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MARCH 2022

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INTERVIEW
Toshiaki Ujiie,
Tadano global
president and CEO



OPERATOR TRAINING AND CERTIFICATION ■ IRANIAN CRANE MARKET

ULTIMATE JOBSITE FLEXIBILITY

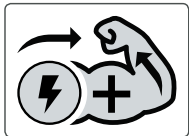


CITY CLASS FLAT TOP TOWER CRANES

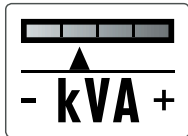
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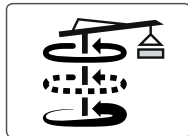
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EDITOR'S VIEW



Integrating two companies after an acquisition is no mean feat at the best of times. When it is two of the world's largest crane manufacturers, and we are in the middle of a global pandemic, it must place it firmly in the monumental challenge category.

I am referring to the acquisition of Demag by Tadano. Our interview this month is with Toshiaki Ujiie, global president and chief executive officer based at Tadano headquarters in Japan. The acquisition completed in August 2019 since when the merger of the two giant crane manufacturers has been underway. Read the first interview Ujiie-san has given outside Japan on page 20. He took up his position at the head of the global corporation in April 2021 just when supply chain issues were hitting around the world. It remains a hot topic now throughout the industry, pushing back lead times for new machines and hampering deliveries.

Talking of supply chain issues brings to mind an experience I had years ago. In December 2005 I was privileged to see and board (yes, into the cockpit too) the world's largest aircraft, the Ukrainian Antonov AN-225 heavy lift cargo jet. My photos of the six-engined, twin-tailed giant were on a rainy (who would have thought it) grey day in the English Midlands. I wrote about it in the February 2006 issue of *ICST*, page 22.

On the occasion I saw the spectacular aircraft it wasn't using its 200 tonne internal load capacity to deliver a typical fare of large refinery vessels or heavy transformers, often urgently needed somewhere in the world. Instead, it was being loaded with tens of thousands of boxes of gifts for children to be flown from the UK to its home country on behalf of a charity. More recently, the AN-225 carried medicine during the Covid pandemic.

I was saddened then to hear the AN-225 was an early casualty of the war in Ukraine by being damaged or even destroyed. It was at the Hostomel airport, also known as Antonov International Airport, to the North West of the country's capital city, Kyiv. I wonder what chance there will be of resurrecting this giant heavy lifter. Let's hope it is sooner rather than later that thoughts there can turn to repairing and rebuilding things.

ALEX DAHM

Editor



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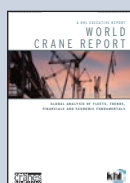


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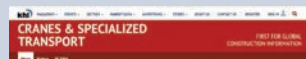
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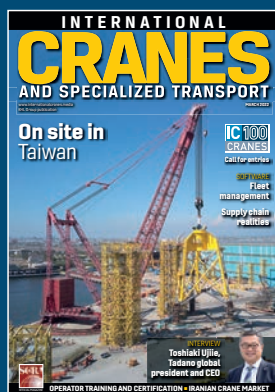
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Tadano announces 12 tonne hydraulic loader cranes

A series of loader cranes for international markets has been announced by manufacturer Tadano in Japan.

Three models comprise the new TM-ZX1200 Series. They are 22 tonne-metre rated behind the cabn cranes with 16 metre booms.

Minimum boom length is 4.48 metres and it can be elevated to an angle of 80 degrees. Capacity is 8.8 tonnes at a 2.5 metre radius and the maximum outrigger extension spread is 5.5 metres.

Two narrower settings can be selected, at 3.9 and 2.2 metres. Three specification levels start with a manual



Tadano TM-ZX1200 Series loader cranes are available in three versions

(MH) spec, followed by HRS/HS specifications with an advanced overload prevention device, the manufacturer said. This Safety Eyes system, standard on HRS and HS models, monitors stability changes as the crane is operating.

Another included safety system is the AML (Automatic Moment Limiter) to prevent overloads. It monitors the crane in use, restricting or stopping operation depending on how close

it is to its limit in any position. It also has the Jack Interlock function to disable the crane if the outrigger legs lose contact with the ground. A working height limit device automatically stops boom elevation at a preset height.

The three versions are: TM-ZX1205MH (basic spec) TM-ZX1205HS (intermediate spec) TM-ZX1205HRS (fully loaded).

New Terex self erector and a new director

Terex tower cranes has a new self erecting tower crane and a new director for the product line.

The new CSE 40 follows the CSE 30 and CSE 32 models and sits above the CSE 36. It has a 40 metre jib and a capacity of 4.4 tonnes.

Terex said the new crane design, motors and electronic control improve performance and usability and that the fully electronic control ensures a precise setting and crane control. It has the new Terex Power Plus (TPP) and Terex Power Match functions. Hook height can be set between 25.6 and 32.2 metres and its rear swing radius is 2.8 metres.

Terex has also formally announced the appointment of Nicola Castenetto as business line director for self erecting cranes. Castenetto was formerly Terex's global cranes product support strategy director. Commenting on the news Marco Gentilini, Terex vice president and general manager, said, "We are very excited about our self erecting cranes and we are putting more focus on them."



Terex said its new CSE 40 self erector will comply with the new version of the European Standard EN14439

HIGHLIGHTS

» A call has been made for contributions to a new best practice guide (BPG) on the use of mobiles cranes in pile driving and extraction. **THE INTERNATIONAL CRANE STAKEHOLDERS ASSEMBLY (ICSA)** has decided to start work on a new BPG. The ICSA member in Europe, **ESTA**, is seeking contributions from its members.

» Agreement has been signed for international crane and engineering maintenance specialist **SPARROWS GROUP** to be acquired by Altrad Group. Sparrows' wind energy business Alpha is part of the transaction with the industrial services provider. Terms of the deal were undisclosed. Sparrows said it will be run autonomously.

Germany-based **HEINRICH AND CO** has added a Tadano 100 tonne capacity ATF 100G-4 all terrain crane to its fleet. It will be used primarily as a taxi crane in East Westphalia.

The company already has a large fleet of Tadanos from 40 to 220 tonnes capacity. This latest addition closes a gap for Heinrichs. "The ATF 100G-4 will allow us to be even more flexible when it comes to accepting orders. It's compact and powerful, so it really is the perfect taxi crane," said company owner Thomas Heinrichs. "We want to use the crane primarily for moving machinery, as an auxiliary crane or in prefabricated construction.



Mammoet halts new business in Russia

International heavy lift and transport specialist Mammoet's parent company has issued a statement outlining its stance in the Russia and Ukraine situation.

Mammoet owner SHV said, "For now, no new investments, no new projects and no new exports to Russia will be undertaken. Simultaneously, we assess our current and future obligations on a continuous basis as the situation evolves. We fully adhere to the sanctions, both in spirit and in law and make sure we stay compliant in what we do."

SHV said its first priority was the well-being of its 1,100 employees and their families in the region. Others in the crane and transport industry, including manufacturers Tadano and Liebherr, have issued statements and similarly taken action. For more on the impact on the Russia-Ukraine situation's implications for the construction industry, see *War in Ukraine: the construction impact* at www.khl.com

Manitowoc sales up 19%

Sales in 2021 for the full year at crane manufacturer Manitowoc were up 19 per cent to US\$1,720 billion, from \$1,443 billion in 2020.

The USA-headquartered company reported full-year 2021 adjusted earnings before taxes, etc. (EBITDA) of \$116.0 million, or 6.7% of net sales.

For the fourth-quarter of 2021 the company posted a 15.7% increase in sales to \$497.8 million from \$430.3 million in the same period a year earlier. A net loss of \$(3.6) million was reported

attributed to "a \$13.9 million charge due to a legal matter with the U.S. Environmental Protection Agency. Adjusted EBITDA in the quarter was \$34.2 million, or 6.9% of net sales.

Orders, rather than sales, in the fourth-quarter were up 21% year-on-year at \$615 million.

Commenting on the results Aaron Ravenscroft, Manitowoc president and CEO, said, "In spite of the multitude of operational challenges we faced during the year, the Manitowoc team ended

the quarter exceptionally strong and delivered great results.

"...orders for the quarter increased 21% year-over-year, and our backlog ended the year in excess of \$1.0 billion, our highest level in over 10 years. This improved demand combined with our recent acquisitions provide us with a solid foundation as we focus on growth in 2022 and beyond." said Ravenscroft.

The company's order backlog on 31 December 2021 was \$1,010.9 million, up 86.1% year-on-year.

BKL to distribute Sáez towers

German tower and mobile crane company BKL and Spanish tower crane manufacturer Grúas Sáez have agreed a distribution deal for Germany and Austria.

BKL will be the exclusive dealer for Sáez in these two countries. Sáez manufactures flat tops and luffers up to 36 tonnes capacity, plus self erectors."

In Grúas Sáez we have found a strong partner, one that meets our exacting quality requirements... The co-operation is helping to enhance BKL's construction crane portfolio and is part of our successful growth strategy," said Alexander Volz, BKL owner and chairman of the advisory board.

Laura Canovas Sáez, CEO, commented, "As a well



Alexander Volz, BKL owner and chairman of the advisory board, left, with Laura Canovas Sáez, CEO at Sáez Group

established dealer, BKL's support guarantees the Sáez brand the best possible conditions to gain a greater foothold on the German and Austrian markets."

"It will continue our work from the last five years where

we have already been working with Sáez," Jörg Hegestweiler, BKL chief executive officer, told ICST. "We have found it to be a very good product. Sáez can easily and quickly fulfil specialist requirements of customers."



» **Fabio Belli**, CEO at Italian heavy transport and lifting specialist **FAGIOLI**, has been nominated to take over as the president at European crane and transport association ESTA.

Current incumbent David Collett's term ends in March. Belli's appointment has to be confirmed by the ESTA general assembly on 17 March. Alternative



Fabio Belli, Fagioli CEO, is nominated to take over as ESTA president

candidates could emerge beforehand.

In the meantime the ESTA board and management said they are delighted that such a respected and influential candidate as Belli has – with the support of his company – agreed to his name being put forward.

David Collett is stepping down, having been in post for three three-year terms which is the maximum time

allowed under ESTA's constitution.

Collett's period in office is regarded as being highly successful. During his time as president ESTA has become increasingly influential with governments, regulators and the European Commission, promoting issues on safety, and harmonisation of Europe's rules and regulations.

Hiab and Cargotec up in 2021 despite challenges

Cargotec group sales in 2021 were €3,315 million (US\$ 3,762 million), as against a €3,263 million (\$3,703 million) total for the year before.

Sales increased 1.6 per cent in

2021 while orders received was up a strong 42 % on the previous year from €3,121 million (\$3,542 million) to €4,427 million (\$5,023 million). The discrepancy was explained by Mika Vehviläinen,

Cargotec CEO, who said, "Component shortages and global logistics challenges limited our ability to respond to the demand."

Group operating profit was up 2 % to €232 million (\$263 million) from €227 million (\$258 million) driven by the Hiab crane division. Hiab sales increased 14 % while at Kalmar and MacGregor there were declines in sales.

By division Hiab, with its hydraulic loader cranes and other materials handling equipment, has a 38 % share of the total. In 2021 sales were €1,250 million (\$1,418 million), up 14 % from €1,094 million (\$1,241 million) in 2020. Operating profit was €166 million (\$188 million) or 13 % of sales. It employs 3,585,

people Port crane and equipment maker Kalmar is the largest of the Cargotec divisions with a 46 % share of the total. Sales in 2021 were €1,512 million (\$1,715 million), down -1 % from €1,529 million (\$1,734 million) in 2020.

Smallest of the divisions is MacGregor, maker of marine cranes and other cargo equipment. Its 17 % share of the total constituted €553 million (\$627 million) in sales for 2021, down nearly -14 % from €642 million (\$728 million) in 2020.

Commenting on the year for the group as a whole, Mika Vehviläinen said, "In 2021, our market situation improved, global economic activity picked up, and the demand for our products and solutions strengthened significantly. As the year progressed, however, component shortages and supply chain challenges delayed our deliveries. The continuing Covid-19 pandemic also hampered both our operations and those of our customers."

Looking ahead Vehviläinen said the order book is strong but he expects component shortages and global logistics challenges to continue and that they may limit Cargotec's ability to respond to the growing demand.

Hyva adds 40 tonne-metre class to Edge Line

Hydraulic crane manufacturer Hyva has added five models to its 40 tonne-metre rated Edge Line articulating crane series.

