less boom section, for a total main boom length of 34.8 metres.

Both cranes are built at the Manitowoc factory in Shady Grove, Pennsylvania, USA and, since the second half of this year, also at Manitowoc's factory in Niella Tanaro, Italy. The GRT8100 is the largest Grove rough-terrain crane built at Niella Tanaro. The company said that in 2018 it boosted production of Grove rough terrain cranes at the factory in order to better serve customers in Europe, Africa, the Middle East and Asia-Pacific.

### Zoomlion

A similar story regarding the state of the rough terrain market is related by Olga Dubinok, crane sales manager at Zoomlion North America. "The rough terrain market is coming out of a challenging stage due to collapsing oil prices back in 2014 and taking a slower recovery path," she said. "Although the market is not where we would like it to be the fact that rough terrains are hardworking machines and still have a high demand in utilisation in non-residential infrastructure, the energy sector and government projects makes us feel confident that growth of the rough terrain market will continue with decent pace and will reach its consistent strength in the period of 2019 to 2025."

At Bauma the company displayed the ZRT850 which is designed for oil field projects. The crane has a capacity of 85 tonnes and a five-section U-shaped boom that extends from 12 metres up to 47 metres. It comes with two trussed fly jibs. The main boom has 49.8 m maximum lifting height while the fly jibs give a 67.1 metre maximum lifting height. The crane has a new boom head and end structure with optimised boom connections designed to provide stronger load bearing capacities.

Following this exposure Zoomlion says it has just taken an order for 47 ZRT850s worth nearly US\$14 million from an undisclosed buyer from the Middle East. "The Middle East »

Zoomlion's RT850 at Bauma where it caught the attention of a buyer from the Middle East







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Terex's RT 90 and RT 1040L on display at a customer event in Italy



client showed keen interest in purchasing the crane at Bauma 2019," explains Lu Yangchen, director, Zoomlion construction crane research institute. "They then made the decision after making detailed comparisons with other cranes."

The ZRT850 has certification including ANSI (for North America), CE (for the EU), and EAC (for the Customs Union). It is the only rough terrain crane from China that has approval for Saudi Aramco Total Refining and Petrochemical (SATORP) job sites, says Zoomlion.

## Terex

Crane manufacturer Terex displayed its RT90 at Bauma and again, more recently, alongside its new tower cranes at a customer preview event at its testing site in Polcenigo, close to its Fontanafredda tower crane production facility in northern Italy. In Italy, the RT90 was shown alongside the RT1045 – demonstrating the importance of these models to Terex's newly streamlined portfolio.

The 90 tonne capacity RT 90 has a five-section, fully hydraulic boom that stretches 47 metres (154.2 feet). It comes with three boom modes: synchronised boom mode; strength mode; and stability mode. Maximum tip height is 66 metres.

The RT 1045L has a capacity of 44 tonnes at a 2.5 metre (8.2 foot) working radius. Maximum boom length is 37.4 metres and it has a maximum tip height of 47.8 metres (157 feet). Maximum hook height is 37.5 metres (123 feet).

The exposure is working for Terex, as the company reports that at Bauma its Algerian

**Tadano's GR 200EX on display at Bauma. It is designed to meet Australian road regulations**

distributor ETS SIAD Automobiles (Groupe SIAD) signed an order for nine Terex rough terrain cranes. Just prior to the show, the company also sold the US version of the RT 90 (the RT 100US) to New York state, USA-based crane sales and rental specialist Empire Crane. It is the first of this model in its fleet.

## Tadano

Japanese crane manufacturer Tadano has also expanded its capacity to produce rough terrain cranes with the opening of a new plant in Kozai, Takamatsu, Japan. The opening ceremony took place on 29 August. The new factory has been built on a 200,000 square metre plot of industrial land in the western Kozai district of the port of Takamatsu. In addition to rough terrains, it will also produce truck cranes, as well as booms and cylinders for Tadano operations worldwide. According to Tadano, the coastal location means large cranes can be easily exported.

At Bauma, Tadano had its GR 1200XL and GR 200EX models on display. The GR 1200XL has a capacity of 120 tonnes and a boom that extends from 12 to 56 metres. The GR 200EX is designed to comply with Australian road regulations. It has a maximum lifting capacity of 20 tonnes at 2.5 metres and a six-section long boom that extends from 6.5 metres to 27.5 metres.

Just prior to Bauma, Tadano upgraded its 15 US ton (13.6 tonne) GR-150XL-2 with the release of the GR-150XL-3. It has a 78.7 foot (24 metre) boom and capacity is increased by 70 per cent in terms of single line pull, the manufacturer said. This allows for improved hoisting performance and lifting capacity at most working radii on four parts of line, Tadano said.

Maximum lifting height with boom and jib is 97.5 feet (29.7 metres) and the maximum working radius is 85.5 feet (26 metres).

Tail swing has been reduced to 4.11 feet (1.25 metres) from 5.3 feet (1.63 metres) to improve working in confined space. Also to help in small spaces is an underslung hydraulically offset jib. Asymmetric outrigger

configurations are possible and the AML-E system calculates available capacity.

A new operator cabin is designed to be more comfortable and to offer better visibility. It includes a larger colour screen to replace the previous models black and white display. An Eco function means the crane controls the volume and pressure of hydraulic oil supplied according to demand so that it operates using what is necessary instead of an excessive amount. It reduces fuel consumption and environmental pollution.

## Chinese success

Chinese crane manufacturer XCMG reports that, in contrast to the general trend, in the first half of 2019 exports of its rough terrain cranes rose by 167 per cent. The company attributes the increase to the effect of the Belt & Road Initiative - a global development strategy adopted by the Chinese government involving infrastructure development and investments in 152 countries and international organisations in Asia, Europe, Africa, the Middle East, and the Americas. In particular, XCMG identifies strong demand from Russia, Central Asia and the Middle East.

Chinese crane manufacturer Sany also reported benefits from the Belt & Road Initiative. On 29 August Sany Heavy Industry released its semi-annual report for 2019. According to the report, it achieved operating income of RMB 43.386 billion in the first half of 2019, a year-on-year increase of 54.27 per cent and its best performance since it was founded.

At Bauma Sany displayed the 90 tonne capacity SRC900C, which was also displayed at Bauma China in 2018. It has a five-section U-shaped boom with a maximum boom length of 47 metres. Maximum load moment is 2,820 kN.m and a maximum fixed jib combination of 47 metres plus 17.5 metres.

So with Chinese rough terrain manufacturers reporting success, it will be interesting to see what new models emerge from other manufacturer for the 2020 ConExpo trade show in Las Vegas, USA. ■





# Link-Belt's 110 mt Rough Terrain Crane is off the charts!

## 120|RT

### 110 mt Rough Terrain Crane

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- TWO 4.9 M LATTICE BOOM EXTENSIONS AVAILABLE
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# Hinkley Point C

Hinkley Point C is one of the largest construction projects in the world. CHRISTIAN SHELTON visited the site.

**E**nergy provider EDF Energy is building two new nuclear reactors at Hinkley Point C (HPC) in Somerset, in the south west of the United Kingdom. HPC is the first new nuclear power station to be built in the UK in over 20 years and the project is extensive with over 4,000 workers presently on site. During peak construction up to 5,600 people will be on site at any one time. Construction started in the second half of 2016 and is expected to take around ten years to complete.

One of the most eye-catching cranes on the site, with its jib rising high above the other tower cranes, is the Favelle Favco M2480D Heavy Lift Luffing (HLL) tower crane, which is commonly dubbed 'the world's largest luffing jib tower crane'.

## Long haul crane

It was supplied by Australian heavy-lift luffing crane solutions provider Marr Contracting (Marr) for contractor Balfour Beatty, who is contracted to provide the construction of the outtake and intake tunnels for the cooling water for the two nuclear reactors.

Initially Balfour Beatty was considering using large crawler cranes and a gantry system to do the work. Marr persuaded Balfour Beatty, however, that this approach would require a lot of temporary works and double handling of componentry and that the M2480D located in a position where it could offer a single solution for all lifting requirements would work best.

The lifting requirements included installing a tunnel boring machine (TBM), reaching out to the tunnel segment storage area to lift and place tunnel segments, and constructing the conveyor system around the outside of the heat sink excavation.

Marr shipped the M2480D over from Australia and it was setup in February 2019 ready to commence work on the first reactor. It was setup using the assistance of a Liebherr LTM 11200 mobile crane owned by heavy lift and transportation specialist Mammoet. Setup took two weeks and, to assist, Marr sent a team of four from its Australian office



The Sarens SGC-250 has a lifting capacity of 5,000 tonnes



The SGC-250 will lift prefabricated nuclear reactor parts out of the domed building and slew them into position

(including riggers and fitters and an operator to train the Balfour Beatty team), plus another two personnel from its UK office.

The crane was erected on 72 metres of freestanding tower with 102 metre radius

boom and fly combination. It has a capacity of 25 tonnes at 100 metre radius and a maximum capacity of 220 tonnes in this configuration. According to Marr, this allows the M2480D to perform all the heavy lifting requirements in higher wind speeds and at greater speed than using traditional cranes. The freestanding crane occupies a smaller area than a similar size crawler in an already congested construction site and does not require a super lift attachment to complete any of its lifts compared to a heavy lift crawler option, Marr says.

By being on a 72 metre tower, the M2480D is well above any of the other luffing cranes on site so that Balfour Beatty can operate independently of other contractors working on the project. As an additional safety enhancement Marr designed an interface

»

between the M2480D's hydraulics control system (that controlled the hoist, luff and fly winches) with the anti-collision system being used across the other tower cranes on the project. This system is from French zoning and collision-avoidance equipment specialist AMCS Technologies which, by June 2019, had installed its DCS 61-S anti-collision and zoning system on 20 of the expected 55 tower cranes on the site.

## Collision avoidance

With the crane allocated to complete the tunnelling scope of work, it was still hooked into the AMCS system adopted by the project to ensure there was no clash with other work fronts. The AMCS system was also tailored to suit the main hook and auxiliary fly hook on the M2480D, which is something that has not been done before on the AMCS system, although Marr says it has done this before using other anti-collision suppliers on projects in Australia.

According to Marr, the installation of the TBM also presented Balfour Beatty with the challenge of how to rotate a number of heavy components from transport to installation. With Balfour Beatty reluctant to use two separate cranes to rotate the loads, Marr says it developed a procedure within its crane system which allows the loads to be picked up and rotated using the main hoist and fly hoist within a single crane lift simply and safely.

Managing director of Marr Contracting, Simon Marr, said, "We're incredibly excited to be working on this project. Although we are well-known at home (in Australia), this is our first project in the UK and it's great to be working with a team that is as forward-thinking and innovative as Balfour Beatty.



The M2480D was erected on 72 metres of freestanding tower

## DELIVERING THE GOODS

The delivery of the Sarens SGC-250 components from Avonmouth docks in Bristol to the Hinkley Point C construction site, a journey of 45 miles (73 km), was conducted by UK specialist contractor Collett. The Yorkshire-based company moved the crane's fabricated steel pieces with a total combined weight of more than 3,000 tonnes.

It took Collett two 12-hour day shifts to unload all the components from the delivery ship. A short timeframe meant Collett engaged all available crane services, including port cranes, mobile cranes and specialized transport vehicles. The pieces were arranged in a laydown area in the port to an agreed plan for sequential onward delivery to site in the order they'd be needed for the crane's assembly. The HPC Delivery Management System gave specific routes for the deliveries to pre-arranged dates and timeslots. In April Collett started transporting the crane pieces to site. Over the next four months Collett made more than 400 deliveries.

As problem-solvers who love a challenge, we tend to think differently – so it's been fantastic to work with a client that is as willing to embrace our heavy lifting technology as Balfour Beatty has been."

## Giant lifter

Perhaps the most eye-catching 'first' on the HPC site is from Big Carl, the 5,000 tonne capacity super heavy lift ring crane (with the nomenclature SGC-250), owned by Belgian-headquartered heavy lift and transportation company Sarens. This is the crane's first job and it started working at the site on Monday 23rd September following ten weeks of being rigged. It is scheduled to be there for the next four years during which time it will lift more than 600 pieces of prefabricated components. The heaviest lift will weigh 1,600 tonnes.

The crane was commissioned by the BYLOR joint venture. BYLOR is the consortium between UK-headquartered construction company Laing O'Rourke and French industrial group Bouygues TP and it is delivering the main civil engineering works at HPC worth more than £2.8 billion (US\$3.62 billion). BYLOR also commissioned the other tower cranes on the site that were mentioned earlier.

One of the SGC-250's key lifts, scheduled for around spring 2020, will comprise raising the dome of a building that houses prefabricated reactor building parts; it will lift these parts out of the dome building and slew them into the new reactor building. The dome building is used to ensure large components can be built on site in covered, factory-like conditions and is designed to help save time and improve quality. The dome will be lifted via 12 lifting points which will be equalised using Sarens's Sarspin load levelling system.

The crane will run on over six kilometres of ArcelorMittal steel rail. Three lift locations, comprising 48.5 metre turning circles, are linked by lengths of straight track. The crane runs on 128 wheels for slewing and lifting and on 96 wheels for travelling. It uses hydraulic



55 tower cranes will be on site, all fitted with anti-collision systems from AMCS

cylinders to switch from the ring to the straight rails.

The configuration of main hook block (which weighs 105 tonnes and has a capacity of 3,200 tonnes) has now been set, although the SGC-250 will be re-reeved for its heaviest lifts. The main block can take up to 60 falls of 50 mm wire rope. The jib hook (which weighs 58 tonnes and has a capacity of 1,600 tonnes) can take a maximum of 40 falls.

Rob Jordan, EDF construction director at Hinkley Point C, added, "The crane allows us to innovate in the way we build the power station, lifting complete pieces out of our factory bunkers and into place across the site. Pre-fabrication helps us boost quality, gives better conditions for skilled workers and saves time – that's good news for the project and an example of learning lessons from successes at other projects."

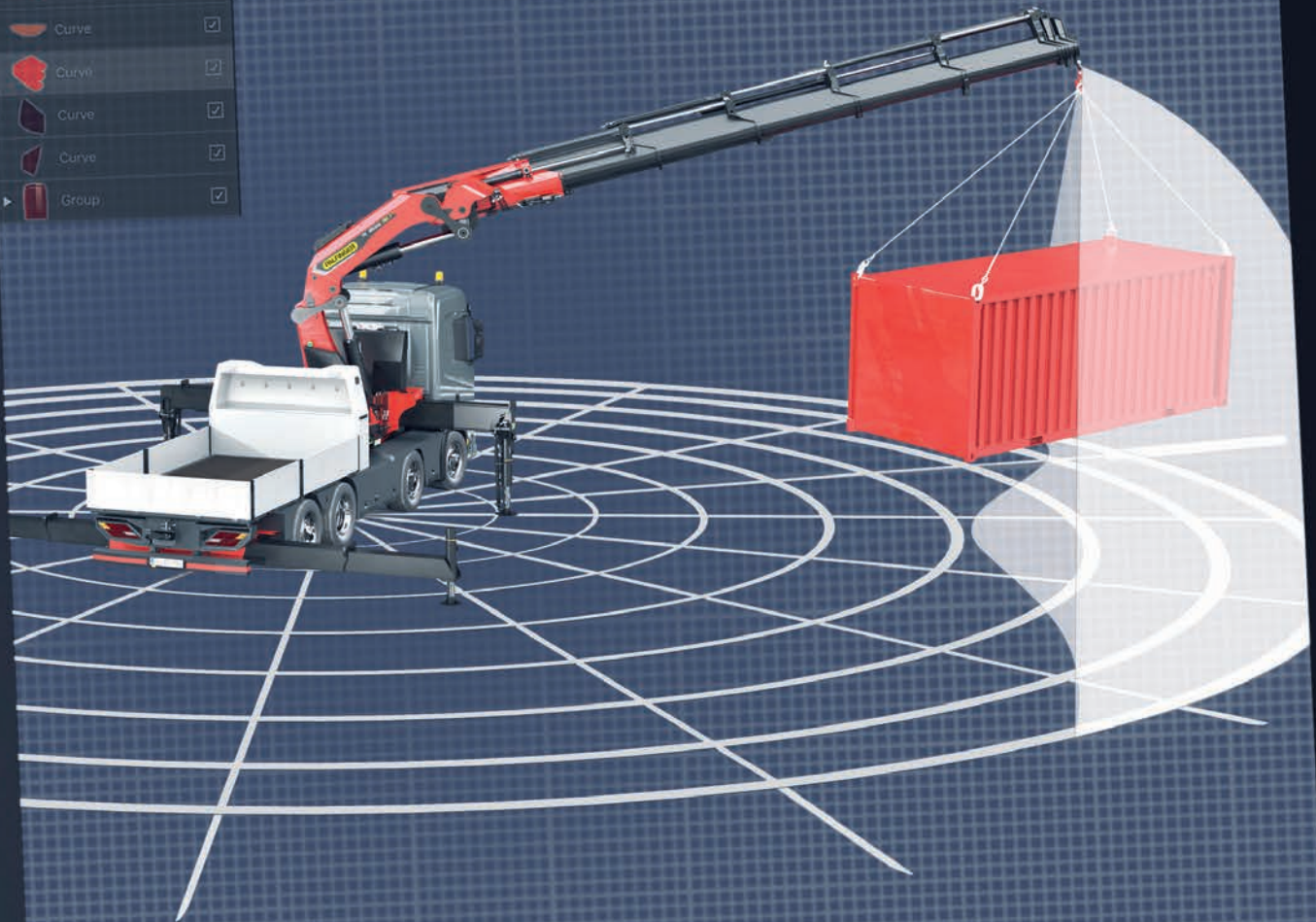
More details about the lifting procedures being used on the HPC project will be discussed by Ashley Daniels, head of lifting and temporary works, Hinkley Point C, EDF Energy, and Garrick Nisbet, head of lifting assurance, Notus Heavy Lift Solutions and lifting manager, Hinkley Point C, at the forthcoming World Crane and Transport Summit in Amsterdam on 13 November. If you are unable to attend this event, a video of the presentation will be posted on the ICST website in due course. ■



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C. Zwagerman Transport's new Nooteboom 4+6 EURO-PX low-loader

# New low-loader from Nooteboom



Cor Zwagerman

Netherlands-based transport company C. Zwagerman Transport has bought the first Nooteboom four-axle IC Interdolly Compact combined with six steered rear pendular axle lines. Dutch trailer manufacturer Nooteboom's 4+6 low-loader combination is its latest addition to the Euro-PX line and is the largest combination in this range.

Zwagerman's low loader, type Euro-147-46(ICP), was optimised for German regulations with an axle load of 12 tonnes at 80 km/h. According to Nooteboom, this means loads of 100 tonnes can be transported efficiently in and out of Germany.

Cor Zwagerman, director and owner of C. Zwagerman Transport, said, "The cranes and machinery that we transport are getting heavier all the time. This new low-loader is the largest Nooteboom has ever put on the road. With a German exemption the load capacity

is just over 100 tonnes and this enables us to enter a new segment of the market.

"This Nooteboom 4+6 low-loader has several advantages for us. To adapt the low loader, as far as possible, to comply with the German regulations for exemptions, the axle distance has been increased to 1.51 metres instead of the usual 1.36 metres. In practice this means that due to this larger axle distance, which minimises the load on bridges and viaducts, the exemptions in the various federal states of Germany are easier to obtain."

The trailer's close coupling system makes it easier to convert the trailer into a 10 axle semi low-loader. Load capacity is increased to around 110 tonnes and the steering of the Interdolly can easily be adjusted to this shorter configuration, Zwagerman continued.

"All the 4+6 low-loader components – such as the gooseneck, Interdolly, load floor and

axle assembly – are universally exchangeable with our 3+5 EURO-PX Nooteboom low-loader. This means we can put no less than 14 different configurations on the road and for us this is an economical and efficient alternative to modular trailers, which are complex and more expensive," Zwagerman said.

C. Zwagerman Transport driver, Paul van Wijk, said, "I drove the first Nooteboom low-loader with an Interdolly ten years ago. At first I did not see the advantage. In those days we had been working with a Jeep dolly for years. Initially I thought the smaller steering angle of the first generation Interdolly would be a disadvantage. But in practice this was not a problem and the new Interdolly now has a steering angle of up to 70 degrees. This makes the combination much more manoeuvrable than before and reversing is much easier than with a Jeep dolly."

## McIntosh adds Mercedes

Scottish heavy haulier McIntosh Heavy Logistics has added its first Mercedes truck to its fleet.

The 8 x 4 Arocs 4163 SLT tractor unit is plated at 180 tonnes gross combination weight. It has a 460 kW (625 hp), 15.6 litre straight six diesel engine and a turbo retarder clutch which works with the 16-speed Mercedes PowerShift automated manual transmission.

McIntosh is a division of family-owned McIntosh Plant Hire (Aberdeen) and specialises in work for the oil and gas sector. It has a 62 acre (25 hectare) depot 12 miles (19 km) inland from the city of Aberdeen. The company also offers plant and transport rental, civil engineering, and storage services. Among its fleet of 40 trucks are nine under the Special Types category.

The new truck will pull an eight axle

Goldhofer modular trailer and others from Faymonville and Nooteboom.

Gary McIntosh, company director, commented, "We've been doing this job for many years now so we know what we're looking for. The Arocs SLT was very well specified and kitted out and had a really smart paint job too. We came up with a livery design that complements this and have given it the personalised registration M100 MHL, so it looks fantastic."

McIntosh continued: "Reliability is the most important attribute that we look for in a truck, and I'm delighted to report that with nearly 37,000 km now under its belt, our first Mercedes-Benz hasn't missed a beat. The Arocs is also impressively economical – average returns of 6.6 mpg stack up very well against the competition."



Loading the McIntosh Heavy Logistics Mercedes Arocs 4163 SLT



# Saan puts Palfinger on Volvo tractor

Dutch crane and transport specialist Koninklijke Saan boosted its fleet with the addition of a Volvo FH 500 10 x 4 box tractor unit fitted with a 165 tonne-metre Palfinger truck-mounted crane.

The truck can be used as a box truck and as a tractor. It will be used for a wide range of projects, said Mark van Klaarbergen, Koninklijke Saan technical service manager,

## MAMMOET MOVES CRANES



The biggest STS crane the SPMT moved weighed 1,365 tonnes

Mammoet has relocated several container cranes at the Port of Veracruz in Mexico.

Three ship-to-shore (STS) cranes and 18 rubber-tyred gantry (RTG) cranes were moved as part of an expansion project, designed to increase the port's capacity.

Two trains of 28 axle lines of self propelled modular transporter (SPMT) were used to move the STS cranes, plus eight of the RTGs. While the heaviest RTG weighed 197 tonnes, the biggest of the STS cranes weighed 1,365 tonnes.

Mammoet crews then rolled them onto a barge and sailed them to the port's new terminal area, located 4 miles (6.5 km) away, where they were unloaded and left ready for use.

Mammoet said that completion of the expansion project's phase one had tripled the port's cargo capacity, from approximately 24 to 66 million tonnes.

Described as one of Mexico's most important maritime infrastructure projects, owners Hutchinson Ports ICAVE, is investing around 31 billion pesos (US\$1.6 million) in upgrading the facility.

A further 10 RTGs will be moved at the end of 2019 as part of phase two of the project, which is said will raise the port's cargo capacity to a total of more than 95 million tonnes.

"This can involve hoisting work in the construction, transport of machines and construction, but also moving sensitive equipment or art objects."

The 500 hp truck has two 9 tonne front axles with air suspension and 10 tonne hydraulically steered trailing axle. Also specified was an I-Shift gearbox, Volvo Dynamic Steering and the Work Remote wireless remote control. Its front Frame Extension allows fitment of an outrigger for full 360 degree lifting. The crane was a Palfinger PK 165.002 TEC7 with PJ240 jib and an MFA fly jib.

Requirements set out by Saan included a maximum length of 10 metres and for the gross vehicle weight (GVW) not to exceed 45 tonnes. The configuration was established by looking for the optimum ratio between the lifting capacity of the crane, its reach, the length of the truck chassis and the GVW.

Van Klaarbergen explained, "With these specifications, we can enter Amsterdam with this vehicle without having to apply for a 45 tonne exemption. We can, therefore, always respond quickly to customer demand. With crane rental in the construction industry in



Koninklijke Saan's new Volvo FH 500 10 x 4 with Palfinger PK 165.002 TEC7 crane out at work

particular, we regularly have to anticipate orders that arrive last-minute.