Maximum outreach is from 8.02 to 20.90 metres achieved with between two and eight boom extension sections and a 10 metre jib. Of the five new models, two have continuous slewing while the other three have rack and pinion type slewing. Edge Line models offer a three year general warranty and five years on structural parts, Hyva said.

Giuseppe Bevacqua, Hyva cranes product manager, said, "High performance, with a wide range of innovative features and variety of accessories and attachments, make these cranes ideal for many applications from construction to logistics; oil and gas to mining, and maintenance to rental."

The new models start at the basic 40 tonne-metre HC 401 with 430 degree rack and pinion slewing and a double linkage. Top of the line is the 44 tonne-metre HC 445e with continuous slewing and Proportional Lift Control System (P-LCS).

Top of Hyva's new Edge Line series is the 44 tonne-metre HC 445e



HIGHLIGHTS

» **TEREX CORPORATION** experienced a much brighter year in 2021, compared to 2020, thanks to a resurging market.

Full year sales for the group were \$3.887 billion, compared to \$3.076 billion the year before.

The materials processing (MP) segment, which includes cranes, saw an upswing in the year to 31 December 2021.

» **KING LIFTING** in the UK has ordered 19 new Liebherr wheeled mobile cranes for delivery over the next two years.

The order covers a range of models from 60 tonnes up to the 700 tonne capacity LTM 1650-8.1.

Three units of this eight axle model are part of the order which helps mark the company's 40th anniversary in 2022.

Spanish boiler manufacturer **TALLERES LAGUILLO** has purchased a dual-power Jekko SPX650CDH spider crane. It is the first unit of this model to be delivered in the country.

Cantabria-based Laguillo chose the 5 tonne capacity model for its indoor and outdoor capabilities. It has a diesel engine for outdoor use and an electric motor with plug in mains power cable for operation indoors. Maximum lifting height is 23.5 metres with the jib.

Ian Trenzano, sales manager at Spanish Jekko dealer Transgrúas, said, "We've already sold four units and three additional ones will soon follow. We think we can sell many more to plant hire companies."

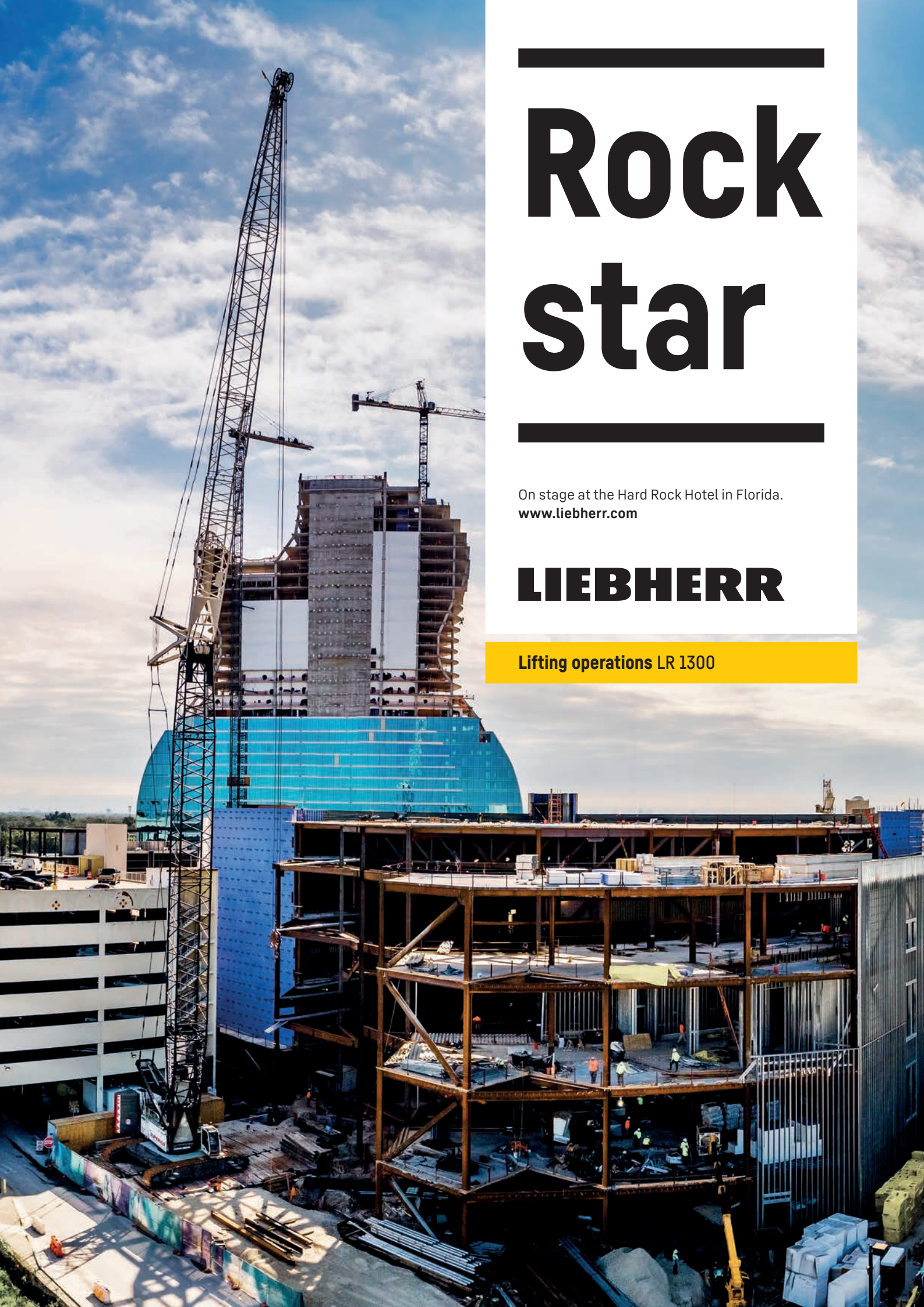


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Learn more about the AC 2.040-1 and other news we have planned for the future at:
thestartofsomethingbig.onetadano.com



Andreas Klauser, Palfinger CEO, speaking at the financial results press conference on 24 February 2022. PHOTO: PALFINGER/APA-FOTOSERVICE/JUHASZ

Another record year for Palfinger

Sales revenue was €1,841 million (US\$ 2,067 million) for the Palfinger Group in 2021, up 20 per cent from the €1,533 million (\$1,721 million) in 2020.

The Austrian crane, aerial work platform and materials handling equipment manufacturer said it achieved all-time highs for revenue, EBIT, consolidated net result and dividend. EBIT was €155 million, up 55 % from €100 million in 2020.

As the company started its 90th year in business, it reported growth in all its sales regions and said it has set a €2.0 billion target for revenue in 2022.

Much of the growth was attributed to the strength of the construction, timber and recycling sectors. "Long-term

infrastructure packages and increasing investments in housing projects are driving the positive trend in the construction industry," the company said.

Commenting on the result Andreas Klauser, Palfinger CEO, said, "This result shows how quickly Palfinger reacts to a volatile and challenging environment with the Global Palfinger Organization (GPO) and uses it to its advantage."

For 2022 the company forecasts further growth with, for the first half of the year, reduced profitability. It expects improvement during the second half as a result of price increases. A €2.3 billion revenue target has been set for 2024, increasing to €3 billion for 2030.

Three fully electric LIEBHERR crawler cranes are working on two high speed rail (HS2) construction sites in the UK. Supplied by Select Plant Hire, the 250 tonne capacity LR 1250.1 unplugged and two of the new model 160 tonne capacity LR 1160.1 unplugged (ICST December 2021,



Zero emissions Liebherr electric crane at HS2's Old Oak Common

News, page 6) are among just five emissions-free Liebherr cranes in the world, Select said.

The 250 tonner and one of the 160 tonners were delivered to HS2's Old Oak Common site in West London, run by the Balfour Beatty, Vinci Systra joint venture. They are helping build the 850 metre Old Oak Common Station box

Big and bold

Several companies produced their full 2021 end-of-year reports this month, with the larger manufacturers seeing steady and encouraging recovery from the challenges of the pandemic. Supply chain issues, however, are already a major hindrance to delivering new cranes and may even get worse again before they improve.

At US and Italian crane manufacturer Manitex net sales for the full year 2021 at US\$ 211.5 million, were up 26 per cent from \$167.5 million in 2020. Reflecting supply chain issues, however, the order backlog at the end of September 2021 was \$189 million, up 66 % from \$113.6 million a year earlier.

On share prices, Tadano saw a drop of -10.85 % this month but sees a much more positive year-on-year change, improving 8.26 % from the previous 12 months. Despite a -17.53 % decline from the last 12 months, Japanese-headquartered manufacturer Kobe Steel saw a large increase this month of 10.35 %.

Progress has been made in the proposed Cargotec Konecranes merger in that the European Commission has conditionally approved it. To satisfy those conditions Konecranes will need to sell its Lift Truck business and Cargotec its Kalmar Automation Solutions unit.

MARCH /C SHARE INDEX

STOCK CURRENCY	PRICE AT START	PRICE AT END	PRICE CHANGE	% CHANGE	PRICE 12 MTHS AGO	12 MTH % CHANGE	
/C Share Index*	93.79	93.42	-0.37	-0.39	149.87	-37.42	
Legacy /C Share Index**	308.89	298.56	-10.33	-3.34	328.62	-6.00	
Dow Jones Industrial Average	34,239	33,224	-1015.33	-2.97	31,402	9.03	
FTSE 100	7,483	7,374	-108.37	-1.45	6,622	12.99	
Nikkei 225	26,720	26,477	-243.74	-0.91	28,966	-7.75	
Hitachi Construction Machinery	YEN	2,946	2,797	-149.00	-5.06	3,275	-10.05
Konecranes	€	34.90	32.50	-2.40	-6.88	37.00	-5.68
Kobe Steel	YEN	541	597	56.00	10.35	656	-17.53
Liugong	CNY	7.20	7.33	0.13	1.81	9.14	-21.23
Manitowoc	US\$	17.63	16.34	-1.29	-7.32	16.67	5.76
Palfinger	€	29.60	27.65	-1.95	-6.59	31.85	-7.06
Sany Heavy Industry	CNY	20.14	20.17	0.03	0.15	41.11	-51.01
Tadano	YEN	1,088	970	-118.00	-10.85	1,005	8.26
Terex	US\$	41.41	40.77	-0.64	-1.55	41.28	0.31
XCMG	CNY	5.64	5.57	-0.07	-1.24	7.00	-19.43
Yongmao Holding	SGD	0.72	0.72	0.00	0.00	0.65	10.77
Zoomlion	CNY	7.05	7.14	0.09	1.28	14.30	-50.70

*/C Share Index, 1 Jan 2011 = 100

**Legacy /C 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	6.361	6.317	-0.04	0.70	6.46	-1.57
€	0.896	0.893	0.00	0.37	0.83	8.55
Yen	115.197	115.477	0.28	-0.24	106.37	8.30
UK£	0.746	0.747	0.00	-0.10	0.72	3.94

Period: Weeks 5-9

Speaking to Chris Hines, head of Mammoet's people development and recruitment and Wilfred de Boer, senior SPMT supervisor at Mammoet, it seems the biggest trends in training today concern safety and scalability. The lack of industry wide standardisation, global accessibility and communication are big challenges to overcome. The digital landscape too is changing operator training, and fast.

OPERATOR TRAINING – WHAT ARE THE BIGGEST CHANGES AND TRENDS?

Wilfred de Boer: Safety is the most important issue. The amount of SPMT in the world over the last 15 years has grown dramatically. And the funny thing? Everybody can operate them. You don't have to have any licence or any training. There's no rules for it, no laws. It's different from the crane industry.

Chris Hines: I joined as part of the acquisition from ALE. The emphasis for us is on safety. In terms of changes and trends, it's scale. It's how we reach and communicate messages of common standards of safety across what is now a vast organisation.

WHAT ARE THE BIGGEST SKILLS SHORTAGES YOU NEED TO ADDRESS WITH TRAINING?

Chris: I think it very much depends on who you talk to. Operators make up 60 to 70 per cent of our organisation. Our emphasis is on making sure people are competent to operate our equipment safely.



Well-trained employees make fewer mistakes and have fewer accidents than those with less experience, says NCCCO



Properly training operators is a key part of ensuring safety on site. From VR simulators to viral video content, technology and the digital post pandemic world are showing smarter ways to communicate, learn and teach. **NIAMH MARRIOTT** reports



For PTC cranes we can't just train on site, it needs to be done beforehand and that's where simulators are useful, says Mammoet

Train to

Wilfred: In terms of skill shortages, we go to all different countries, different projects start all the time and it's getting more and more difficult to bring specialists to the location because of contractual matters. You have to use local people and train them. You have to find the right people, technical people who are interested – and who hopefully speak English or are willing to learn. English is a worldwide common language but sometimes it's the first barrier and you have to explain the benefits of learning it.

HOW DO YOU MANAGE TRAINING AROUND THE WORLD WITH PEOPLE SPEAKING DIFFERENT LANGUAGES? HOW DO YOU MAKE IT ACCESSIBLE?

Chris: With a translator it's not a case of English or bust. It's really about recognising that there are more commonly used languages. It's easier to communicate in a common language as we're normally working in a multinational team, on highly specialized multinational projects. It goes far beyond the classic role of training. When recruiting people we are looking at the core skillsets and having a common language is definitely useful, particularly for safety.

Wilfred: Video content can be translated easily so that helps, and the operators can see these videos in class, and also on their mobile devices. It's also cultural training, not just the language issue.

DO YOU THINK THERE NEEDS TO BE BETTER STANDARDISATION GLOBALLY OF TRAINING?

Chris: We have several thousand axle lines of self propelled modular transporter. This stuff didn't exist until the mid 1980s, and the scale of use didn't rise until 15 years ago. We're seeking to deliver a common standard where we can ensure people have a common level of competence.

Elsewhere in the industry you don't need a licence, you can just go and buy SPMT. How do you manage risk in that? How do you ensure safety in that environment without making sure you've got subject experts with significant experience?

SO THERE'S A LACK OF STANDARDISATION?

Chris: We have our own attitude towards standardisation, quality, safety. Standardisation in the industry? That's a different question. I don't believe it exists.

VIDEOS, VR TRAINING, SIMULATORS - WHAT ARE THE BENEFITS? WHAT DO PEOPLE PREFER?

Wilfred: For the PTC cranes we can't just train on site, it needs to be done beforehand and that's where simulators are useful.

Chris: In terms of VR, we've got some high quality infrastructure at our regional training academy in the Netherlands. It is



needs to have some form of structure to it. **Wilfred:** People in training like to see photos and videos of real life situations, on real projects and with real examples.

These people are not used to sitting down in an office, in a classroom all day, you have to keep things interesting and interactive. Physically showing them how to replace a faulty power pack or how to get things moving again after an issue, with the real equipment that they can see and hold and use.

Chris: Video content means that everything the trainers like Wilfred do can become scalable, we can share it everywhere as Wilfred can't be everywhere all the time. So that's really useful.

WHAT EFFECT HAS COVID HAD ON TRAINING?

Chris: Like every business we have had to think creatively. It's presented lots of problems of course but actually it's forced us to think differently.

It has provided unexpected benefits, too. We had to step out of our comfort zone but that led to creating a digital mentor network.

HOW ARE YOU ENCOURAGING YOUNG PEOPLE TO JOIN THE INDUSTRY?

Chris: I think training is actually a secondary issue to the broader question of how we attract people, full stop, and the industry has a challenge. What attracted people to the oil and gas sector and supporting sectors 30

years ago is completely different to what interests people now. So it's really about us modifying our thinking about what our offer is to candidates, what our values are as a business, and making sure that they're aware of them.

If you find the right people, it's very difficult not to be excited about what we do. Once we've got them, it's about recognising there are different ways that people learn now. There are different ways that people communicate and consume information, and a lot of that is digital.

HOW DO YOU TRY TO ENSURE OPERATOR RETENTION POST TRAINING, SO THEY DON'T GET TRAINED AND THEN LEAVE FOR A COMPETITOR?

Chris: How do we make people stay? People value the investment in them. It's part of our offering to our people as well as in terms of safety. But training doesn't make people stay. Cultures are what make people stay. You stay because you love what you do.

SIMULATOR TRAINING

Simulator style training is gaining in popularity as the technology becomes more realistic to on site working conditions. The benefits are obvious – operators can log practice hours safely and without disturbing actual works, finesse their technique and improve their knowledge without any danger to themselves or to the equipment.

David Clark, senior product marketing manager at CM Labs, says simulation-based training can help improve and maintain health and safety. "With such high risks, construction is today being held to some of the most stringent workplace safety standards," says Clark. "Simulation directly addresses health and safety metrics by reducing injury, while allowing trainers to virtually capture unsafe equipment operation. Leveraging simulation in your training programme allows operators to gain familiarity and confidence in a safe, low-stress environment before taking control in the field.

"Greg Brown, inspector and trainer at Crane Industry Services (CIS) says an added benefit is the ability to prepare operators for extreme conditions not easily replicated in field training. "We can challenge students with a wide variety of tasks, distractions, and difficult conditions such as high winds, rain, and so on without creating danger in or around the job site," he says. "Simulators aren't just for beginners. Their flexibility allows us to teach customised and advanced



Self erecting tower crane and stiff boom crane students training on at Bigfoot's Abbotsford BC Training Centre. Both are full certification programmes lasting 8 to 15 days



gain

unique equipment built to our own bespoke specification.

The issue is actually getting people to the VR technology. We're investing in really leading edge tech but it still requires a human to get on a plane to go and see it and that's why we want to replicate it in other locations.

So we've got VR, simulators and classrooms but also on site learning. That's where the real powerful learning takes place in my opinion. But the on the job training

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LIFETIME EXCELLENCE





CM Labs' new Vortex Edge Plus is lightweight so can be easily transported in carrying cases and set up in minutes, says the company

operations to even the most experienced operators."

Clark continues, "As equipment becomes increasingly powerful and complex, operator training takes on a whole new level of importance. And simulation-based training is shown to offer a substantial return on investment in terms of time, retention, and effectiveness."

CIS started using CM Labs' simulators in 2014 to help determine the impact of simulators on training. It says that Vortex Simulators from CM Labs are highly effective for training or re-skilling operators.

"Although simulators are an investment, they are much less expensive in the long run for assessing aptitude and training for the right skills than utilising only in-the-field methods," says Debbie Dickinson, CEO at CIS.

"When you consider the expenses associated with hands-on equipment training in the yard, equipment rental, fuel, the hourly rate of a certified instructor, maintenance, and so on – the cost of training can be astronomical," she says. In contrast, CIS says that one hour on the simulator was equivalent to up to four hours on a crane, making this an efficient and cost-effective training tool.

Julien Richer-Lanciant, CM Labs' construction product manager, says, "The construction industry is doing absolutely everything it can to eliminate barriers to training, and get the next generation of skilled labour exposed to the challenges and rewards of a construction career."

VIRTUAL TRAINING

With advancing technology, and a basic internet connection, training can be held virtually and broadcast to any learner around the world, making it highly accessible. US-based Industrial Training International (ITI), for example, is now offering instructor led training via Simulcast, meaning that students can join from anywhere in the world. It offers a range of courses, including its three day NCCCO mobile crane operator certification test preparation.

People value the investment in them, says Mammoet



TRADITIONAL LEARNING

Despite digital advancements, there is merit to traditional training in person. Postpandemic in Canada, this type of learning can now continue to great effect.

Ralf Notheis, crane academy manager at Abbotsford, Canada-based Bigfoot Crane Company, says, "Bigfoot is continuing to be very busy on all fronts in providing crane, rigging and construction hoist operator training across Western Canada."

"With our "zero experience to fully certified operator" programmes, we are making the connection between an industry that needs skilled workers and regular people with a passion for cranes," he says.

One of the courses in high demand is the Level 1 Rigger Certification Course. "I believe we have finally turned the corner in

Canada and companies are realising workers performing rigging duties require formal training from a qualified instructor, it is vital to the safety of everyone."

"We offer theory and practical training in a way that is easy to understand. It really helps keep students engaged when they understand why they need to know things," he says.

CERTIFICATION IS KEY

"While training is vital to ensuring employees are knowledgeable and prepared to perform the work you expect of them, it isn't the final step," says Thom Sicklesteel of the National Commission for the Certification of Crane Operators (NCCCO). "Certification verifies that training has been effective and closes the link in a process established to educate people in the correct way to perform their job duties."

"Well-trained employees, with independently verified knowledge and skills, make fewer mistakes – and therefore have fewer accidents or other mishaps – than those with less experience," he says.

"CCO offers load handling operator and related certifications. Earning certification through CCO attests that a person possesses the required competencies to practice their profession. To be fair, certification is awarded by organisations not involved in training."

"CCO standards, like those of most accredited certifications, are set through a defensible, rigorous, industry-wide process. Certificants often also have retesting."

"Differentiating between the available credentials and weighing their benefits can be both intimidating and confusing," he adds. "The main difference between "certification" and "qualification" is the level of testing required. Certification provides a consistent and accurate means to determine a person's technical knowledge and skills."

AINSCOUGH APPRENTICES

UK-based Ainscough Crane Hire is supporting a new generation of crane professionals with its crane operator apprenticeship programme. A three year paid course, it aims to offer participants a pathway to the crane industry while gaining skills and qualifications. In the first year, the apprentices will gain their slinger signaller qualification before moving on to achieve a HGV Class 2 licence and mobile crane operator qualifications. Once completed, each apprentice will be a fully qualified blue card crane operator. They will be mentored and supervised throughout.

Darren Thompson, Ainscough Crane Hire head of HR, comments, "The past year has been very difficult for young people but it's an incredibly exciting time to join the crane industry. Ainscough is currently working on both HS2 and Hinkley Point C – two of the largest infrastructure projects the UK has ever seen." The apprentices will be "taught the absolute importance of safety" while working on actual lifting projects, says Thompson.



Sanctions bite

International sanctions and a lack of foreign currency have left Iran without new modern cranes and a shortage of spare parts, jeopardising the construction business as well as equipment operators.

In 2021, Iran revived its ambitious plans for a major nationwide residential building renewal programme. Rostam Ghasemi, a newly appointed Minister of Roads and Urban Development, promised to build four million residential units by 2025. Ghasemi said Iran had everything it takes to turn this project around, mentioning land, building materials, and engineers. Government officials admit, however, that when it comes to equipment, especially cranes, things look different, as most of the existing units are old and not only ineffective but also unsafe.

The previous plan for renewal was embarked on shortly following the signing of the so-called Nuclear Deal between the Iranian government and world powers. At that time, most companies were optimistic about the Iranian market prospects. "Iran is a market with great potential. Its political and economic stability is making it easier for government plans related to oil, mining and transport to go forward. Steel structures are widely used in Iran so tower cranes are essential for most projects," said Andrea Bristot, Comansa head of sales for the Middle East.

That landmark accord began unravelling in 2018 when then US President Donald

A rare insight into the crane market in Iran where the impact of sanctions and a shortage of foreign currency is biting hard. **VLADISLAV VOROTNIKOV** reports

Trump pulled out of the deal and re-imposed sanctions, burying that construction project, hampering infrastructure development. The new sanctions prohibit Western companies from doing business with Iran, stripping the country of much-needed European construction equipment, among other things.

Tehran faces two impediments to buying foreign cranes. The first hurdle is paying for foreign equipment under a US banking sanction threatening foreign banks with third-party sanctions if they deal with Iran. The second problem is the lack of foreign currency, as the US oil sanctions have reduced Iran's dollar earnings, forcing the country to use foreign currency reserves.

OLD CRANES TENDING TO FAIL

The Trump sanctions almost stopped the import of cranes and construction machinery into Iran, plus spare parts, which may be an even bigger problem. Arman Khaleghi, Deputy Minister of industry, mines, and commerce, claimed, "Most construction equipment in the country is worn out and obsolete. The use of



this worn-out equipment poses a big danger to workers."

Recent years have seen several accidents with lifting equipment, including tower crane collapses, which caused injuries to workers and damaged property.

Khaleghi also added that equipment failures, which have become more frequent, incur losses because companies have to halt operation. He said the government must seek an import replacement in this field, suggesting this step would improve safety in the long run.

"In the field of heavy machinery, domestic production has not met the needs of the country and we have to rely on imports," Khaleghi said, adding some progress with import-replacement could be achieved by permitting construction companies to import cranes and other machinery only in cases where no alternatives are available on the domestic market.

"Most of the cranes available in the Iranian market are imported. Several domestic companies have taken steps to assemble and manufacture some brands but, so far, it has taken place only in the field of light and semi-heavy equipment. Recently Lajoor Arak Company has started producing heavy cranes with a unique design, and we hope to see support from the state," local analytical agency Iran Granbar, said.

So far, however, no public information is available about Lajoor Arak Company's cranes.