"Furthermore, it is necessary for the truck to be strong and stable enough for a 165 tonne-metre crane, which is the heaviest Palfinger loader crane that can still be folded behind the cab. This leaves room for a fifth wheel or for carrying cargo in the removable container."

Volvo delivered the chassis straight from the factory, van Klaarbergen said, which shortens delivery time and cuts costs.

## XCMG targets Middle East

Chinese crane manufacturer XCMG, along with commercial vehicle manufacturer Beijing Foton International Trade, has exported 50 articulated boom truck mounted cranes for the Middle East market. XCMG said it conducted extensive research into the requirements of the market in this region and used this analysis to develop the crane.

According to XCMG, the sale demonstrates the success of its strategic co-operation initiative with Foton under the 'double brand

XCMG has sold 50 articulated boom truck mounted cranes into the Middle East

- double channel' banner. The co-operation between the two companies started in 2018 when vehicles with a Foton chassis and an XCMG superstructure were launched, selling almost 100 units in that year. From January to August 2019 XCMG said it sold more than 100 units of XCMG-Foton integrated vehicles.





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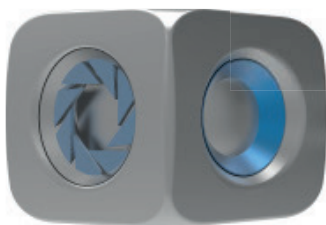
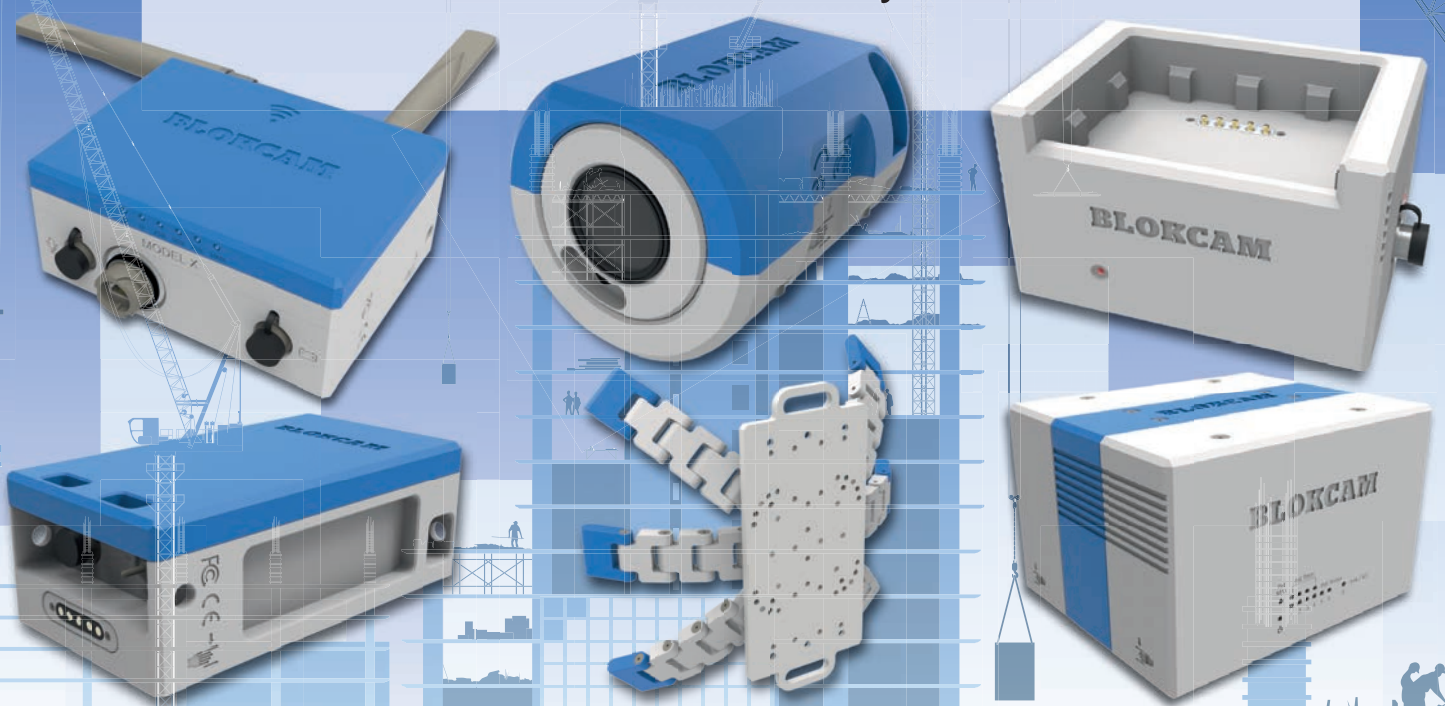


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# BLOKCAM



Safety is a key focus for below the hook equipment manufacturers. Responsibility, however, also needs to be taken by end users. CHRISTIAN SHELTON reports

## BEAM CAPACITY INCREASE

Below the hook heavy lifting equipment manufacturer Modulift has enhanced its adjustable lifting and spreader beam type MOD CLS so that it can now lift up to 27 tonnes (up from 8.5 tonnes).

The beam also has a new and improved clamp system enabling lifting from multiple points. The beam can have a span of up to 16 metres and it has adjustable lifting points and low head room capability. Modulift says it is easy to convert between a lifting beam and a semi spreader beam and can be bought as a pre-packaged, off-the-shelf product.

The beam's clamps are pre-assembled with a redesigned safety mechanism which Modulift says means it's easier for one person to operate and to slide and safely lock into place. In testing trials Modulift says this has been done in less than one minute.

The updated beam comes with four clamps as standard so the beam can be formatted with either a single top lifting point (lifting beam) or double top lifting points (semi spreader beam). Modulift can also supply custom length beams depending on lifting requirements.

The MOD CLS can also be fitted with up to four an additional clamps on the bottom side allowing users the flexibility of additional lifting points. If more points are needed the flexible system can also be designed as a H-Frame, Modulift adds.

# Raising awareness

**A** general lack of understanding over one trip or single use and low quality slings is threatening safety in the construction, timber and steel sectors, as well as in ports and docks, warns Dave Cormack, Board Member of the UK-based Lifting Equipment Engineers Association (LEEA).

The term one trip sling is given to a sling designed for the specific purpose of attaching to and accompanying a specific load from source, through a defined number of handling operations, until it reaches its final destination. Once this trip has concluded the sling must be destroyed and not reused. Duty holders will be culpable for non-conformance.

One of the main routes for one trip slings into a country is via ship's cargo being discharged in port.

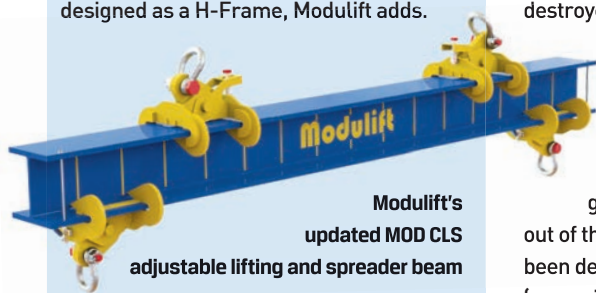
Unfortunately, a lack of awareness is giving many of these slings free passage out of the docks, where they should have been destroyed once removed from the cargo (assuming that was their final destination).

They are often mixed in with general purpose slings on construction sites, timber yards or a steel stockholder's facilities. This is where there is an increased risk of accident.

Staff may see a one trip sling lying around on site, perceiving it to be relatively new and suitable for reuse slinging a load of material. Rather than seeing a sling go to waste they might throw it back into their tool box or equipment store and use it for weeks or months without realising that it is not designed for general purpose use and is, therefore, potentially unsafe. It might be that somebody points it out in time but, if not, something could go tragically wrong.

## Further use

The reality is that such actions put users at risk at the other end of the sling's trip. It also affects the employer because, in the event of an accident, they would be asked why they allowed a one trip sling to be used for general purpose lifting. This issue is not



Modulift's updated MOD CLS adjustable lifting and spreader beam



only with slings designed specifically as one trip but also with those that do not meet the required standard or quality. A sling made to an industry standard in one country may not comply in another.

As an example, the EU Machinery Directive says that general purpose slings must have a safety factor of 7 to 1. This is for the UK and the rest of Europe. US regulations only require a 5 to 1 factor. When a sling bought in the USA and manufactured to US regulations arrives in the UK, it will not meet UK or EU compliance so will need to be controlled in a similar manner to a one trip sling.

Users also need to be made aware that low quality slings, manufactured without complying with any standards, are also out there and they must ensure these do not find their way into general purpose use.

The capacity of general purpose slings can

## IN THE ROUND

Lifting gear supplier Rope and Sling Specialists (RSS) in the UK has delivered 300 eight tonne capacity Miller Weblift polyester



roundslings to an undisclosed customer in mainland Europe. According to RSS, the two metre long slings, which have a circumference of 24 metres, are the latest in an ongoing series of overseas orders to countries including Ireland, Norway, Holland, Canada and Kazakhstan.

Davey Walker, business development director (Scotland) at RSS, said, "The order was another example of RSS emerging as a preferred supplier to an overseas project. The client specified polyester slings and the capacity required. On this occasion we didn't match a rigging solution to a specific load, application or lift."

Roundslings are made from hanks of yarn enclosed in a sheath creating an 'endless' configuration. The yarns remain uniformly loaded during lifting.

Walker, who is based at the company's Grangemouth, Scotland, site, added, "I've experienced the various ways lifting equipment can be provided and serviced in the field but, by far the best in terms of value, efficiency, and safety, is when the equipment and supporting expertise is delivered by individuals and businesses that work exclusively in that niche. Through manufacture, supply, repair, testing, and inspection, the benefits to end users in working with lifting equipment experts are incalculable."

## Tensa has won a safety award in Australia for its Roborigger tagline eliminator device

be identified by their colour. Many one trip slings are made from white webbing but many half-tonne or intermediate capacity slings are also white or even black. It is vital to educate people that because a sling is assumed to be one trip, it isn't necessarily so. LEEA advises that colour should never be used to identify a sling's working load limit (WLL) – always check the label.

## Take control

One trip slings are legal and absolutely safe to be used for their designed purpose. Their use, however, must be controlled. Users must be educated on the limitations of use and they also must be instructed to destroy them to prevent re-use. Everybody down the line should have the information to identify one trip slings and the knowledge of what to do with them. Without this information it is impossible to properly plan the lift as required by legislation. In that case it leaves the user at risk and the duty holder culpable for failure to address the risk through proper planning of the lifting operation.

LEEAA is promoting this issue around the world and is preparing to publish guidance to help those using one trip slings remain compliant. It plans to include information in the form of a pamphlet for staff on one side so it can be posted in canteens or be included in training sessions and risk assessments. The other side will address health and safety advisors to help them offer advice to users.

It is vital, LEEAA emphasises, that duty holders and users become aware of this important safety issue. Slings without instruction to the limitations and illegible markings, should be destroyed at pre-use check and the cargo re-slung. This would mean at the quayside for many slings and long before the load reaches its final destination.

The majority of these slings need to be destroyed as soon as they are removed from the load, stresses LEEAA. Failure to do so and continuing to use them puts users at risk. Duty holders will be culpable in the event of failure and injury to persons, for not executing an adequate lift plan and taking sufficient precautions to reduce the risks associated with these slings. Staff need to be trained to destroy one trip slings when required



to do so and start implementing tighter controls around the use of this equipment.

One trip slings must never be reused beyond their design life, LEEAA concludes.

## Don't risk it

UK-headquartered company Modulift, a manufacturer of spreader beams, spreader frames, lifting beams and other below the hook heavy lifting equipment, is also committed to raising awareness around safety issues. This prompted the company to release a safety alert in July 2019 warning below the hook equipment users that there are other brands launching products claimed as being compatible with the Modulift spreader range but that are actually not.