Iran imported cranes from Europe before the sanctions but now China is the largest supplier



Many cranes in Iran are old and built to superseded standards



A shortage of spare parts and difficulties obtaining them is a big problem in Iran

CHINESE AND SECOND-HAND

In 2020 China was the largest supplier of cranes, specifically overhead travelling cranes, to Iran, as shown in research conducted by international consulting agency Index Box. Overhead travelling crane imports from China exceeded the figures recorded by the second-largest supplier, Spain, threefold. Russia ranks third in terms of total imports.

In 2018 Iran imported 68 tower cranes for US\$6.2 million, the country's Customs Service estimated, the last time it disclosed official data. The overall import value of cranes, mobile lifting frames, straddle carriers, and works trucks fitted with a crane, totalled \$25 million in 2018 – the lowest figure ever. For comparison, the import peak in 2011, Iran imported cranes worth \$126.7 million.

The largest suppliers before the sanctions were Spain with a share of 18.2 per cent, UAE with 17 %, China with 16.9 %, and Japan with 12 %. A significant portion of the cranes being imported into Iran are already several years, in some cases – decades, old. Overhead travelling cranes on fixed supports accounted for 25 % of all import supplies, tower cranes for 24 %, and self propelled lifters for 24 %.

"In previous years, most cranes were coming to Iran from Spain as well as other European countries. Now, China is the biggest supplier. However, to a large extent, the industry still runs second-hand European equipment, which is supplied to Iran indirectly

through UAE, or being resold on the domestic market, to run for the last few years here until it is scrapped," commented a source at a local construction company.

Procurement of modern European cranes is now an exception rather than a rule due to sanctions. For example, in its latest push to develop Iran's Chabahar port project, India handed over two 140 tonne capacity cranes, to the Iranian government. Worth about \$25 million they were from Italy, only arriving after several years of delay, even though India received a sanctions waiver from Washington.

SPARE PARTS ISSUES

Cranes are being scrapped in Iran not just because of their age but due to local companies' inability to source spare parts. Most European suppliers are reluctant to do business with Iran. Indirect purchases and smuggling seem to be the only way to get necessary parts but that is a risky business.

Difficulties importing spare parts has pushed companies to manufacture them in Iran. A lack of standards in this area, however, has become a big problem. Mohammad Bashir Mohammadi, a manager of the tower crane parts department in Meh Yas Ghaem Company, said the absence of some common standards caused quite a few incidents in the Iranian construction industry.

"Everyone in the country produces tower crane parts according to their own standard,"

Mohammadi said, adding that customers have little confidence in Iranian-made products. "There are no common standards and the existing regulations allow this mess."

According to Mohammadi, the spare parts of dubious quality pose a threat to operations and, in his opinion, the authorities must intervene to bring order to this market.

The technical regulations must be changed to prevent old cranes from operating beyond the maximum allowable time. "According to international standards, every crane has a useful life, after which, even if it is still able to work, it should be scrapped and destroyed. Unfortunately, in our country, a large number of installed tower cranes keep operating even despite the end of their useful life, and depreciating due to obsolescence, fractures or failures," Mohammadi added.

RENTING FOREIGN CRANES

Iranian construction companies are suffering from a general depression as they hoped the new building plans, and new orders, would source money for modernisation.

Evidence is growing, however, that Iranians could soon see new modern cranes on their streets but not thanks to local companies. Ahmad Donyamali, a member of the state housing council, announced that the authorities planned to invite foreign companies from China and Turkey.

Donyamali said negotiations prove foreign firms are offering much better prices than their Iranian counterparts. By way of example he stated that a price of \$100 per square metre had been offered for building cheap, prefabricated apartment buildings. Iranian companies are asking almost double.

Iran simply has no money to pay construction companies. Estimates indicate it would take a \$24 billion investment to build 4 million apartments – money Iran simply doesn't have. Donyamali said Iran's position is not to pay any cash to foreign companies, but barter with oil. Local companies would not accept such conditions. ■



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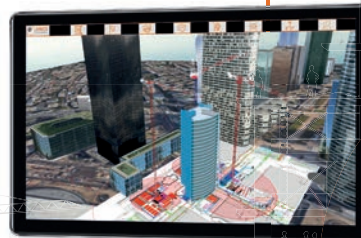
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A Demag CC 4800 lattice crawler crane lifted the boat into place

Sarens doubled up 12 axles lines of SPMT to lift and move an ancient solar boat through the Egyptian pyramids to its new location in the Grand Egyptian Museum in Cairo.

NIAMH MARRIOTT reports

Ancient path

The new Grand Egyptian Museum in Cairo aims to host the largest ever collection of Egyptian artefacts in the world. Planning to open in November 2022, the museum will display significant historical objects, including a statue of Ramses II, Tutankhamun's funerary collection, including the famous golden funerary mask, and Khufu's wooden solar boat, built more than 4,600 years ago and unearthed from the sands near the pyramids of Giza.

The archaeologically significant and relatively fragile boat had to be transported more than 10 km from the old Khufu Boat Museum for installation in the new museum. Specialist international transport and lifting contractor Sarens was tasked with the move and installation by construction contractor Besix-Orascom Joint Venture (BOJV).

PLANNING PHASE

During planning it became clear the boat had to be precisely positioned horizontally during the entire operation, as it is so fragile.

Equipment Sarens deployed included:

- 12 axle-lines SPMT type K24 Kamag
- 12 axle-lines SPMT type K25 Scheuerle Kamag
- An 800 tonne capacity Demag CC 4800 lattice boom crawler crane in SSL/LSL configuration with 90 metre boom and 300 tonne superlift.

"It took more than eight months of studying and planning to successfully

execute this most important, challenging and unique engineering and archaeological projects," said a spokesperson. "After the approval of the permanent committee of the Supreme council of antiquities in accordance with antiquities protection law, preparation for the transportation of the boat began. Archaeological and engineering committees, in collaboration with local and international scientific institutions, prepared the boat for its final departure. Protecting it and not exposing it to any risk during the transportation process was a top priority."

PROTECTIVE STEEL

A steel cage was designed and built to house and protect the boat for the journey. The boat is 42 metres long and weighs 20 tonnes. Combined with the cage, the overall weight was well over 100 tonnes.

Sarens built a 52 metre long and 5.6 metre high steel bridge to allow the SPMT to drive in and park under the boat. Next, 12 axle lines of K24 SPMT lifted the boat from its support, drove it carefully outside through a narrow opening with 200 mm space on each side, and parked it on top of another 12 axle-lines of K25 SPMT to help ensure smooth movement of the load on slopes.

Commenting on the SPMT, the

Two lines of SPMT were placed on top of each other to allow the boat easy transfer from its original position

spokesperson said it had "an outstanding ability to overcome any obstacles that may occur along the route and the ability of manoeuvring curves and spins as well as absorbing any vibration."

PYRAMID PATH

The boat had to be transported through the pyramids with slopes up to 3 degrees along the way. Prior to the move, a radar survey was conducted of the rocky ground under the museum, and on the passageways and roads on the Eastern side, to ensure their ability to withstand the load.

Restorers from the conservation centre of the grand Egyptian museum and the Supreme council of antiquities made a laser scan survey of the boat for documentation before carefully packing it for transport.

The morning after the move, the Demag CC 4800 lifted the boat from the SPMT and installed it in the new section of the Grand Egyptian Museum.

To watch a video of the move, go to: www.youtube.com/watch?v=4P6zwwa83M



The 10 km journey was meticulously planned, including radar surveys of the ground to ensure it could carry the full weight of the steel cage, ancient boat and double lines of SPMT



In post as Tadano president and CEO since April 2021, *ICST* caught up with Toshiaki Ujiie at the company's factory in Zweibrücken, Germany. He now has almost a year under his belt as president and CEO, taking over from Koichi Tadano, now chairman at the Japan-headquartered global crane manufacturer.

Ujiie is not new to the company, having already been there two years before taking the CEO job. Now he is in charge of the company's efforts to increase its standing again as one of the world's largest crane makers, the top position it held just a couple of decades ago. Ujiie has a long career history working in the construction industry, including

at the beginning, in the 1980s, with a stint in the United Kingdom at Marubeni, which was also a Tadano crane distributor.

Marubeni also owned Hitachi in Australia, another Tadano distributor.

"My first assignment abroad was with Marubeni in 1987 in the Netherlands where we rented space on the second floor of the building of Tadano International Europe. Marubeni assisted with appointing distributors in Spain, Portugal and Belgium, this last one by me."

From 1987 to 1992 he was in Europe, then later in the USA, for five years, from 1997 to 2002. His experience there included

distributing Hitachi excavators and Volvo loaders, in Georgia, Alabama and Florida.

"Spending a few years in different places was a good learning experience."

Then coming right up to a couple of years ago his career in a way came full circle, back working with Tadano, before taking over as president and CEO on 1 April 2021.

HOW HAS YOUR FIRST YEAR BEEN AS TADANO PRESIDENT AND CEO?

For the first three months I was busy preparing for the company's annual general meeting, held in June. From April to June there were many things I had to do, showing up at the stock exchange in Tokyo, explaining the financial results for the year ending in March. As soon as I became CEO, I had to go out to the public and I had to explain one of the toughest year's results.

WHAT ARE YOU DOING NOW AND WHAT IS NEXT?

One thing I need to do is complete the One Tadano strategy. We have development and production bases in Japan, Germany (three factories) and also one factory in the USA, so

Integration and a unified approach towards the same goal are a key focus at crane manufacturer Tadano. **TOSHIAKI UJIIE**, Tadano president and CEO, talked to **ALEX DAHM** about his first year in the job, the One Tadano strategy and how cranes are in the company's DNA

Pulling together

we need to form a real global alliance of those three zones.

In Japan we mainly produce rough terrain cranes, in Germany it is all terrain and crawler cranes. In the USA it is telescopic crawler cranes. Each factory has got its concentrated area but, for example, in Japan we also produce all terrain cranes that fit the Japanese market. We import the Faun carrier from Germany and fit it on the superstructure in Japan where we also sell complete imported cranes.

HOW IS THE NEW CRANE DELIVERY TIME AFFECTED BY THE PANDEMIC?

We see the markets coming back, which is really positive for us, and we have an order intake which is comparably good. But then the supply chain is letting us down to a certain extent so we have to push out deliveries, which you normally don't want to do if you have a good order situation.

Our customers understand because for every other OEM, for excavators, wheel loaders, cranes, whatever, it is exactly the same situation. Delays are everywhere and lead times are going up. Depending on the

size of the equipment, the larger the longer, in simple terms.

It is also difficult because the predictability of the supply chain is really poor. We are standing with tools in our hands and the part doesn't come and you need to do something, in terms of the way we can react to those uncertainties.

WILL SUPPLY CHAIN ISSUES GET WORSE BEFORE THEY GET BETTER?

I think they've been at the same level for a few months now and soon we'll see slow progress but we don't expect an end to it before the third quarter, especially with microchips and similar which will probably last the whole of 2022.

WITH THE COMPONENT SHORTAGES AND PARTS DELIVERY ISSUES WILL YOU OUTSOURCE LESS AND START BRINGING MORE COMPONENT PRODUCTION BACK IN-HOUSE?

The volatility of the supply chain means we have to bring some

components back. We are increasing our efforts when it comes to welding, because we figured out that we need some safety or security on our side there. So that is something we are pursuing but we will not go into very specialized things, like building our own hydraulic pumps. That is not a goal for Tadano. It is not the right time to start production of diesel engines now. »

“We have a lot of things to do. Decarbonisation is a big issue and there are things like autonomous driving to look at.”

TOSHIAKI UJIE,
Tadano president
and CEO

TALKING OF DIESEL ENGINES, HOW DOES TADANO SEE THE FUTURE IN TERMS OF DECARBONISATION AND POWERING CRANES – IS, FOR EXAMPLE, HYDROGEN, REALLY THE NEXT BIG THING?

If manufacturers come up with a very good hydrogen engine we would jump on that but the infrastructure is not there. We are looking for new solutions and of course we are starting to learn by ourselves too.

We will soon introduce a decarbonised machine. I can say we are working on that. Our engineers are working to complete the timeline. It is a headache for our customers. They need to own and use our equipment for the coming 25 years. During that time if they need to stop using it because of the engine then we need to solve that problem.

We all know there are government targets around the world to reduce the carbon footprint. We cannot develop our own fuel cell or our own hydrogen engine or whatever so we look to the engine manufacturers. If you listen to the large players like Volvo or Mercedes they all are following various strategies right now because it seems no one really knows the end game.