All Modulift's products are certified. If they are combined with equipment from other brands, however, this certification becomes invalid. This, Modulift says, means below the hook users must get equipment combinations proof load tested prior to each and every lift. The company has an in-house compression test rig capable of proof load testing spreader beams up to a load of 1,650 tonnes and spans of 28 metres. "Don't risk lives and don't risk your business," Modulift warns. »



Elebia's eTrack

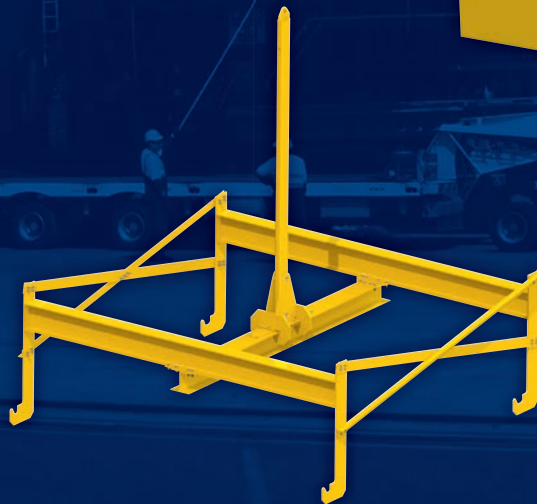


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Proof testing is also a service offered Spanish automatic safety hook manufacturer Elebia, which has installed a 50 tonne tensile test machine to test its lifting solutions.

Elebia also offers load cell calibrations up to 50 tonnes and break force (or strength) testing. The breaking strength of a material, Elebia explains, is the maximum amount of tensile stress that the material can withstand before failure, such as breaking or permanent deformation.

Also with the aim of further enhancing

safety, Elebia has also added a new feature to its eINST remote control which means that if the hook is not fully opened or closed the crane will only be able to lower the load. Only when the hook is fully open or closed can the crane lift the load. A video of this can be seen here: <https://bit.ly/2C1R9Y9>.

The company has also launched the

eTrack, a 2,000 kg capacity remote-controlled rail-lifting clamp. Elebia says eTrack is designed to enhance safety and efficiency when lifting, handling and transporting single rail sections. Typically, working beneath the hook of a series of gantry cranes, the product approaches, orientates and positions itself directly on the rail thanks to a 'finger'. Once in position, the crane descends and the spring-loaded finger retracts, allowing the clamp to make contact with the rail. Once the clamp has locked to the rail it is not possible to release or drop the load.

When the eTrack's sensor makes contact with the surface of the rail the clamping mechanism automatically unlocks. As the ascending manoeuvre begins, the clamping mechanism automatically locks onto the rail, allowing it to raise the load. According to Elebia the product provides a reliable and fail-safe grip on the rail and has a narrow profile to ease the approach and positioning to an individual rail when rails are side by side.

## Safe and secure

Oscar Follo, founder and CEO at Elebia, said, "We were approached by a European company that was searching for a solution to the safety and security issues associated with alternative rail handling methods. Currently it is common for personnel to walk on and/or in between rail stacks that can be three-feet high to manually engage lifting clamps, which is inherently dangerous. It becomes even more hazardous in inclement weather. With the eTrack, however, the whole operation of approaching the rails, orientating the clamps and their engagement can be handled remotely, as well as its release. The eTrack rail-lifting clamp can be paired to the Elebia eMAX, the eMINI or the eINST remote controls."

Perth, Western Australia-based company Tensa has been recognised for its safety-related work. The company won the 'Best solution to a work health and safety risk (200 employees or more category)' at the Work Health and Safety Excellence Awards – an event organised by the Western Australia government Department of Mines, Industry Regulation and Safety.

It won the award for its Roborigger device – a remote load orientation device for crane lifting operations. Roborigger is designed to enhance safety by allowing riggers to control loads via remote control from a safe distance. The unit is installed below the hook of the crane and uses inertial forces to rotate and orientate crane loads, eliminating the need for workers to use taglines or to be in close proximity to the load during the lifting and lowering phases.

## CHANGING EXCHANGERS

Canadian rental firm Equipment Corps Inc. was commissioned by Edmonton Exchanger & Refinery Services, which provides on-site plant maintenance services for the petrochemical industry, refineries and fertiliser plants, to lower two existing exchangers and install two new ones at the Syncrude oil refinery in Fort McMurray, Alberta, Canada, during a site overhaul.

The old exchangers weighed 58 tonnes while the replacements weighed 75 tonnes. To do the job Equipment Corps used four JD Neuhaus air hoists and four customised Straightpoint wireless load shackles. Two hoists and two shackles were used to lower or lift each exchanger.

Dave Kisel, director of sales at Equipment Corps, said, "Two approaches were being investigated when we were contacted; the other was a winch configuration. The air hoist option was deemed to be the best once the complete scope and design was understood. In addition, it was considered critical that the load capacities needed to be known exactly which dictated the use of load monitoring technology."

Kisel explained that each pair of load cells was connected to a Toughbook notepad with the wireless connectivity. Real time feedback provided the operator with vital information relating to the lift and also confirmed to the engineers that the estimated capacity of the exchangers was correct, the company said.

The bobbins on the 125 tonne capacity load cells were modified to accept the lower hook of the 60 tonne capacity hoists.

Two of the air hoists were sourced from Equipment Corps' stock with an additional two being ordered to meet the demands of the project; all four load shackles were ordered specifically for the task in hand. The company was also contracted to provide onsite technical support for the duration of the heavy lift component related to the critical path equipment that was being lowered and replaced. Other rigging was supplied by the client, which consisted of slings and lugs and additional shackles.



JD Neuhaus air hoist



Inside Syncrude at Fort McMurray





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# Movers in Charlotte

## The 2020 SC&RA Specialized Transportation Symposium is coming up fast. *ICST* previews the event

**C**harlotte, North Carolina, USA, will be the location for the 2020 SC&RA Specialized Transportation Symposium (STS) from 18 to 21 February.

The Symposium brings together industry professionals in the field of oversize and overweight transportation and permitting. Officials will discuss permitting harmonisation and safety concerns. In addition to a busy programme of education sessions the meeting includes an exhibit centre. Multiple networking opportunities are also a key feature of the event.

The 2020 STS will be at the Sheraton Charlotte Hotel. Around 500 people typically attend. Tuesday 18 February, the first day, will primarily be the State and Regional association meetings and the Pilot Car Committee meeting.

Wednesday 19 begins with the AASHTO CTSO Freight Operations Working Group meeting. AASHTO is the American Association of State Highway and Transportation Officials. It sets standards, specifications, test protocols and guidelines for highway design and construction. After this first session are the Safety Committee and Leadership Forum meetings, followed by one for the Permit Committee.

Lunchtime sees the presentation of the

Driver of the Year award. It will be made by Ed Bernard, president at Ontario, Canada-based Precision Specialized, and Ray Morgan, Perkins STC vice president of sales and government affairs.

Following on from that is hearing the latest regulatory and compliance update, including HOS reform, from the Federal Motor Carrier Safety Administration (FMCSA). The speaker is Jim Mullen FMCSA acting administrator.

Next will be a 45 minute session titled 'Keeping it Real' in which state officials will discuss the future of harmonisation. Three highly respected former State Department of Transport officials will offer their perspective on the future of specialized transportation based on their first-hand experience. Listen to a no-holds-barred conversation about reality and possibility in the next decade. Speakers will be Scott Marion, retired, Missouri Department of Transportation; Randy Braden, retired, Alabama Department of Transportation; and Dan Wells, retired, Colorado Department of Transportation.

Looking further down the road is the subject of 'Hauling Past the Present: Projections for Specialized Transport'. A speaker for this is yet to be confirmed. The session will explore what might happen in the next ten years for specialized transportation



and how to prepare for some of the biggest hurdles we might face.

The next presentation continues this theme of looking ahead. Called 'What the Future Holds: Permitting in 2030 (Part One)', attendees will learn what to expect in the next ten years in oversize and overweight (OS/OW) permitting so they can position their business for success with the right tools and resources necessary to navigate potential pitfalls. Speakers for this session include: Wes Mollno, WCS Permits president; Tim Pilcher at ProMiles; and Mike Morgan, CEO at Pit Row Transportation Solutions. Session moderator will be Geno Koehler, Permit Chief at the Illinois Department of Transportation.

The final session on the first day is titled 'How Accuracy in Measurement Gives You an Advantage'. Speakers for this will be Peter Vanderzee at LifeSpan Technologies and John Caya at 5C Strategy. The growth of technology across the oversized and overweight (OS/OW) sector is being seen on the side of the road and in-cab, so carriers need to be one step ahead. New sensor technology is changing the game as it opens up more bridges to OS/OW. Likewise, technology advancements in dimension and axle spacing measurements will give companies an exponential advantage in hauling times and compliance with permits.

Rounding out the first day will be the early evening briefing for first timers at the event followed by a welcome reception for all attendees.



Meeting facilities at the STS event hotel in Charlotte, North Carolina



## Day two

Following an early breakfast timetabled for 07.00, the second day of the 2020 STS kicks off at 08.00 with a first session presented by Steven Todd, transportation vice president at SC&RA. In 'Five Ways SC&RA is Positioning Heavy Haul for the Next Decade', Todd will map out five key steps critical to economic development and business success.

Next in the programme is the first of two presentations by John Maketa, titled 'Charting the Course Through Demographic Change'. Maketa will explore the fascinating but counter-intuitive world of demographics. As a thought leader and pioneer in innovative leadership, Maketa has a passion for workforce trends and developing skills for next generation leaders.

Following the morning break will be four of no less than eight breakout sessions. Breakout session one will comprise the second presentation by John Maketa. Titled 'The Science Behind Driver Retention', it will explore demographic changes in the workforce and how these are impacting the ability of companies to retain drivers. Using a study commissioned for American Trucking Associations (ATA), Maketa will lead you through the science behind the trends, offering practical tips you can use in your own company to protect and strengthen your driver retention programme.

Breakout session two is titled 'What the Future Holds: Permitting in 2030 (Part Two)' and will follow the part one session from the previous day. It will look at what to expect in the next ten years in OS/OW permitting so that attendees can position their business for success with the right tools and resources to navigate any potential pitfalls. Speakers are Darrel Foust, Comdata, and Louis Juneau, Nova Permits & Pilot Cars. The session is moderated by Joanna Jungles, permit manager at ATS Specialized, Inc.

Breakout session three is called 'Harmonization From a Manufacturer's Perspective'. Over the last five years, Caterpillar has teamed up with SC&RA for progressing permit harmonisation. Using this collaborative approach as a framework attendees will learn how leveraging strengths together can benefit the industry through initiatives such as the Uniform Permit Transport scheme UPT2021. Kathy Barber from the Government Affairs department at Caterpillar will present this.

Breakout session four is called 'Using Technology for Safer Operations'. Integrating technology into your safety culture creates an extraordinary return on investment, says the SC&RA; the question is how to make this happen. As such, experts in in-cab and



Charlotte skyline viewed from the hotel rooftop

collision avoidance technology will show STS delegates how to incorporate new technology for safer operations. Explanations will be given by Brian Fielcow at Jetco and Dave Merrill at Paho Express.

## On show

Between 11.30 and 15.00 attendees will have a chance to see manufacturers and service providers during the Exhibit Center event in which around 60 exhibitors will show their wares and latest developments.

After the Exhibit Center event there will be the breakout session five. Called 'Leveraging Technology as a Proactive Loss Prevention Tool'. A trio of insurance and risk reduction specialists will explain how leading organisations are leveraging technology to create a culture of safety. This subject will cover how companies have more tools than ever before to improve workplace safety and reduce dangerous incidents - such as accident event recorders (AERs), electronic logging devices (ELDs), and telematics - yet choosing the right technology can be overwhelming. Key strategies include developing safety KPIs to identify what technology solution is best for your company. The three speakers are: Paul Stock, vice president, loss control and claim services at National Interstate Insurance Company; Cameron Boots, director of risk engineering at Allied Insurance Brokers; and Bert Mayo, vice president at TrueNorth Risk Solutions.

Breakout session six is called 'An Inside Job: Co-ordinating with the Office on OS/OW Movements'. It will cover the challenges faced by specialized transportation office teams. Attendees will learn how to work better with project co-ordinators, permit co-ordinators, permit supervisors, dispatchers and managers for successful OS/OW transports and will be encouraged to share their insights. The speaker for this session is Randy Starnes, business development manager at Kenco Bucket Trucks.

Following the afternoon networking break is breakout session seven: 'Demonstrations of Pilot Car Best Practices'. Attendees will hear the latest advocacy efforts of the North American Pilot Vehicle Safety Alliance as well

as participate in a hands-on demonstration of the most effective equipment for pilot cars and pilot car drivers. Speakers are Dale Karns, co-chair of NAPVSA, and Don Morgan at Pit Row Pilots.

The next breakout session (number eight) is called 'Managing Your Company's Technology and Data as it Relates to Your Insurance Policy'. It will look at the reasons why you should review your business data and technology tracking services. The session includes a review of the public data on CAB reports and how other companies use it to analyse services, risk management and safety controls. Another area that will be explored is how underwriters and claims executives use your information and how technology is being used to manage and transfer risk. Attendees will hear about the role insurance agents have in helping manage risk, control data and protect your investment and your company. Speakers are: Jeff Haynes, USI; Jim Jinhong, NBIS; and James Stovall, USI.

## Day three

The last day starts with a breakfast session. It is a roundup of the Hauling Job of the Year finalists and winners. Presentations on exemplifying safety practices, ingenuity and specialized engineering will be given. Invited presenters are participants in the 2019 Hauling Jobs of the Year. The winners were Omega Morgan, Fagioli and Barnhart Crane & Rigging. The finalists were Emmert International, Barnhart, Berard Transportation, Tradelossa, Perkins and Deep South Crane and Rigging.

After this session the final event of the Symposium will be an outdoor demonstration on load securement in which attendees will learn tips for acing law enforcement inspections, receive advice for maintaining excellent CSA scores, and explanations of best practices for preventing accidents. Speakers will be Pete Trimble, safety and risk manager at Keen Transport, Don Hinds, director of operations at Yarbrough Transfer Company, and Danny Cain, safety and risk manager, Edwards Moving & Rigging.

For more information and to book see: [www.scranet.org](http://www.scranet.org)

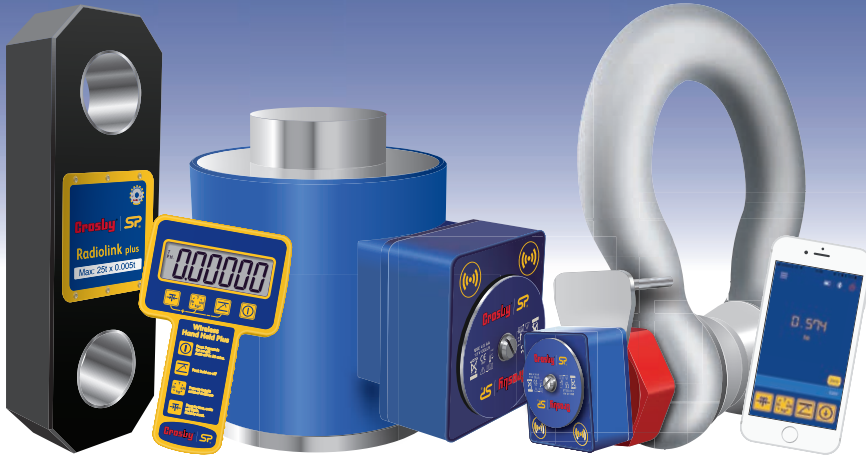


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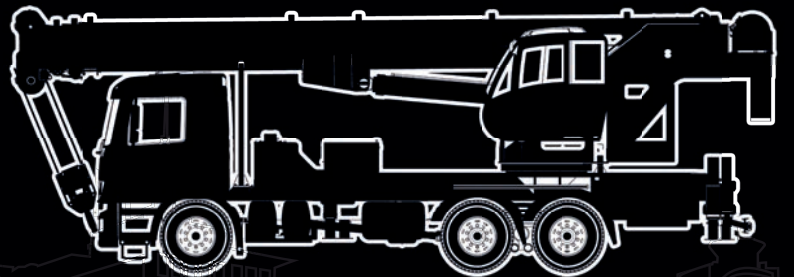
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# Keeping it up

## Building on last year's return to growth, the 2019 ICM20 ranking of the world's largest crane manufacturers by revenue is up strongly. ICST reports

**A**ny rise in the total of the top 20 largest crane manufacturers by revenue is a very welcome sight.

This year it is a particularly impressive double digit increase of 12.5 per cent, or just over US\$3 billion. Allowing for exchange rate fluctuation it is basically an increase across the board for all 20 companies - all of which also appeared in last year's ICM20 table.

This year's total for the crane-related revenue of all 20 companies was \$27.851 billion, up from \$24.832 billion in 2018's table. While the vast majority of the increase is from the Chinese manufacturers, all the others are also up, many of them with double digit rises.

The extraordinary rises in percentage

terms are from China's XCMG, Zoomlion, and Sany. In their reporting currency the rises are 48, 83 and 78 %, respectively. In terms of actual amounts they have been sufficient to significantly disrupt the table. It is the second year of big increases among the Chinese manufacturers, largely due to a return to growth in their domestic market.

### From the top

At the top of the table Liebherr retains its number one position and by a larger margin than last year over the number two company Konecranes. The \$406 million difference this year is approaching double the \$217 million of last year. Remaining fairly flat from last

year is Cargotec in third place. Its figures include a contribution from Effer, the Italian specialist in large and customised loader cranes acquired in the third quarter of 2018. It also acquired marine crane and equipment manufacturer TTS earlier in the same year.

So the first three companies retain the same positions as last year (as do the last three in the table and Kobelco at 16th) but the remaining 13 have all moved around and several of them by quite a bit. Movements are largely as a result of the Chinese manufacturers. XCMG gains three places, moving from seventh to fourth. It displaces fellow Chinese manufacturer ZPMC one place behind it and then Manitowoc, down one place to sixth.

Next of the major disrupters is Zoomlion, up three places from 10th to 7th with a spectacular 83 % rise, calculated in its reporting currency. When converted to US dollars the rise is still 80 %. Despite

## ICM20 MANUFACTURERS

### NOTES ON THE ICM20

Figures used in this ICM20 table for November 2019 are from calendar year 2018 or the 12 month financial year to 31 March 2019. The year-on-year percentage change figures in the article are normally calculated in the reporting currencies of the manufacturers or are supplied by the manufacturers. In some cases, where stated, they are calculated from the figures given in the table which are conversions to US dollars from the various reporting currencies. For the figures in this year's table the exchange rates from the reporting currencies into US dollars [29 October] were as follows:

Euro 1.00 = US\$ 1.11 (2018: 1.14)

US\$1.00 = JPY 109 (2018: 112)

1 CNY (RMB) = US\$0.14 (2018: 0.14)

US\$1.00 = CNY 7.0 (2018: 7.0)

US\$1.00 = RM (MYR) 4.18 (2018: 4.17)

Rank 2019	Rank 2018	Company	Sales in US\$ millions	
			Year 2018	Year 2017
1	1	Liebherr	3,907	3,788
2	2	Konecranes, including MHPS from Terex	3,502	3,571
3	3	Cargotec	2,468	2,489
4	7	Xuzhou Heavy Machinery (XCMG)	2,229	1,528
5	4	ZPMC	2,115	1,886
6	5	Manitowoc Cranes	1,850	1,581
7	10	Zoomlion	1,766	978
8	6	Tadano	1,720	1,549
9	8	Palfinger	1,551	1,401
10	12	Sany	1,323	751
11	9	Terex Cranes	1,300	1,190
12	14	Columbus McKinnon	839	637
13	11	Kato Works, inc IHI cranes	784	776
14	15	Link-Belt	523	462
15	17	Sennebogen	462	418
16	16	Kobelco Cranes Co	459	434
17	13	Sumitomo Heavy Industries Construction Cranes Co (Formerly Hitachi Sumitomo)	331	740(279)
18	18	Furukawa Unic Corporation	268	244
19	19	Manitex	242	213
20	20	Fassi	213	198



increasing its sales, Tadano loses two places, displaced by the above-mentioned Zoomlion and XCMG which were below it in the table last year.

Down one place at 9th is Palfinger, still one of the best performers for many years, with consecutive years of record annual revenues. At the time of writing, its latest results, for the first nine months of 2019, have also broken the previous record with a 10 % rise over the same period a year earlier. Palfinger continues with its Sany partnership.

Following its seven place drop two years ago after the sale of its materials handling and port solutions business, Terex has dropped a further two places to 11. Again, this is due to displacement by Chinese manufacturers, Zoomlion and Sany.

Industrial crane and hoist maker Columbus McKinnon in 12th position has gained two places with a solid increase of almost 32 % or \$200 million. Next, however, is Kato which was actually marginally down in its Japanese yen reporting currency but up 1 % when converted to US dollars.

### Double digits

A strong increase of 13.2 % for Link-Belt helped it gain a place, moving it to 14th, a

position it normally holds. Another double-digit rise, of 10.5 %, helped push Germany's Sennebogen up two positions to 15th, higher than it has been for at least the last six or more years.

Next is Kobelco which no longer breaks out its figures for crane sales, instead including them with its excavator sales as part of its construction machinery division. It retains its 16th place from last year with a small increase in sales. The Japanese manufacturer said crane sales were down in its home market while overseas sales were about the same as the year before.

Also lumping its construction equipment sales together is Sumitomo Heavy Industries with its SHI Construction Cranes Co. (formerly Hitachi Sumitomo). For its construction machinery division overall, Sumitomo reported a 12 % increase in sales. This year's ICM20 figure is an attempt at making an adjustment from last year's number which was an anomaly as a result of the changes in reporting and the change in ownership structure, which saw a shift from 50:50 Hitachi:Sumitomo to 66:34 % in favour of Sumitomo. It now sees the company return to its more typical position in 17th place.

In a similar vein, ZPMC no longer breaks

out a figure for crane sales. In previous years it had a separate report for its harbour cranes. Now the sales of more general port equipment are also included. In 2017 harbour crane sales were reported as RMB13,120 million. Together with the port equipment the 2017 figure was RMB14,736 million. For 2018, RMB14,938 million.

Manitex in 19th place reports its results, showing a strong 13.6 % increase in sales, a big shift from its 7 % drop the year before, albeit insufficient to advance its position in the table. Last but not least Italian hydraulic crane and access equipment maker Fassi holds onto 20th place after entering the table last year. Outside the top 20 are tower and offshore crane manufacturer Favella Favco on \$127 million and China's Yongmao tower cranes at \$125 million.

Next year's ICM20 will see the incorporation of the Demag crane brand revenue in Tadano's figures instead of with those of previous owner Terex. Tadano announced its acquisition in February and it was completed on 1 August. It will also be interesting to see how much more of a change the Chinese manufacturers will have made to the table next year on top of the major shifts they have made in the last two years. ■

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www.cargotec.com				✓		✓	✓	
www.xcmg.com	✓	✓	✓	✓				
www.zpmc.com						✓	✓	
www.manitowoc.com	✓	✓	✓	✓				✓
www.zoomlion.com	✓	✓	✓	✓				
www.tadano.co.jp	✓	✓		✓				
www.palfinger.com	✓	✓		✓			✓	
www.sany.com.cn	✓	✓	✓			✓		
www.terex-cranes.com	✓		✓					
www.cmworks.com					✓	✓	✓	
www.kato-works.co.jp	✓	✓						
www.link-belt.com	✓	✓						
www.sennebogen.de	✓	✓				✓		✓
www.kobelco-cranes.com	✓	✓						
www.hsc-cranes.com		✓				✓		
www.furukawaunic.co.jp	✓	✓		✓			✓	
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A look at the latest SPMT equipment updates and some of the ways in which Mammoet and ALE are utilising this important specialized transport tool. CHRISTIAN SHELTON reports

Sea and Land Integrated using some of its fleet of PST/SL



# Propelled to fame

Some say the SPMT is the unsung hero of the heavy transport industry. We say it's time to sing its praises with this round-up of equipment developments and job site examples.

German heavy-duty transport equipment manufacturer Goldhofer says it has re-engineered its PST/SL-E self-propelled heavy-duty module and increased the tractive power of its Addrive self-propelled heavy-duty module. The new edition of Goldhofer's PST/SL, the PST/SL-E 4, has a reinforced

frame that Goldhofer says gives it an even higher load capacity. The module's gross weigh capacity is 180 tonnes and it has an axle load of 45 tonnes. The module is also now available with what Goldhofer is calling the Speedrive option, which allows the drive axles to be operated in freewheel mode. This means transportation companies can tow the module under full load thus speeding up operations. The tractive power of the module has also been increased, weighing in at 360 kN.