We are talking to various engine manufacturers to get the right solution. I think it's hybrid, it is battery, it is fuel cells, it is hydrogen combustion – those four things are out there. We just have to find out which solution for which crane, because an AC 3.045 City is not the same as a CC 88.1600. What we do is listen to as many partners as possible, to what kind of views they have, and we should be very open to those.

ON THE ACQUISITION OF DEMAG IS THERE MORE TO ACHIEVE IN TERMS OF FURTHER SYNERGIES?

Theoretically, synergies should always be there although they are not easy to obtain, especially in our case. Faun and Demag used to be competitors and normally one plus one doesn't become two. We have faced a similar situation but, as we already announced in public, TFG [Tadano Faun GmbH] and TDG [Tadano Demag GmbH] are being vertically integrated.

We have cut the crane in the middle, so to say, in that everything above the slew bearing is built in Zweibrücken or Wallerscheid and everything below the slew bearing is built in Lauf. It goes back to when Lauf was the Faun heavy duty truck carrier factory. even before Tadano started building cranes there. The production facilities there are optimised for this.

Once our ERP systems are harmonised, on July 1st, we will start. We will relocate production of one carrier to Lauf and one superstructure to Zweibrücken or Wallerscheid at the same time. At the same time we have slimmed down our product line to remove duplication. It will take us 18 months because we cannot simply transfer everything all in one shot. By the end of 2023 we will have it that carriers all come from Lauf, driven by road. On the way they will get an extensive test drive which should help confine teething troubles like bad connections, leaking hoses and so on to history.

Dividing the production in this way with less scope but a higher volume of fewer different components at each plant should mean higher quality. Also, less investment in manufacturing technologies because we only invest in carrier manufacturing in one place, unlike today. We build carriers in Zweibrücken, Wallerscheid and in Lauf so for anything we want to improve on carrier production we have to do it three times. That will be history. Once we're done, in two years, we will have three optimised factories with a very nice production flow.

WHY ARE YOU DROPPING THE DEMAG BRAND NAME AND WILL IT BE BROUGHT BACK AGAIN LIKE IT WAS WHEN IT WAS UNDER TEREX OWNERSHIP?

First of all, we are not Terex. We are a crane company. The best news for this [Demag] factory in Zweibrücken was that Tadano, the crane manufacturer, became a shareholder in the company. We have continuously stayed strong, by making cranes. That is why I believe that to carry on or to not carry on, with the name of Demag, does not affect us very much. Some people may hold a different opinion but we have decided it to be that way.

We had long discussions before making the decision. The longer you think about this and the more you look at it, you can also change your mind. Now the majority of customer feedback we've had says, 'I understand this, it is logical and it makes sense.' Of course there will always be Demag enthusiasts who will tell you this name cannot go away. I won't say they are wrong but I believe we have made the right decision. It will take a while, also for me and for everybody else here, to not talk about a Demag AC 45 but a Tadano 3-45 but we will get there.

Tadano's brand name in the rest of the world is very strong. In core Europe, okay, we don't have the rough terrain so everybody



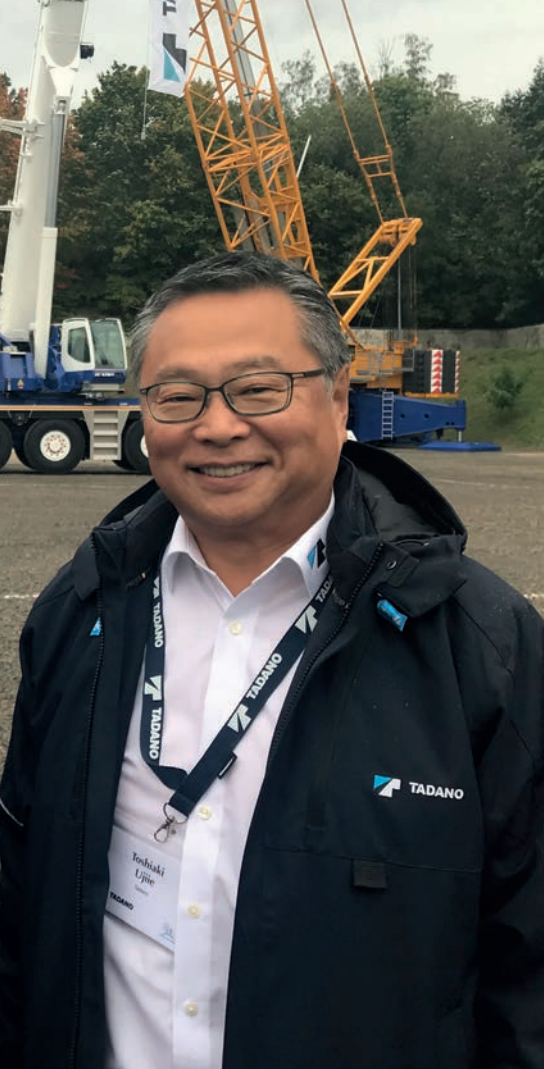
is much more familiar with Demag but in the rest of the world, because of the reputation of the rough terrains, this move is quite good. The Mantis brand will also be Tadano. We will have everything in blue and white and all under one roof. If we want to be One Tadano we cannot at the same time sell as Demag or Faun or Mantis. If we want to be one company, then we also want one brand name. It will take a while. I'm quite sure people here will speak in 50 years about the Demag factory, that will not go away. But with the product itself, I think that will not last too long, then people will get used to it.

When customers buy new cranes from us we are getting more requests for them to be branded Tadano painted blue and white than blue and yellow [Demag colours].

WILL ALL NEW TADANO CRANES BE GLOBAL MARKET MODELS?

All terrain cranes yes. For rough terrain cranes sometimes it is different. In Japan it is a totally different animal. It's almost something in Europe we would call a truck crane, some with several axles. But outside Japan I would say the models are somewhat global, yes.

The all terrain cranes built in Japan are likely to stay within Asia and not go to Europe because of the totally different road regulations. They have a quick connection



Tadano president and CEO Toshiaki Ujiie, right, and Jens Ennen, president and CEO at Tadano Demag and Tadano Faun in Germany

where you take the superstructure off, deliver the crane to site and then there is a lifting device developed by Tadano that puts the superstructure on the carrier.

In Japan it is usual to transport them in two pieces plus the counterweight. In Europe I think this would be hard to accept. The cranes are very compact in Japan and very heavy. Even the carrier alone might still be too heavy for European road regulations. As with the rough terrains, it is totally different market requirements outside Asian countries.

AFTER YOU'VE COMPLETED THE INTEGRATION WHAT WILL BE NEXT, WHAT IS ALSO ON THE TADANO SHOPPING LIST?

For now, we are integrating two former competitors that have been out there competing for 50 years or so. Doing that and then product development, plus decarbonisation, resource optimisation, production relocation, supply chain issues, etc – we have enough things on the 'shopping

list' for now. Going forward, never say never but we will see.

We have a lot of things to do. Decarbonisation is a big issue and there are things like autonomous driving we could look at. I don't say we can have a driverless crane on the road tomorrow but current technology, of AI or IoT, those things will help us a lot more than today. We are starting to investigate them and we are very happy to show something at the next Bauma [construction equipment exhibition in October 2022]. It is not only for our product range but also to show ideas for what kind of future we are seeing. We are digging our own path and going further.

We still have some time to finalise our integration before we go to the next steps. There may be other lifting solutions out there that would fit the Tadano portfolio but for now we have other priorities.

You'll see we have a new slogan, "Your passion. Our DNA". What we figured out is that we share the same passion with our customers and we share it so much that it is in our blood. So that's why we say it is in our DNA. That is true for many people here. We are in the crane business forever and we're solely a crane producer. ■

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Support for review of SPMT training and standards

European transport and crane association ESTA has confirmed it is setting up a new expert working group to investigate how to create a Europe-wide system of training for SPMT operators, similar to the European Crane Operators Licence scheme.

The group will also discuss updating ESTA's 2016 SPMT Best Practice Guide to include expanded information on trailer maintenance and operator licensing. Concern has been growing in the industry at the lack of recognised training qualifications and the need to improve safety standards as the SPMT market grows.

Many of the biggest European heavy and abnormal load transport companies have expressed strong support for the move.

Ton Klijn, ESTA director, said, "It is clear that SPMT training and operational standards need to be improved. We will look at whether we can use the ECOL system to create an operator driving licence for SPMTs, both to increase safety levels and make the sector more professional."

ESTA's 2016 guide was translated into six languages to meet demand from across Europe. It is still available for free download from the ESTA website. ■



Electronic steering on the SPMT was invaluable, Wiesbauer said

Local power

When a power station in Germany needed a new generator and turbine, each weighing more than 300 tonnes, Wiesbauer was on hand locally to deliver.

Self propelled modular transporter (SPMT) from Wiesbauer was ready at the quayside in Marbach, on the doorstep of its headquarters. The inland vessel arrived with a 318 tonne generator and 335-tonne gas turbine on board. Both units were destined for the coal-fired reserve power station in Marbach am Neckar, built in 1942.

Offloading was done with a pair of 600 tonne capacity lattice boom crawler cranes, a Demag CC 2800 from Wiesbauer and a Liebherr LR 1600 from Neeb, lifting in tandem. The cranes reversed together to make way for the Cometto SPMT. It was from the Wiesbauer fleet with additional lines cross-hired from Schares Autokrane.

A side by side arrangement of 2 x 12 axle lines was used to form a four file combination. Two power packs, of 129 kW and 202 kW, were used. The 5.33 metre wide transport passed between the crawler cranes and made a 90 degree carousel turn before being positioned for loading. Next was a 90 degree carousel turn, back through the cranes and onto the road.

Schwengsbier hands over at TII to Baldassari

After nearly 45 years Bernd Schwengsbier has handed over his sales and management responsibilities at TII Group.

The Germany-based specialized transport equipment manufacturer includes the Scheuerle, Nicolas and Kamag brands.

Schwengsbier handed over to Filippo Baldassari, marking the culmination of a



succession plan instigated in July 2020 since when the company TII Sales was jointly managed by them.

A company statement said, "Thanks to his very

Bernd Schwengsbier



Filippo Baldassari

good, long-standing customer relationships, Bernd Schwengsbier has contributed to the success of the TII Group for decades, of which the last

15 years from a management position.

"He is held in extremely high regard, both by our global customers and within our company. The shareholder family and the management of the TII Group would like to thank Bernd Schwengsbier for his successful commitment and high performance and wish him all the very best for the future." ■



The load capacity of the temporary bridge wouldn't allow for both the truck and trailer to be on it at the same time

Allelys delivers reactor

Allelys has completed the transport and installation of a 113 tonne reactor to Frodsham substation, an electrical substation in the UK. The reactor, 6.5 metres long by 2.7 metres wide and 4 metres high, was received at Immingham port, on the north east coast of England, and transported to Frodsham using 12 axle lines of modular trailer.

On site the unit needed to be transported across a waterway and required the use of a temporary bridge. Allelys jacked up the bridge, positioned rollers underneath and connected winches. The bridge was then winched across the waterway on the rollers.

A 100 tonne capacity wheeled mobile crane lifted the nose of the bridge to allow it to be lowered into position on the embankment, where it sat on feet positioned and installed by Allelys. Another challenge was the bridge capacity only allowing the trailer on it. Allelys used a truck each side of the bridge and variously shunted and winched the trailer across.

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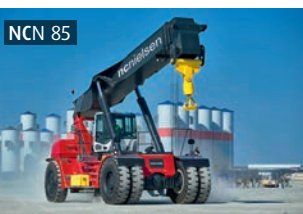
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IC 100 CRANES

2022

It's time to enter *International Cranes and Specialized Transport* magazine's annual IC100 (formerly IC50) listing which ranks the world's largest crane companies

EDITOR'S IC100 NOTES

1. All IC Index figures should be given as a maximum load moment rating in tonne-metres.
2. Tower cranes are not included in the IC Index for lattice boom, crawler and wheeled mobile cranes. Please ensure that there are no figures for this equipment in your calculations – if you have tower cranes please request an IC Tower Index entry form.
3. Alternative lifting equipment is no longer included in the IC Index. Please ensure that there are no figures for this equipment in your calculations.
4. Figures in the IC Index for crawler and wheeled mobile cranes should include an allowance for any super lift attachments that you own.
5. The IC Index should include all cranes that are in your fleet as of 6 May this year. Do not include cranes that you have ordered but that have not yet been delivered.
6. To help illustrate the IC100 editorial in the magazine you could include some photographs, perhaps showing your cranes in action that will be considered for publication.

The IC100 is the world's original industry ranking of the largest crane operating companies, and each year it grows in popularity. We've already received some entries, so, if your company has not yet taken part, this is your chance to ensure it takes its position in the listing.

We calculate the IC100 figure by totalling the maximum load moment rating, in tonne-metres, of all mobile and crawler cranes in your fleet on 6 May 2022. Simply fill out the IC100 form over the page and submit it to us. If you send us a list of the cranes in your fleet, which would be helpful, please include the make, model, type, capacity and number of units for each model.

If you have any questions regarding the form or require help representing tonne-metres, contact the editor, Alex Dahm, by phone: +44 (0)1892 786206 or e-mail: alex.dahm@khL.com

PLEASE COMPLETE AND RETURN THE FORM BEFORE FRIDAY 6TH MAY 2022

IC100 CRANES

2022

Please read the form and the notes on the previous page carefully. If you have any questions, do not hesitate to contact the team at **International Cranes and Specialized Transport**.

The listing must only include cranes that you will actually have in your fleet on 6 May 2022. Please do not include cranes for which you have placed orders but not yet taken delivery.

Company name _____

Full address of company HQ _____

Name of senior contact _____

Job title of senior contact _____

e-mail address _____

Company web site _____

IC100 MOBILE CRANES

Number of wheeled mobile cranes _____ Total tonne-metre rating _____

Number of crawler/lattice cranes _____ Total tonne-metre rating _____

Total IC Index* (tonne-metres) _____

Make and model of largest crane _____

Lifting capacity of largest crane in metric tonnes _____

Average age, in years, of the equipment in your fleet _____

Number of depots _____ | Number of employees _____

Scope of operation local national continental worldwide _____

Annual sales, in US\$, from crane-related activity _____

I confirm that the information shown above is correct.

Signed:

Name (please print) _____ Date _____

Job title _____

e-mail address _____



*IMPORTANT

To calculate your IC Index, please add together the maximum load moment ratings in tonne-metres of all the lattice boom cranes and wheeled mobile cranes in your equipment fleet to produce a total figure.

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Keeping track



When used appropriately, data can be useful to not just collate, but to inform actual decisions. Italy-based digital telematics provider Targa Telematics, for example, offers the industry a connected fleet management solution. Depending on the package purchased (standard or premium), the solution allows fleet managers to view and use the data of a connected vehicle such as fuel level, geolocation, engine warning lights, speed and crashes. The solution also includes a rider recognition module via NFC (Near-Field Communication) technologies. The data can be viewed on a desktop as well as a mobile app. It can also be integrated into a customer's IT systems or sent as a detailed report via email.

DATA-DRIVEN DECISIONS

With the Targa system, connected vehicles have the eCall emergency call service and the Stolen Vehicle Recovery (SVR) service, providing direct assistance with local police in the event of theft. These services ensure safety for both driver and vehicle, and are managed by Targa Telematics control rooms

From energy consumption to geolocations and operator availability, different software can help record and keep track of useful data to optimise fleet management.

NIAMH MARRIOTT reports

operating in the Europe, Middle East and Africa (EMEA) area.

Alberto Falcione, Targa Telematics VP of sales, says, "Vehicle connectivity is now a key requirement for our customers, who are increasingly focused on the digitalisation of operational processes and operating in an efficient and informed way, making data-driven decisions. Our systems provide new services and new solutions for an increasingly efficient corporate fleet and to facilitate a fleet manager's job."

PRINT AND PICK

As well as the most state-of-the-art digital solutions, traditional and digital labelling can

Certags heavy duty labels can be used for shipping and storage of equipment and accessories

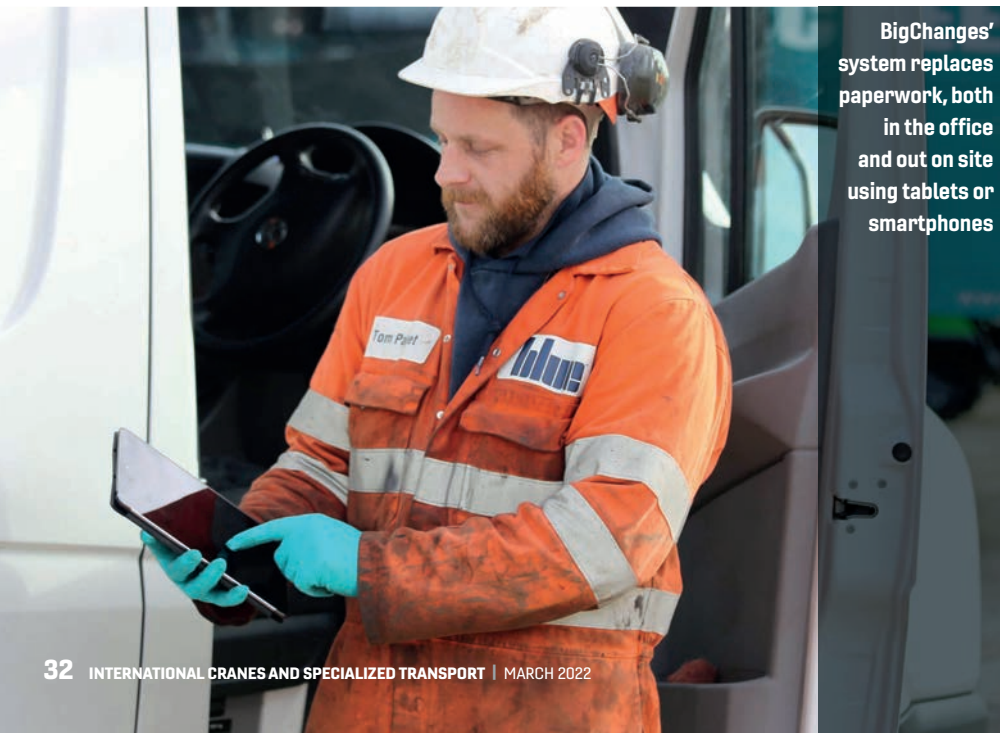


be a useful asset for identification of assets on site. It keeps track of what is where and ensures correct storage and inventory of accessories and equipment. Certags, for example, offers an on-site labelling system which means companies can print their own heavy duty tags and labels for shipping and storage, as well as for compliance reasons.

REMOTE AND DIGITAL MANAGEMENT

Remote management can be useful for fleet management so on-site and office teams can communicate easily and digitally. BigChange is an online job management system which can organise customer relationship management (CRM), job scheduling, live tracking, field resource management and job finances.

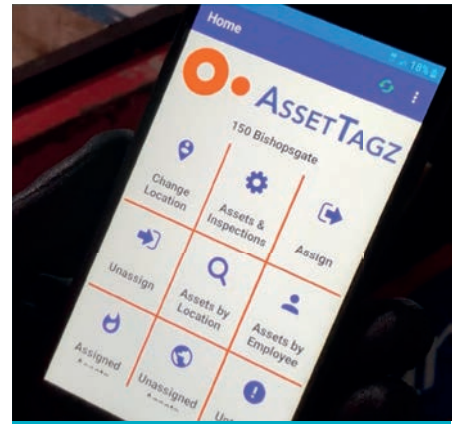
Since crane rental companies have highly valuable assets, optimising their utilisation is crucial. Effective planning and co-ordination are important to making sure the right assets are in the right place at the right time. Crane services require especially tight control due to the operational and safety requirements.



BigChanges' system replaces paperwork, both in the office and out on site using tablets or smartphones



BigChange provides visibility of assets such as location, current hire status and any reported defects



SOFTWARE ACQUISITION

UK construction software company Construction Industry Solutions Ltd (COINS) acquired asset management solutions, AssetTagz. The company says the purchase is to enhance its cloud platform and expand its market reach.

AssetTagz is designed for managing assets across multiple sectors and is scalable for the size of the business.

Robert Brown, COINS Group CEO, comments, "With the acquisition of AssetTagz, COINS gains a piece of the jigsaw puzzle in the digitisation of end-to-end construction processes. AssetTagz solutions are already in use by COINS customers, including Byrne Group, Careys, Reach Active and Laing O'Rourke."

AssetTagz enables assets to be tracked, traced, and located using a combination of RFID (radio frequency identification), NFC (near field communication) and barcodes. A cloud-based central repository of asset information provides an organisation with a single source for its inventory, from hand tools and safety equipment through to heavy plant and tower cranes. The company says logging this information reduces costs and increases compliance and auditability of assets.

AssetTagz will continue to trade under its current brand as a sister company to COINS but with closer sales collaboration and technical integration of its solution with COINS Construction Cloud.

BigChange provides visibility of assets, including location, current rental status and any reported defects. By having visibility of every asset nationwide, fleet resources and plant can be shared.

BigChange also recently adopted location technology what3words that allows drivers and field service engineers to pinpoint delivery, servicing and collection locations to within 3 metres. By adding what3words to any job booking, no time is wasted looking for the correct location.

The system replaces paperwork, both in the office and out on site using tablets or smartphones. This not only eliminates the burden of handling paperwork and data entry, but all information is instantly available as the mobile devices synchronised in real-time with the back-office system.

Crane companies have to adhere to stringent safety procedures and BigChange is particularly useful here, says the company. Workflows set up on the mobile devices take operators, step-by-step, through the correct procedures onsite and the software ensures all data is complete, including compliance forms, and then sent immediately to the office.

BigChange is also helping rental companies monitor damage to improve the management of reclaim charges as the software provides an audit track of condition of all assets, with inspection reports supported by time and location referenced photographic evidence, including photos taken on site when delivered and collected.

REAL-WORLD

Already introduced to the market, there are several companies that use BigChange, including DM Cranes, AFI, Quick Reach and Altida in the UK.

Powered access company Quick Reach reported a 200 per cent increase in damage charges by using BigChange to accurately record damages. "The ability to capture and record information, including photographs, at every stage which has resulted in the tripling of our damage charges," says Jim Dorricott, operations director at Quick Reach.

The AFI Group has boosted the productivity of its nationwide team of engineers and drivers with BigChange. AFI provide powered access machine rental and sales, and operates from 20 locations in the UK, and six in the Middle East.

"With BigChange, we build our own workflows which means we only ask relevant questions and perform applicable tests; for example, if we are inspecting an electric machine why check fuel levels? It sounds obvious, but every question that doesn't need to be asked or test that doesn't need to be undertaken is time, and therefore money, saved," says Chris Jowett, group IT director at AFI Group Services. "This also leads to quicker fixes for our customers."

Planning for operators and engineers is now undertaken for the whole of the UK from central offices and management have complete, real-time visibility of every vehicle. AFI is also transitioning other aspects of transport management to BigChange, including PMI scheduling, MoT test and tax reminders and DVSA checks.

Mobile crane rental company Altida in the UK has improved the efficiency of its transport operations with BigChange. By automating the scheduling and communication of rental contracts and service requests, the company has reduced back-office administration and improved route planning, reducing unnecessary mileage.

The automation of timesheets and invoicing is also improving cash flow through the business.

Embracing software provides multiple benefits and, depending on what companies need to monitor, analyse or display, it can be useful to view in real-time on accessible digital screens. It can make fleet management much more efficient and reduce waste, as well as keep all workers in the loop.

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by Ronald M. Kohner, P.E.
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Jacket required

Mammoet's 5,000 tonne capacity PTC 210-DS super heavy lift ring crane on its first outing to Taiwan

Increased efficiency was a primary aim achieved by Mammoet on a project to transport and lift offshore wind jackets in Taiwan. **ALEX DAHM** reports

The Greater Changhua 1 and 2a offshore wind farms are between 35 and 60 kilometres off the coast of Changhua County in Taiwan. They are a key element in Taiwan's renewable energy transition.

Construction of the wind farms has been supported by the Mammoet-Giant Taiwan joint venture company. It provided engineering and design services, in addition to assisting with the transport and integration of the jackets, ready for them to be loaded out.

Each of the jacket type foundations consists of two sections, the upper and the lower jacket. Part of Mammoet-Giant's involvement was to design temporary lifting lugs both for the upper and lower sections.

The upper and lower sections were carried in custom support saddles, also

designed by Mammoet-Giant, on self propelled modular transporter (SPMT) during the assembly process. It was more efficient than alternative solutions because it saved time, Mammoet said.

LIFTING AND TRANSPORT

It wasn't only transport and SPMT used on this project either. Mammoet used its 5,000 tonne capacity PTC 210-DS super heavy lift ring crane, for the first time in Taiwan.