## Surf and turf

Taiwan-headquartered transportation company Sea and Land Integrated Corporation ordered 28 of the new PST/SL-E modules which were delivered to it in June. They will primarily be used to transport large plant components for the energy industry and equipment for refineries. According to Goldhofer, what particularly appealed to Sea and Land Integrated about the modular



Cometto's SyncBox enables a number of its SPMT to connect with self-propelled vehicles from other manufacturers

system was that they can be mechanically coupled with Goldhofer's THP/SL-L and THP/SL transporters and can be electronically synchronised with Goldhofer's PST/ES-E vehicles. This is particularly pertinent to Sea and Land Integrated because it has 94 Goldhofer PST and THP axle lines in its fleet built up over the last 20 years.

Sea and Land Integrated's modules have been provided with additional lifting points on the frame to make it easier for customers to load and transport individual modules.

Goldhofer's latest Addrive, version 2.0, has also been updated. It now has almost double the tractive power of the previous version, coming in at 530 hp.

This has been achieved by incorporating additional drive axles enabling speeds of up to 50 km/h when in 'Add' mode. The module's low-noise motor meets EU Stage IV and EPA Tier IV standards. When the vehicle is in towed mode, rather than self-propelled mode,



Goldhofer's Addrive in action



Mammoet used its Trailer Power Assist (TPA) system for the first time in Norway



»





Mammoet using its SPMT fleet in Saudi Arabia



there is no oil flow in the hydromechanical drive system. Goldhofer says this prevents overheating in the drive and minimises wear. It also means that when in self-propelled mode it cannot overheat even during under continuous operation with high loads.

As with the previous generation the drive can be controlled via radio remote which offers a choice of driving modes. Depending on the operating situation the drive can be connected or disconnected and the module moved with or without the assistance of a tractor. When crossing a bridge, for example, the PowerPack can be used as the sole drive with the tractor uncoupled so as to significantly reduce overall weight.

Goldhofer says Addrive is easily installed in trailer and semi-trailer combinations and can be combined with drop decks and long-load turntables. Modules can also be coupled together to form longitudinal and parallel combinations and synchronised with other Goldhofer Addrive modules. If the towed combination exceeds the maximum speed of the Addrive, the drive unit switches off automatically and disconnects, permitting it to

travel at speeds of up to 80 km/h.

The new drive unit also incorporates an electronic braking system, which Goldhofer claims as a world first in a vehicle of this type.

Self propelled transport equipment manufacturer Cometto, part of trailer manufacturer Faymonville since 2017, launched the SyncBox earlier in 2019. The SyncBox allows users to connect Cometto MSPE 40T, 48T, EVO2 60T and/or EVO3 70T SPMT with self-propelled vehicles from other manufacturers. A video of the system in action can be seen here: <https://bit.ly/2JEu8P3>

### German delivery

Cometto recently delivered a six-axle self-propelled MSPE trailer with a capacity of 40 tonnes per axle line to German crane and transport company Gertzen Autokrane and Transporte. The MSPE was delivered with a 129 kW powerpack. The combination provides



ALE used 36 lines of SPMT to launch a 750 tonne ferry on the River Mersey in north west England

a loading area of 8.40 x 2.43 metres.

Mammoet used its Trailer Power Assist (TPA) system for the first time in Norway. Developed in conjunction with trailer manufacturer Scheuerle, TPA is a 1,000 hp powered trailer system used as an alternative to self propelled modular transporter and prime movers. To improve transport safety and efficiency it was used on a project to move 23 generators and 23 turbine hubs on a particular section of the project's route near Narvik in the north of the country.

Safety is one of several benefits of TPA. Anders Bräuner, Mammoet Denmark sales manager, commented, "Safety is vital on every project. The four kilometre section of the route to the Narvik site that Mammoet were required to complete involved climbing an 18 per cent gradient and navigating 12 to 14 hairpin bends. With each generator weighing 74 tonnes and each hub weighing 47, we needed to use the TPA system to maintain safety."

TPA is a module of six axle lines, the central four of which are driven. The engine drives hydraulic pumps as part of a hydraulic power pack unit. It has twice the pulling force of a conventional prime mover, Mammoet said. Fewer prime movers are needed and it offers a tighter turning radius.

## SHIPSHAPE FOR GROUPE CAYON

French transportation specialist Groupe Cayon moved a transformer across Gennevilliers, France, for French energy company EDF (Électricité de France) using Cometto MSPE and a low bed semi-trailer. The transformer was 6.4 metres long and weighed 85 tonnes.

The six-axle MSPE was loaded with the transformer at the quay in Gennevilliers, where the transformer had arrived via boat on the River Seine. "Thanks to the MSPE's overall length of just 11.45 metres we had no problem getting to the ship's mooring position," says Matthieu Lapczynski, project leader for special transport at Groupe Cayon.

Two low bridges along the route meant that the transformer had to be temporarily loaded onto a 4+6 low bed semi-trailer before being reloaded onto the Cometto MSPE for the final leg of the journey. "There wasn't much room at the destination but with the self-propelled vehicle we were able to position ourselves well to subsequently install the transformer," concludes Lapczynski.

Last year Groupe Cayon purchased four 48 tonne Cometto MSPE self-propelled modules (a total of 20 axle lines). The order included two six-axle MSPE 6/4 48 tonne modules, two four-axle MSPE 4/2 48 tonne modules, two power packs (with an output of 129 kW each), and side-by-side coupling accessories.

Six axle Cometto MSPE carrying 85 tonnes





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ALE used two-file, 20-axle PSTs to load-in LPG vessels



In France ALE used 32 axle lines of SPMT to transport two wind turbine nacelles

Mammoet has also been busy utilising its SPMT fleet on various jobs around the world. In 2018 the company claimed to have the largest SPMT fleet in the world, with more than 3,200 axle lines based at strategic locations. In September Mammoet announced it used local SPMT in both Bremerhaven, Germany, and the Port of Hueneme, California, USA to load and unload a zero-emission mobile harbour crane that was being transported between the two locations. In Saudi Arabia it used 56 axle-lines of SPMT to transport eight pipe rack modules, ranging

in weight between 450 and 650 tonnes from the client's yard to the installation site. As part of the same job a 2,000 tonne wash tower was also transported nine kilometres from Mammoet's yard within the King Fahd Industrial Port to the installation site.

It also used 28 axle lines of SPMT to move shipping container cranes at the Port of Veracruz in Mexico (see specialized transport news on page 29 for the full story).

Another heavy lifting and transportation company that extensively utilises its global fleet of SPMT is UK headquartered ALE. In the

UK it used 36 lines of SPMT to launch a 750 tonne ferry down a slope from the fabrication shop, down a slope, into the River Mersey.

It also used 96 axle lines of SPMT in a configuration of 4 x 2 file 24, along with skid shoes varying from 500 to 1,000 tonnes capacity to lengthen two vessels in a shipyard in Palermo, Italy.

In South Africa ALE used two-file, 20-axle PSTs to load-in LPG vessels for transportation to a new LPG gas site at the Port of Richards Bay, near Durban.

In France ALE used 32 axle lines of SPMT in a 16 x 4 file configuration to transport two wind turbine nacelles from where they were made to barges for shipment to Rotterdam, the Netherlands and Blyth, UK. The nacelles are for the Haliade-X 12 MW which ALE says is the world's most powerful offshore wind turbine featuring the world's longest blades for a rotor span of 260 metres. ■

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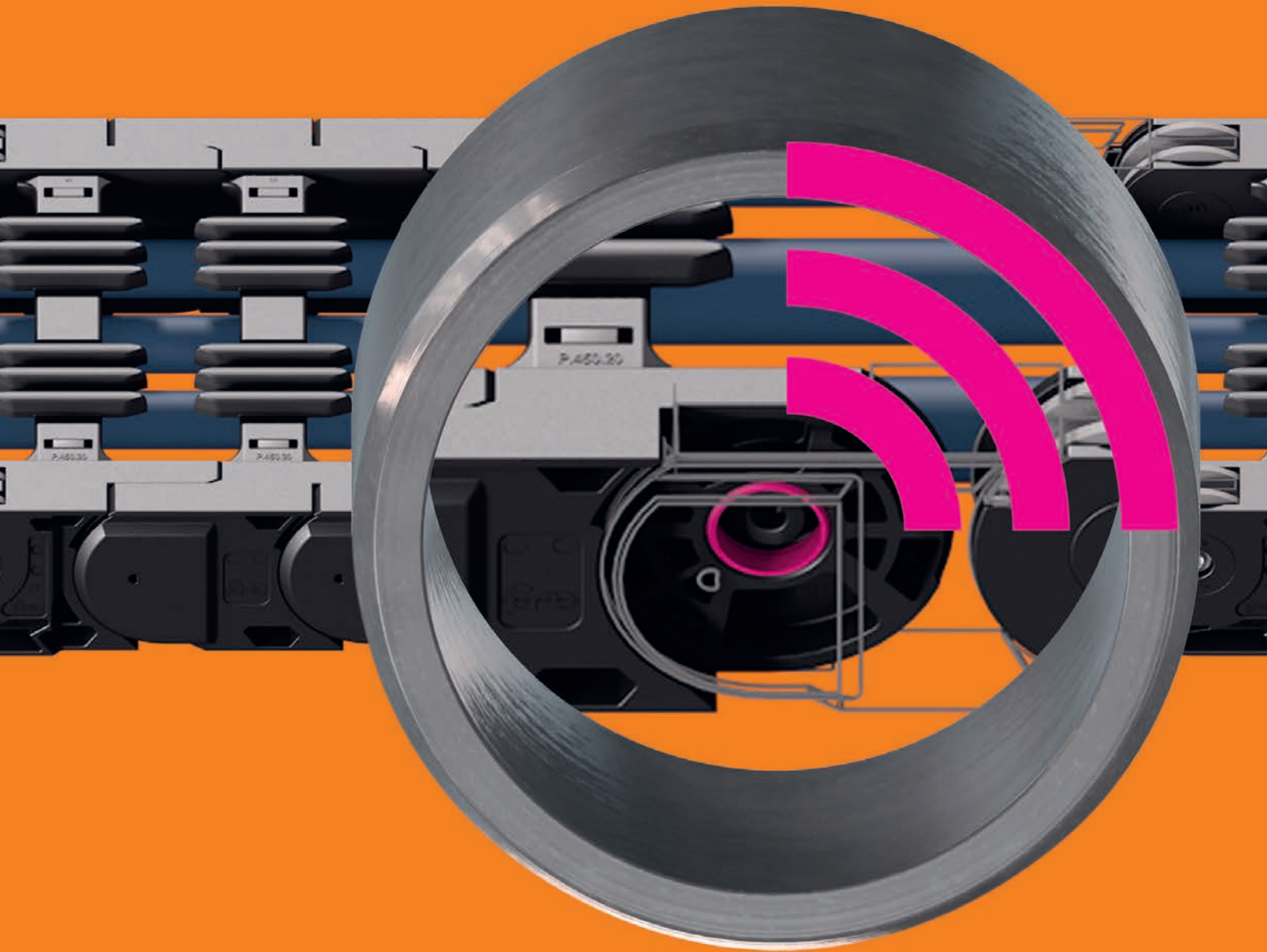
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# Rise of the cyber attack

**C**yber attacks have become one of the top risks facing companies and industries around the world. Trucking and logistics companies are no exception. Transportation now lands at number five on the list of industries with the most cyber attacks, according to Forbes.

Despite the increasing sophistication of these attacks, it's still tempting to dismiss the threat – a mistake that could cost a company severely, no matter the size.

In particular and, perhaps counter to popular belief, smaller transportation companies tend to be more regular targets for ransomware attacks – primarily because they lack the sophisticated protections of larger companies. As a result, they could be more likely to pay hackers who disable their computer systems.

That said, larger companies certainly aren't off the hook; though they might have more significant protections in place, they can also represent bigger paydays for hackers, and thus remain targets that are essentially worth the risk. Numerous SC&RA companies, in the USA and beyond, have had to deal with cyber attacks, and the war stories can be harrowing.



## Consider the alternative

Usually, when an attacker or hacker enters a company's network, they are checking financials first to see how much they can charge for what amounts to ransom. Often times, if the numbers look good, they'll plant "ransomware," a type of malicious software, or malware, designed to deny access to a computer system or data

until a ransom is paid. Ransomware typically spreads through phishing e-mails or by (the user) unknowingly visiting an infected website.

The ransom is often arrived at through a certain level of finesse. Hackers will literally look at your financials and decide how much to charge you – i.e., what you can afford as a company. They know if they ask for too much, you likely won't pay. They want to land within a sweet spot of sorts, because this is ultimately a business model for them. The worst part? Once cyber attackers find a vulnerability, it's a safe bet that they'll probably come back for more.