This crane was upgraded in 2018 so it could lift structures weighing as much as 2,000 tonnes in one piece instead of in sections. Its maximum load moment rating was increased from 200,000 to 210,000 tonne-metres.

Before the PTC did its lifting the 270 tonne upper jackets were moved about 100 metres from the storage area at the 27 hectare yard on SPMT to within reach of the PTC.

Next, a 750 tonne capacity crawler crane was used to upend them ready to have the transition pieces fitted. In a similar way, the lower jackets, weighing between 600 and 700 tonnes, were brought in on SPMT and stood up within reach of the PTC.

With the upper jackets and their transition pieces now joined on top, the PTC lifted them as one onto the lower jackets.

The PTC's capability allowed four of the above assemblies to be put together at a time without having to move the crane.

With the assemblies complete it was time for the return of the SPMT, with the same



96 axle lines of SPMT was used to move the jacket pieces around, both horizontally prior to assembly and then after they had been upended

saddles as the first stage of the operation, to move the modules to a storage area. To move the completed jackets the 96 axle lines of SPMT were arranged in two 4-file 24 configuration. Two transport beams, 24 metres long, carried the pile stoppers so the SPMT could lift using its hydraulic suspension.

"Mammoet-Giant has provided strong support during the fabrication of the first Taiwan-made jacket foundations for the Greater Changhua 1 and 2a Offshore Wind Farms. The PTC 210-DS ring crane's high lifting capacity, together with the engineering expertise and solutions shown by the Mammoet-Giant team have provided both time and cost efficiency for the operations," commented Sing Da Marine Structure Corporation, manufacturer of the turbine foundation jackets. SDMS is a subsidiary of China Steel Corporation.

Installed generating capacity of the Greater Changhua 1 and 2a offshore wind farms will be 900 megawatts, sufficient to power one million households in Taiwan. ■



The offshore wind turbine bases consist of upper (pictured) and lower jacket sections topped by a transition piece to connect the jacket and the turbine tower

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The benefits of enterprise resource planning (ERP) for business are boundless

Well informed and agile

Enterprise resource planning (ERP) refers to a type of software organisations use to manage day-to-day business activities, such as accounting, procurement, project management, risk management and compliance and supply chain operations.

ERP systems are critical for managing thousands of businesses of all sizes and in all industries. To these companies ERP is as indispensable as the electricity to keep the lights on.

Construction and transport companies understand well enough the pressures surrounding a tight budget and a fixed deadline. Yet unforeseen circumstances often arise, sending established plans out the window and requiring workers to set a new schedule and new margins. Ultimately, efficiency becomes the victim – and if you have a good ERP system in place, the software can be relied on to get the project back on track.

THE INTEGRATION QUESTION

An additional benefit to a complete ERP suite is that it also includes enterprise performance management and software that helps plan, budget, predict and report on an organisation's financial results.

It basically integrates all your various software systems into one comprehensive solution – allowing managers to use tools to effectively manage the full lifecycle of a project, including: CRM, cost estimation, bid management, contract and purchase-order management, project scheduling, inventory management, facility and equipment management, reporting, document and workflow management regarding drafts, RFIs and RFPs, productivity and performance monitoring and HR and payroll processing.

But how integrated is integrated? Is it a bunch of systems stitched together that will be high maintenance, fragile and ultimately reliant on a few knowledgeable individuals to maintain it? Or is it seamlessly integrated a system easy to upgrade and support?

The best thing you can do is reach out to others in the industry – colleagues, peers, partners – and see who is using what and determine if the integration truly is seamless. A platform which integrates finance, procurement and commercial systems is one of the key things you should consider when looking for a construction or transport ERP system.

MUTUAL UNDERSTANDING

Some of the top names in ERP solutions include Acumatica, CMiC, Computer Guidance Corporation (CGC), Epicor, MarkSystems, Oracle, Penta, Procore, Sage and Viewpoint.

Like all tech, it's worth doing your due diligence to see which system is most aligned with your needs, which includes asking the right questions. Do the provider and the software offer real and proven solutions to the challenges you face? Will it help you to improve quality of build of business information, or support growth, while benefiting from the economies of scale? How can it support your growth ambitions while helping to manage and control operating costs?

Again, ask around and ultimately confirm with your provider that you can both identify quick wins as well as longer term benefits.

At the end of the day these benefits must be felt by not just your business but also your customers, contractors and supply chain partners. It is paramount the software vendor understands the business you're in, including the market(s), the overall industry, your specific challenges.

A good initial test: can they demonstrate as much through the answers they provide and the solutions they offer during the software evaluation process? Is there evidence of true understanding? They should also arrive with sterling references you can follow up on.

Whichever ERP solution you choose, make sure it easily enables you to access the right data, at the right time, supporting informed and agile business decisions that allow you to use your resources to their utmost effectiveness. ■

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More gloom

Assessing the realities within the supply chain affecting SC&RA members. **MIKE CHALMERS** reports

According to leading market and consumer data, in 2021 there were 11,642 supply chain disruptions reported worldwide. North America claimed the highest number of disruptions on that list, totalling 47 per cent.

While the supply chain crisis was certainly exacerbated by increased consumer spending during Covid, the problem didn't start with the pandemic. The skilled worker shortage (the USA alone is short 80,000 drivers) began long before the pandemic. Adding to the challenge, in recent years, big freight rail carriers have also reduced their workforce – while rail freight increased by 40 per cent in weight and 37 per cent in dollar value from 2010 to 2019.

At present, the ingredients making up the modern supply chain shortage appear to comprise a dubious mix of worker scarcity, container and chassis shortages, lack of storage space for just about everything, a need for the industry to modernise and, last, the next-day-delivery model itself.

But given the challenges within this (yet another) new normal, there are still pathways to success – even within the moment.

PUSH VERSUS PULL

"In my research, everyone tends to agree that American spending shot up during the pandemic as a result of economic stimulus," said Charles Edwards, professor of practice at the University of North Carolina at Chapel Hill in the USA. "And America doesn't make a lot of stuff domestically; we tend to import, primarily from Asia and elsewhere in Europe. So companies have been stretched because of demand, and at the same time, logistics flows have changed in recent years."

Edwards explained what was once a "push" model, where the consumer purchased an item and the seller essentially ordered more, has been replaced by a "pull" model.

"A seller used to say, this is what I'm making and this is where you can get it. We



Charles Edwards, professor of practice, University of North Carolina at Chapel Hill, USA

now live in a 'what do we want, when do we want it, and where do we want it delivered' model. The logistics industry and the freight transportation industry are having their own moment: 'what do we

order, when will we have it, and where do we put it until the real sale occurs."

Edwards, who has been in freight transportation and logistics for more than 50 years, added that it's this "real sale" piece of the equation that is really mucking up the works. "With ecommerce, it's all about anticipatory orders. When you hover over something online, the algorithm behind it senses that action and sends a message that an order needs to be placed – whether anyone purchases anything or not. So the seller places an order with the supplier and that supplier goes about trying to fulfil the order(s)," he says.

From there, maintained Edwards, it doesn't take a genius to figure out how quickly the supply chain can clog with distribution centres filling up, storage warehouses backing up and trucks with nowhere to put or store anything.

As for how pervasive the clog is within the USA, Edwards emphasised that the disruption doesn't discriminate.

"While we hear a lot about the ports out West, it's the same everywhere – Savannah, New York, Virginia, Seattle. Almost every port in the US is backed up, and it's because there's no place to put anything."

IMMEDIATE IMPACT

Scott Bragg, CEO at SC&RA member company Bragg Companies, is trying his best to weather the storm. "We look at the big-ticket items for us and try to stock up on them and at least get them here in Long Beach



Scott Bragg, CEO at US lifting and transport group, Bragg Companies



Eric Peterson, heavy transport general manager at Bragg

and southern California, and then we can send stuff to our branches throughout the West," he said. "But also, your everyday stuff – filters, oil and lube. They've all gone up in price and they're getting harder to find."

While Bragg admitted the supply chain disruption hasn't seemed to hit the OS/DW industry quite as severely from what he sees, it's hardly more than a temporary reprieve. "There are enough businesses just in our trucking world who are all having problems, including the biggest names. So, of course the little guys are too – especially when you factor in the semiconductor shortage."

In addition to stockpiling everyday consumables, Bragg's heavy transport general manager, Eric Peterson, pointed out another adjustment they've had to make. "We have two spare trucks on standby now, whereas before, we were utilising our entire fleet. If a truck goes down, it used to be a one- or two-day turnaround to get stuff fixed, parts, etc. Now, we're looking at a week, maybe two, in some cases, depending on the part."



than doom

Many factors have contributed to the supply chain crisis where the USA alone is short of 80,000 truck drivers



Bragg also spotlighted his company's digital evolution over the years. "Our system is fairly modern, and we're continuously updating," he noted.

"While we realise that not everyone can invest the same in technology, I can't imagine how difficult the last couple years would have been without it. Two years ago, I hired a chief technology officer, and our IT department is about a dozen people now."

Moreover, Bragg advised his industry colleagues to consider an additional hire. "A good purchasing agent who can spend time researching and find what you need. We've got a couple really good people. You have to



Bill Doyle, executive director at Maryland Port Administration-Port of Baltimore, USA

monitor it all the time – and find the deals as well as the availability."

According to Edwards, digitising in this way will undoubtedly help to alleviate the overall disruption. "The US is twenty to thirty years behind on this, but companies – the industry – needs to get over it and modernise," he stressed.

"Many trucking companies are still using fax machines to move around information. Ultimately, we should be utilising open-access, highly encrypted digital platforms on which all the stakeholders in the supply chain can enter information. It would streamline this process and speed everything up.

"We see how effective digitalisation is for permits alone. The same thinking applies to the greater logistics industry. These systems could be used on many levels in many places and probably have an immediate impact."

TIME TO DIVERSIFY

Along those lines, William Doyle, executive director at SC&RA member Maryland Port Administration-Port of Baltimore, sees an additional layer of opportunity.

"The current US supply chain is broken because it's outdated," he assured. "It's a result of a decades-long model where ocean carriers and beneficial cargo owners have brought forty percent of the nation's containers

through Los Angeles and Long Beach ports and into the Inland Empire."

Doyle believes the time is now for diversity. "These ultra-large container ships can now come to the East Coast ports like Baltimore that have the necessary infrastructure and channel depth to handle them," he said. "You also need an efficient supply chain network that includes multiple local distribution, sorting and fulfilment centres as well as great trucking and rail networks, like we have in Baltimore."

Ultimately, Doyle firmly believes the path to success involves shippers (like retailers and beneficial cargo owners [BCOs]) demanding that the ocean carriers move away from the 30-year-old model of bringing in goods to just a handful of select ports.

Chris Smith, SC&RA vice president of Transportation echoed this sentiment, noting "...when shippers select import and export locations, they must consider that port's ability to lift and move these large pieces of equipment in and out of the gates. In turn, ports need to consider their crane, rigging and adjacent highway infrastructure through the lens of project cargo mobility as a competitive advantage to offer shippers who face recurring labour, container and congestion issues at other locations."

Doyle added, "While other ports are dealing with congestion, we've been welcoming ships that have diverted from those congested ports and instead come to Baltimore. But like all ports, we could always use more truck drivers – truckers are a lynch pin in every port." ■



A shortage of warehouse space is one of the many issues in the supply chain



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Cranes on barges guide close to publication

The long-awaited best practice guide on the safe use of mobile cranes on barges is due for publication in March. The news follows discussions between members of the International Crane Stakeholders Assembly.

Work on the guide started following the Alphen aan den Rijn accident in Holland, in which two cranes and part of a prefabricated bridge fell on several buildings in August 2015.

Mammoet and Sarens agreed to share their internal guidelines and the work will also draw on guidelines operated by the US Corps of Engineers, which has

responsibility for many of the waterways in the USA, and the Occupational Safety and Health Administration, an agency of the United States Department

of Labor. ICSCA promotes the harmonisation of international standards and shares information on safety, technical and regulatory issues.

Two cranes on barges dropped a bridge deck in the Netherlands in August 2015, precipitating the ICSCA work.



Belgium recognises ECOL, Denmark to follow



ESTA's European Crane Operators Licence project has progressed with Belgium agreeing to recognise the ECOL licence and Denmark reportedly close to following suit. The positive noises from Denmark follow a meeting last month between ECOL Supervisory Board members Klaus Meissner and Ton Klijn and senior officials from the Confederation of Danish Industry (DI), the country's largest business and employers organisation. The meeting discussed the steps needed in Denmark to conclude a Mutual Recognition Agreement (MRA) between the Danish health and safety organisation Arbejdstilsynet (AT) and the ECOL foundation.