This type of criminal is actually often a criminal enterprise, made up of multiple hackers operating a proficient underground business.

All the more reason to take your tech systems as seriously as any other component of your business. Your data is, essentially, sacred. One of your greatest priorities in the digital age should be protecting that data, which usually isn't just your data, but the data of your customers and even other carriers.

Though it might sound like a stiff challenge, responsible companies understand and accept that cyber security is a task that is never complete. Companies can, however, significantly lower their risk through investment and employee training.

Obviously, you'll never be hack-proof, but you can be prepared as well as secured in a way that doesn't scream "soft target."

Transportation (and certainly crane & rigging) companies should conduct at least one full computer system assessment per year, but bi-yearly wouldn't hurt. This includes penetration and risk management tests that gauge the likelihood of an attack. Such tests can reveal opportunities to apply software patches in areas of need, but also create incident response plans, which can be critical when it matters most.

It is important to remember that a successful cyber attack doesn't happen overnight; hackers are typically planning and researching for more than a year – all the while, you don't have a clue.

Overall, responsible companies protect the personal information of their employees and customers first. They also educate their entire workforce about threats, phishing scams and even accounts payable information. If that feels like a hassle, then consider the alternative. Cyber security is definitely a party you don't want to be late to. ■

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International SC&RA members discuss setting up business in the United States.

MIKE CHALMERS reports



# Setting up shop

**F**rom major enterprises to small shops, every day, foreign nationals set up businesses in the USA. For most of them, accessing the country is key to growth and continued success. It's no different for international SC&RA members, many of whom have made the leap and set up subsidiary locations, satellite offices or much more formal operations in America.

Jaime Serdan, US managing director at Group Cargo Lift landed in the country in 2019, when his Mexico-based company, which started in 2007, took advantage of timing. "In 2018 we had presidential elections and a change to a populist government that is halting economic growth, which creates new challenges for companies in Mexico," he explained. "It seemed natural to diversify our revenue base into a new and much bigger market so, in 2019, we decided to open a new location in Dallas, Texas."

While Cargo Lift's business model had already proven successful in Mexico, boasting six locations, Serdan pointed out that one key factor pushed them towards the USA. "Our US partners and providers

encouraged us to replicate our model in the States," he said. "They believed if we provided the same level of service and dedication to customers here, we'd find similar success."

Cargo Lift found that success by working hard to become the best Mexican cargo-movement company. "To achieve it, we needed to team up with the best brands in the industry, so the company managed to acquire distribution in Mexico through many established names," said Serdan. "Another key factor was the commitment to technology that Cargo Lift understood it needed to adapt. We also created an app for smartphones and tablets where the first slings calculator for Mexico was incorporated. Additionally, we launched a website with an online store where clients could price and buy any slings or related accessories, and acquired the exclusive representation of Automated ID in Mexico, so that all our manufacturing products have a unique code or cloud-based

CHIP RFID for traceability and frequent inspections according to the ASME standard."

Such innovation has allowed Cargo Lift to become the second-largest rigging company in Mexico, expanding throughout the construction, marine, oil and gas and shipping industries, and beyond.

While landing in the USA wasn't particularly challenging for Serdan and Cargo Lift, the main hurdle, he indicated, is brand recognition. "Promotion and getting people to trust in our products and services is the focus. We want to grow quickly, but that doesn't mean we need to rush and make decisions that would cost money. The company is investing with its own resources without the support of a big company or financing from a bank, so we have to be very cautious on how we spend our money and pursue growth intelligently. We are replicating the model



Jaime Serdan, US managing director at Group Cargo Lift from Mexico





that was successful in Mexico, and hope to experience the same level of growth here in the US.”

Currently operating as the first Cargo Lift employee working in the USA, out of a small office with no warehouse, Serdan is assembling a capable team, setting strategic direction, working to launch a robust online sales store and positioning the launch of their first facility, in North Dallas, where they'll enjoy space to both manufacture and stock their product line.

“We've been planning this for a long time, and it's all finally coming together,” he confirmed. “Our next big step will be bringing the new facility and equipment and



Stefan Kohler,  
Goldhofer

people it requires. Seeing the entrance to the building with the Cargo Lift USA logo will be a moment of great satisfaction.”

### Power of partnerships

Stefan Kohler, vice president of sales at Goldhofer can relate. Goldhofer officially landed in the USA in Miramar, Florida, in 2017. An SC&RA member since 1972, Goldhofer has been providing the industry with its innovative product line for nearly 60 years. The decision to land in Florida, Goldhofer's first location outside Germany was, ultimately, an easy one.

“We took over our long-term service partner, Flite Line Equipment,” said Kohler. “Two years ago, we had the opportunity to buy them out and it was a perfect fit for us and that's why we're here.”

One of the biggest challenges for Kohler in landing in the USA was his work visa. “I never really thought about that procedure – that it would take that long,” he noted, “but it took about seven months to get it all done. Something I'd recommend to other SC&RA members who are looking to come to the US similarly – always get professional support from a dedicated attorney who knows exactly what to do as far as the immigration and visa procedures.”

Sarah Spivey, managing director at UK-headquartered Modulift, has been doing business in the USA for many years, though the company doesn't operate out of a physical location. Her recommendation to SC&RA member companies looking to land or do business there is simple. “Work hard, build strong relationships and commit to the partnerships.”

The only hurdle that springs to mind for Spivey involved cultivating success. “To ensure the success of our partners, we always commit to an intensive training schedule – training in-house with our partners on the technical and sales aspects of the products and also spending time on the road with the external sales people,” she added.

“We decided when we began the company that working closely with partners around the world was the way we wished to grow our business,” Spivey maintained. “Each partner knows their market far better than we could ever do and has much greater opportunities to grow relationships with customers.”

### Delivering on promises

“My advice to anyone wanting to set up in the US is, firstly, be patient – don't run before you can walk,” urged Peter Hird, co-founder and joint managing director at UK-based company Blokcam.



Peter Hird

While Hird knows that the UK and North America trade freely with each other and have a similar approach to safety, he also recognises some challenges. “I'm not afraid to politely say that some of the safety standards and acceptance to change are lagging a good few years behind the UK and EU safety standard in crane operations – and this offered some challenging times in the beginning of our US campaign.”

Blokcam, which launched its first crane camera product internationally in late 2015, and then in the USA via the SC&RA's Annual Conference and Crane & Rigging Workshop in 2016 – knew that the size of the USA would also be a challenge.

“So we engaged with several US distributors to sell and support our products,” said Hird. “General market acceptance to change was a major stumbling block – some of the US insurance and risk-management brokers had already denounced the use of cameras, as they felt it would incriminate crane operators and crane rental owners. So, we embarked on a direct educational process. One of Blokcam's unique selling propositions is that the founders originate from the crane industry, and this reflects in the product. We can talk cranes – we know how to work with cranes – and having this synergy allows us to sell our knowledge to the customers.”

Ultimately, Hird has used this knowledge to grow Blokcam in the USA – acquiring key insights along the way. “Engage with your industry associations and network with these people; by doing this, you will slowly be accepted and build up a great relationship personally with your potential customers. From here on in, it's much easier to get to your clients and deliver your promises.” ■

Sarah Spivey,  
Modulift  
managing  
director



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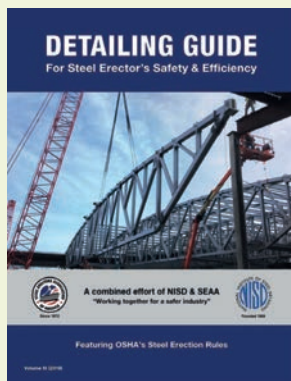
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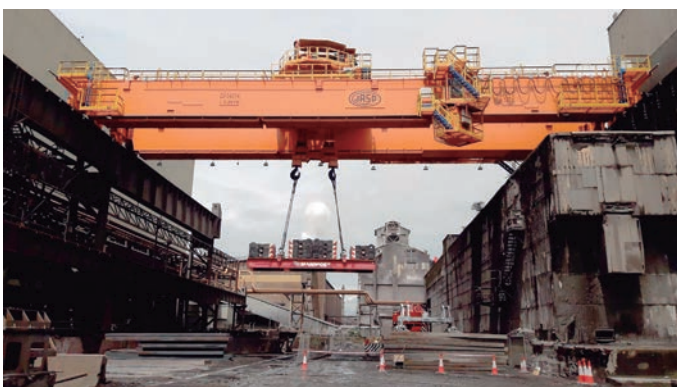
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DETAILING GUIDE

The Steel Erectors Association of America (SEAA) and the National Institute of Steel Detailing (NISD) have partnered to release the third edition of Detailing Guide: For Steel Erector's Safety and Efficiency, which it describes as a practical guide for erection procedures.

The updated guide includes information on the various people involved in a steel project. No matter your role in the construction project, we each have a responsibility for the safety of our peers. This manual is a contribution toward that goal.

The guide also includes pre-drafting information, checklists and more than 50 sketches. It is the first update since 2009 and many of the sketches have been improved, said SEAA. In addition, FEMA Seismic Criteria has been added, the Pre-Construction checklist updated, and all material reviewed in context of current standards and regulations.

■ For more information, see: [www.seaa.net](http://www.seaa.net)



# Cribbing and jacking blocks launched

The Ecocrib range of heavy duty interlocking cribbing blocks is designed to support and stabilise heavy objects during lifting or lowering operations. The blocks are designed for garages and vehicle workshops, as well as manufacturing and engineering.

Ecocrib is made from high density polyethylene (HDPE), making it resistant to water damage, corrosion and splintering.

Charles Grizzle, business development manager at Outriggerpads, said, "Our products are typically used to stabilise construction equipment during its operation. It became very clear to us that our customers also needed something equally as safe and durable for their workshops."

"Wooden cribs can snap and splinter without warning, causing catastrophic failure during



Ecocrib from Outriggerpads

service, maintenance and repair activities. Ecocrib is a much safer alternative to wood, offering long-lasting performance, with minimal maintenance required."

Ecocrib can be used with two blocks per layer or, for heavier load-bearing capabilities, with three. It is tested to withstand loads of up to 100 tonnes. The 600 mm long and 150 mm square

lightweight blocks each have two integrated rope handles, making them easy to lift and stack. The 600 mm square top pads come in three thicknesses, providing load-bearings of 20, 25 and 30 kg.

Outriggerpads is also launching its Ecostack range of jacking blocks.

■ For more information, see: [www.outriggerpads.co.uk](http://www.outriggerpads.co.uk)

## Jaso building biggest industrial crane duo

Jaso Industrial Cranes is building two cranes for the Tata Steel Port Talbot plant in the United Kingdom. One will be the biggest capacity industrial crane that Jaso has ever built.

The Spanish company was contracted to design, manufacture and install both a

41 metre long slab crane and a 500 tonne capacity EAF (electric arc furnace) charging and ladle handling crane.

While the slab crane is already operational Jaso's biggest crane is still being manufactured. The 500 tonne ladle handling crane, which also has an auxiliary lifting capacity of 105 tonnes, comprises four 23 metre girders and an open-winch hoisting mechanism with two engines connected to a central planetary gearbox. The company said this would ensure that if a component stopped working, the crane would be able to move at half speed with the same FEM M8 classification.

■ For more information see: [www.jasoindustrial.com](http://www.jasoindustrial.com)

## BOSCH ADDS COMBI DRILL

Power tool manufacturer Bosch Professional has added a new model to its range of combi drills.

The GSB 18V-55 Professional cordless combi drill has a brushless motor and offers a maximum torque of 55 Nm and speeds up to 1,800 rpm.

It has a two-speed gearbox made of metal, is suitable for screws from 8 to 35 mm and comes with an integrated work light and a belt clip. The drill is designed for daily use with metal, wood and masonry in "mid-range" applications.

■ For more information see: [www.bosch-professional.com](http://www.bosch-professional.com)





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www.khl-wcts.com

## AEM ANNUAL CONFERENCE

18 to 20 November 2019

Marco Island, Florida, USA  
www.aem.org

## EXCON 2019

10 to 14 December 2019

Bengaluru, Karnataka, India  
www.excon.in

## SC&amp;RA BOARD AND COMMITTEE MEETINGS

8 to 11 January 2020

Cabo, Mexico, USA  
www.scranet.org

## WORLD OF CONCRETE

4 to 7 February 2020

Las Vegas, USA  
www.worldofconcrete.com

## THE ARA SHOW

10 to 12 February 2020

Orlando, Florida, USA  
www.therentalshow.com

## SC&amp;RA SPECIALIZED TRANSPORTATION SYMPOSIUM

18 to 21 February 2020

Charlotte, North Carolina, USA  
www.scranet.org

## CONEXPO-CON/AGG

10 to 14 March 2020

Las Vegas, Nevada, USA  
www.conexpoconagg.com

## OFF-HIGHWAY GLOBAL BRIEFING

11 March, 2020 (during ConExpo)

Las Vegas, USA  
www.offhighwaybriefing.com

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www.scranet.org

## ESTA AWARDS 2020

23 April 2020

Postillion Hotel, Amsterdam, The Netherlands  
www.khl-group.com/events/esta

## TOWER CRANES NORTH AMERICA (TCNA)

23 June 2020

Miami, Florida, USA  
www.khl-tcna.com

## PICTURE OF THE MONTH

This month's photo was a winner pretty much for the fact that it simply looked great in the bright Italian sunlight. The colour combination really popped. It is a Tadano ATF 130G-5 all terrain crane on display at the GIS exhibition of crane, transport and access equipment in Piacenza last month. The five axle

telescopic crane lifts 130 tonnes. Careful preparation and fine detailing paid off. The composition and colour combination reminded the editor of an *ICST* front cover from way back in February 2006, of a Luna crane in Spain.

## PEOPLE NEWS

■ Netherlands-based crane manufacturer Spierings Mobile Cranes has hired a new sales engineer. **MAARTEN VAN BRINK** will be responsible Spierings' Dutch and English markets. He will work alongside the company's team of five sales engineers. Spierings said van Brink possessed an extensive knowledge of technology and the automotive industry.



■ The Board of Directors of Konecranes Plc has appointed



**ROB SMITH** as president and CEO effective 1 February 2020. The company's

CFO, Teo Ottola, who also serves as deputy CEO, will act as CEO in the interim. Smith joins Konecranes from AGCO Corporation, where he was senior vice president and

general manager, Europe and Middle East. Prior to that he was at TRW Automotive, Tyco Electronics and Bombardier Transportation, among others.

■ Engine manufacturer



Cummins has appointed **AMY ADAMS** as vice president of fuel cell and hydrogen

technologies. Adams, who has a degree in industrial engineering and has been with the company for almost 25 years, takes on the role after serving as vice president of strategic initiatives. Before that she also led the Emission Solutions business unit, which formed part of the company's components business. The new role is part of the Electrified Power business segment. The manufacturer said that Adams' unique global skills positioned her well to drive its strategic growth initiatives.

■ Mammoet Germany won the 2019 Federal Specialist Group for Heavy Transport and Crane Work (BSK) award for best Crane Work of the Year. BSK Awards recognise best performance in the heavy transport, crane work and assembly sectors. **GERNOT ÖDER**, Mammoet Germany manager



for crane and transport projects, accepted the prize for Mammoet's work on the installation of a maritime crane. The heavy lift specialist installed the land-based TCC 78000, a heavy duty gantry crane, at a Liebherr plant in Rostock, Germany. Mammoet used a tandem and three-crane solution to lift the component parts 105 metres into the air. The company carried out the lifts using its Liebherr LTM 11200 with its Liebherr LG 1750.

■ 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.



# MARKETPLACE

The Marketplace is divided into easy to read colour coded sections to help you quickly find what you need.



## PRODUCTS, PARTS & ACCESSORIES

58

Operational aids, communication systems, components, controls, software, crane mats and outrigger pads, crane repair, hydraulics, jacks, attachments, personnel baskets, rigging hardware, rollers, slings and chains, tires, winches, wire rope, batteries, braking systems, and new, used and refurbished parts.

## SAFETY, TRAINING & INDUSTRY SERVICES

Training, insurance, inspections, financing, consulting and safety equipment.

## SPECIALIZED TRANSPORT

Transportation permits, freight forwarding, heavy haul, pilot car services, trailers, wheels and tyres.

## CRANES AND EQUIPMENT FOR SALE OR RENT

59

Crane, rigging and lifting equipment for sale or rent, new or used.

## CAREER OPPORTUNITIES

Employee recruitment and job postings.

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# Used Cranes

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 Upper hours 23,366 h  
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 Year 2005



## DEMAG AC 1000-9

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 Luffer 24 - 126 m  
 Upper hours 1,670 h  
 Counterweight 40 t + 180 t  
 Year 2017



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### ALL TERRAIN-CRANES

Make / Type	y. o. m.	Drive	Boom / Fly Jib
25 t Krupp KMK 2025	1994	4x4x4	23,00m + 13,00m
30 t Faun ATF 30-2L	2004	4x4x4	28,50m + 8,00m
35 t Grove GMK 2035	1999	4x4x4	29,00m
40 t Terex-Demag AC 40 City	2008	6x6x6	31,20m + 1,20m
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 Grove GMK 3050	2003	6x6x6	38,10m + 15,00m
50 t Terex-Demag AC 50-1	2007	6x6x6	40,00m + 17,60m
50 t Terex-Demag AC 50-1	2004	6x6x6	40,00m + 17,60m
50 t Terex-Demag AC 50-1	2002	6x6x6	40,00m + 17,60m
55 t Liebherr LTM 1055/1	2004	6x6x6	40,00m + 2,50m
60 t Faun ATF 60-3	2004	6x6x6	40,00m + 16,00m
60 t Liebherr LTM 1060/2	2004	8x6x8	42,00m + 17,00m
60 t Liebherr LTM 1060/2	2005	8x6x8	42,00m + 17,00m
80 t Terex-Demag AC 80-2	2007	8x8x8	50,00m + 17,60m
100 t Liebherr LTM 1100-4.1	2004	8x8x8	52,00m + 19,00m
100 t Terex-Demag AC 100	2005	10x8x8	50,00m + 17,00m
130 t Grove GMK 5130-1	2007	10x8x10	60,00m + 18,00m
160 t Liebherr LTM 1160-5.1	2008	10x8x10	62,00m + 7,00m + 36,00m
160 t Tadano Faun ATF 160G-5	2006	10x8x8	60,00m + 13,20m
200 t Terex-Demag AC 200-1	2006	10x8x8	67,80m + 33,00m

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#### TELESCOPIC AT-CRANES

Capacity	Manufacturer	Type	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	Liebherr	LTM 1400	1988	16 x 8 x 12	50 / 61 / 84	direct
200 t	Terex-Demag	AC 200-1	2011	12 x 8 x 10	67,8 / 25	December
200 t	Terex-Demag	AC 200-1	2009	10 x 8 x 10	67,8 / 1,5	November
200 t	Terex-Demag	AC 200-1	2006	10 x 8 x 8	67,8 / 33+runn.	direct
200 t	Liebherr	LTM 1200	1990	12 x 8 x 8	54,5 / 22	direct
160 t	Liebherr	LTM 1160-5.1	2008	10 x 8 x 10	62+7 / 36	direct
160 t	Faun	ATF 160 G-5	2006	10 x 8 x 8	60 / 13,2+runn.	direct
160 t	Liebherr	LTM 1160/2	1996	10 x 8 x 10	60 / 22	direct
160 t	Liebherr	LTM 1160	1986	12 x 8 x 8	45 / 20 / 52	direct
140 t	Terex-Demag	AC 140	2010	10 x 8 x 8	60 / 1,5	direct
130 t	Grove	GMK 5130-1	2007	10 x 8 x 10	60 / 18	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	Liebherr	LTM 1100-4.1	2005	8 x 8 x 8	52 / 19	direct
100 t	Liebherr	LTM 1100-4.1	2004	8 x 8 x 8	52 / 19	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	37 / 17	direct
80 t	Terex-Demag	AC 80-2	2007	8 x 8 x 8	50 / 17,6	direct
80 t	Terex-Demag	AC 80-2	2004	8 x 8 x 8	50 / 17,6+runn.	direct
80 t	Faun	ATF 80-4	2002	8 x 6 x 8	48,5 / 16	direct
80 t	Grove	GMK 4080	2001	8 x 6 x 8	43 / 13	direct
80 t	Demag	AC 80-1	1998	8 x 6 x 6	50 / 17,6	direct
80 t	Demag	AC 205	1996	8 x 6 x 8	50 / 17,6	direct
80 t	Liebherr	AC 205	1996	8 x 6 x 6	50 / 17,6	direct
70 t	Liebherr	LTM 1070-4.1	2007	8 x 6 x 8	50 / 16	direct
70 t	Liebherr	LTM 1070	1990	8 x 8 x 8	42 / 18	direct
70 t	Liebherr	LTM 1070	1990	8 x 8 x 8	42 / 18	direct
60 t	Liebherr	LTM 1060/2	2005	8 x 6 x 8	42 / 17	direct
60 t	Liebherr	LTM 1060/2	2004	8 x 6 x 8	42 / 17	direct
60 t	Faun	ATF 60-3	2004	6 x 6 x 6	40,2 / 16	direct
60 t	Liebherr	LTM 1060/2	2003	8 x 6 x 8	42 / 17	direct
60 t	Liebherr	LTM 1060/2	2002	8 x 6 x 8	42 / 17	direct
60 t	Terex-Demag	AC 60 City	2003	8 x 8 x 8	50,4 / 14+1,2	direct
60 t	Liebherr	LTM 1060/2	2001	8 x 6 x 8	42 / 17	direct
60 t	Liebherr	LTM 1060/2	2000	8 x 6 x 8	42 / 17	direct
55 t	Terex-Demag	AC 55 City	2005	6 x 6 x 6	40 / 13,8	direct
55 t	Liebherr	LTM 1055/1	2004	6 x 6 x 6	40 / 2,5 + runn.	direct
50 t	Terex-Demag	AC 50-1	2004	6 x 6 x 6	40 / 17,6	direct
50 t	Terex-Demag	AC 50-1	2002	6 x 6 x 6	40 / 17,6	direct
50 t	Demag	AC 150	1997	6 x 4 x 2	40 / 17,6	direct
45 t	Faun	ATF 45-3	2006	6 x 6 x 6	34 / 15,2	direct
45 t	Liebherr	LTM 1045-3.1	2006	6 x 6 x 6	34 / 16	direct
45 t	Liebherr	LTM 1045/1	2004	6 x 6 x 6	34 / 16	direct
40 t	Terex-Demag	AC 40-1 City	2010	6 x 6 x 6	31,2 / 13+1,2	direct
40 t	Terex-Demag	AC 40-1 City	2008	6 x 4 x 6	31,2 / 13+s.h.	direct
40 t	Terex-Demag	AC 40-1 City	2008	6 x 6 x 6	31,2 / 1,2	direct
40 t	Liebherr	LTM 1040-2.1	2006	4 x 4 x 4	35	direct
40 t	Terex-Demag	AC 40-1 City	2005	6 x 6 x 6	31,2/13 +1,2+s.h.	direct

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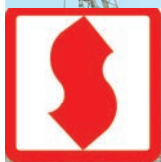
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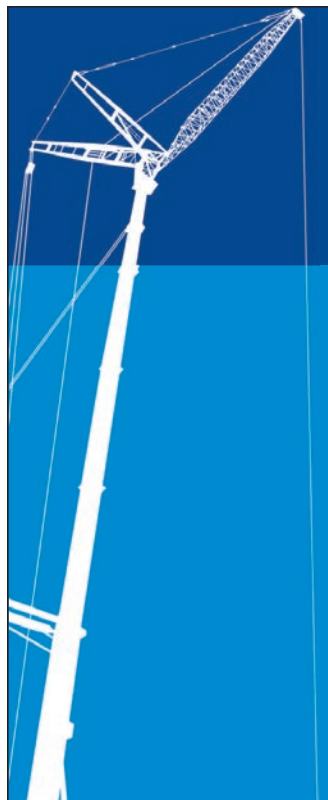
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1x	250 t	Grove GMK 5250L	2017
1x	300 t	Grove GMK 6300L	2016
1x	450 t	Liebherr LTM 1450-8.1	2019
1x	500 t	Liebherr LTM 1500-8.1	2014
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1x	750 t	Liebherr LR 1750	2010

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1x	80 t	Grove RT 880E	2008
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1x	120 t	Tadano GR 1200XL-3	2018
1x	160 t	Tadano GR 1600XL-3	2017

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