EC asks ESTA for input on rules

The European Commission has asked ESTA for its views on proposals to revise Directive 96/53 regulating weights and dimensions of commercial vehicles.

The Commission also raised the possibility of revisiting the Best Practice Guide for Exceptional Transport first published with ESTA's support in 2008. It has been largely ignored by national governments and regulators, despite its potential to improve efficiency, reduce costs and raise safety standards.

Ton Klijn, ESTA director, said, "We are committed to assisting the European Commission and all



Ton Klijn, ESTA director

interested companies and regulators in making substantial improvements to the professionalism and efficiency of the abnormal transport

sector – for the benefit of European industry as a whole.

"A key element in such improvements will be the harmonisation of standards and we strongly believe establishing and supporting a new version of the Best Practice Guide for Abnormal Transport would play a crucial role.

"ESTA would be delighted to contribute to that work."

New ESTA members

Three new members have joined ESTA. Luxembourg-based manufacturer Luxtrailers has joined as a special member. It is the first company from Luxembourg represented in ESTA.

Austrian transport, lifting and logistics company Prangl has joined the association as an affiliate member. The Vienna-headquartered company is more than 50 years old and has 16 locations in six countries.

Engineering consulting firm Becht has also joined. Headquartered in New Jersey, USA, it has offices in the USA, Canada, Latin America and the Netherlands.

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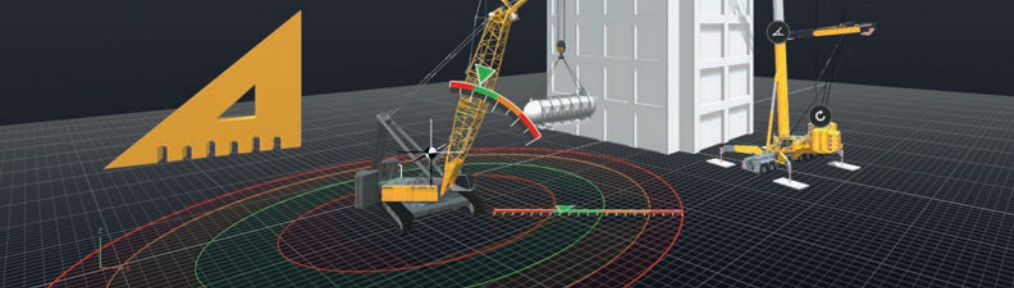
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Liebherr's crane planner combines a 3D interface with precise load data



Liebherr launches Crane Planner 2.0

Liebherr's latest lift planning software update includes three-dimensional lift planning which can be carried out for further LTM series mobile cranes.

The LTM 1650-8.1, LTM 1450-8.1, LTM 1300-6.2, LTM 1250-5.1 and LTM 1230-5.1 models are now also available for planning work.

Additional telescopic mobile cranes are regularly being added to Crane Planner 2.0, Liebherr said.

The update also includes the new distance tool, which enables objects such as machines

and buildings to be precisely positioned relative to each other.

Complicated heavy lifts with crawler cranes as well as supposedly quick and easy taxi lifts by mobile cranes can be planned for safer completion. The tool combines an interactive 3D visualisation of the cranes with the loads they are lifting and the surrounding objects. It includes dimensions and a positioning tool without needing expensive CAD programs, the company said.

■ For more information see: liebherr.com

ENGINEERED RIGGING EXPANDS RENTAL FLEET

Engineered Rigging is adding a 2,000 tonne capacity Enerpac JS500 jack-up system to its rental fleet in the USA.

When Engineered Rigging takes delivery of the hydraulic equipment in May, it will be the first of its type available for rental with technical support in the United States, the company said.

Application is expected for bridge construction as states and municipalities launch bridge projects funded by the Infrastructure Investment and Jobs Act. Other uses are anticipated in demolition, subway construction and renovation, and port construction.

Key benefits of the JS500 are its synchronous lift capabilities and mechanical hold features. The typical setup includes four 500 tonne capacity

jack-up units, one positioned under each corner of the load. This configuration can be expanded with additional units if needed.

■ For more information see: engineeredrigging.com



The 2,000 tonne capacity jack-up system can accelerate the pace of bridge building

CM LAUNCHES CHAIN HOIST WITH REMOTE MONITORING

Materials handling equipment manufacturer Columbus McKinnon has added its Intelli-Connect Diagnostics and Analytics technology to the CM Lodestar VS electric chain hoist.

When Intelli-Connect is paired with the Lodestar VS and its variable frequency drive (VFD), this hoist is the only chain hoist that allows operators to wirelessly program the hoist and to access detailed diagnostic and analytic information from the plant floor on a smartphone or tablet, the company said.

Intelli-Connect eliminates the need for a cable to connect a tablet or PC to the hoist. Information can be accessed wirelessly through the Intelli-Connect Mobile or Mobile+ apps from their mobile device. Intelli-Connect is available as an option on all new Lodestar VS units or in retrofit kits for units already in the field.

■ For more information see: columbusmckinnon.com

Modulift appoints LGH as German stock partner

Lifting equipment specialist Modulift in the UK has appointed Lifting Gear Hire (LGH) as a stock holding partner in Germany.

LGH will now hold stock of Modulift's product for resale. It will hold Modulift modular spreader beams from MOD 6 up to MOD 600. Customers can expect next day delivery and LGH's sales team will be

able to provide local support and technical knowledge when required.

Edwin Boelens, LGH European sales manager, said, "Modulift is one of the most important suppliers for our European rental fleet of equipment, it is a great step for both."

■ For more information see: modulift.com and lgh.eu



LGH will hold Modulift's spreader beams that will be available for next day delivery or same day collection

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www.vertikaldays.net

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15 June 2022

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www.khl-group.com/events/rentalawards

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www.hillhead.com

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www.mtexpo.com.br

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■ 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 email 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.

PICTURE OF THE MONTH



In Positano, on Italy's picturesque Amalfi Coast, Gemar has deployed a Potain MDT 189 tower crane, erected using a Grove GMK4100L-1 all terrain crane, to overcome the challenges of constructing a multi-storey parking lot into the side of a cliff on a site with limited space and access. The crane now overlooks the steep narrow streets next to the Mediterranean Sea. The developer chose the 8 tonne capacity tower crane for its ability to cover the 60 metre height difference between the top and bottom of the site.

PEOPLE NEWS

■ Digital crane rental platform



MyCrane has appointed four new people. **ERIK ALTENA** has been appointed

as head of strategic development;

ALAN FAULDS

has been named as managing director at

MyCrane in the UAE and



Oman; **IGOR DOBROVOLSKIY** is the new managing director at

MyCrane in Russia; and

ALEXANDER KOUKLEY

is business development director for

Eastern Russia and Asia-Pacific.

MyCrane founder and director Andrei Geikalo said, "Alongside appointing franchise holders to operate our service, MyCrane is investing in our core team to grow our portfolio. I am delighted to welcome such highly experienced industry professionals to the MyCrane family."



■ **KENNY WRIGHT** (above left) as been named as production manager at LMS. The Scotland-based lifting equipment specialist has also appointed **CHRIS DAVIDSON** (above right) as business development manager, a newly created role.

Wright is responsible for all aspects of LMS production and operations. He has 25 years of lifting industry experience in the oil and gas sector.

Davidson joined LMS in 2016 as operations manager and has 15 years' lifting industry experience in the oil and gas sector. His remit will focus on increasing sales and generating further growth both in the UK and around the world.

■ **TY HANTEN** will replace Rick Farris as vice president of sales and marketing at Trail



King Industries, following his announcement to retire after

37 years. With this pending retirement, Hanten will immediately assume leadership responsibilities during this transition. Hanten brings more than 30 years of experience in leadership at Trail King to this role. Most recently he was the director of customer service.

■ USA-based Engineered Rigging has hired **KAYLA MUNN** as key



account specialist at its Russellville, Arkansas, facility. Munn will manage a range of responsibilities, including technology research, proposal development, procurement, client relations and project management.



■ Italian mini crane maker Jekko has appointed **JORGE MENCAL** as

area sales manager for South America. He has more than 20 years of experience.

MARKETPLACE

International Cranes and Specialized Transport's Marketplace is designed to help readers find the products and services they need. The Marketplace is divided into colour coded sections to help you quickly find what you need.



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Tadano ATF 200G-5

Year 2016
Capacity 200 t
Main boom 13.2 - 60 m
Kilometers 25,610 km
Upper hours 5,675 h
Counterweight 50 t



Two Winches + HTLJ Telescopic Jib



Demag CC 2800-1

Year 2006
Capacity 600 t
Main boom 36 - 84 m
Upper hours 18,916 h
Counterweight 60 t (CB) + 180
Winches H1, H2, W2



600 t Heavy Boom Head & Runner



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LIEBHERR LTR1100 & 1220, 120/240T

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LIEBHERR LTM1160-5.2, 190 TON, '19-'22, 203' BOOM,
62' JIB, RENT/RENT TO OWNCALL
LIEBHERR LTM1130-5.1, 155 TON, '19-'22, 197' BOOM,
62' JIB, RENT/RENT TO OWNCALL
LIEBHERR LTM1110-5.1, 125 TON, '21-'22, 197' BOOM,
62' JIB, RENT/RENT TO OWNCALL

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TADANO GR1600XL, 160 TON, '16-'22, 200' BOOM,
59' JIB, SEVERAL IN OUR FLEET.....CALL
TADANO GR1300XL, 130 TON, '2022, 183' BOOM,
59' JIBCALL
TADANO GR1200XL, 120 TON, '18-'21, 184' BOOM,
58' JIB, SEVERAL IN OUR FLEET.....CALL
TADANO GR1000XL, 100 TON, '15-'22, 154' BOOM,
58' JIB, SEVERAL IN OUR FLEET.....CALL
TADANO GR350XL, 35 TON, '15-'17, '10' BOOM,
42' JIB, 2 HOISTS, LOW HRS.....CALL

CRAWLER CRANES

LIEBHERR LR1800, 800 TON, 2020, HSL3AF 102M +
15M WIND KITCALL
LIEBHERR LR1700-1, 770 TON, '22,SL8F3 KIT,335'+40',
QUAD DR. RENT/RPO.....CALL
LIEBHERR LTR1220, 240 TON,'19-'22, 197' TELE-BOOM
72' JIB, RENT/RENT TO OWN.....CALL
LIEBHERR LTR1100, 110 TON,'19-'21 171' TELEBOOM,
62' JIB RENT/RENT TO OWN.....CALL

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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
220 t	Liebherr	LTM 1220-5.2	2013	10 x 8 x 6	60 / 22	direct
200 t	Liebherr	LTM 1200-5.1	2009	10 x 8 x 10	72 / 36	June
160 t	Tadano-Faun	ATF 160G-5	2010	10 x 8 x 8	60 / 13, 2+run.	direct
160 t	Terex-Demag	AC 160-2	2006	10 x 8 x 8	63.9 / 33	direct
160 t	Liebherr	LTM 1160/1	1992	12 x 6 x 10	52 / 46	April
130 t	Liebherr	LTM 1130-5-1	2013	10 x 8 x 10	60 / 19	direct
130 t	Liebherr	LTM 1130-3-1	2007	10 x 8 x 10	60 / 19	direct
130 t	Grove	GMK 5130-1	2007	10 x 8 x 10	60 / 18	direct
110 t	Tadano-Faun	ATF 110G-5	2008	10 x 6 x 8	52 / 16, 2+run.	direct
100 t	Terex-Demag	AC 100-4 L	2016	8 x 6 x 8	59.4 / 19	direct
100 t	Grove	GMK 4100	2015	8 x 6 x 8	52 / 17	direct
100 t	Terex-Demag	AC 100	2008	10 x 8 x 8	50, 2, 9, 2+run.	direct
100 t	Liebherr	LTM 1100/2	2002	10 x 6 x 8	52+14 / 19	direct
90 t	Tadano-Faun	ATF 90G-4	2009	8 x 8 x 8	51.2 / 1,6	direct
90 t	Tadano-Faun	ATF 90G-4	2008	8 x 8 x 8	51.2 / 1,8	May
90 t	Liebherr	LTM 1090-4.1	1997	8 x 8 x 8	50 / 19+run.	direct
90 t	Liebherr	LTM 1090/2	2008	8 x 8 x 8	52 / 19	direct
75 t	P&H	S 75	1988	8 x 8 x 8	37 / 16	direct
70 t	Tadano-Faun	ATF 70G-4	2018	8 x 6 x 8	44 / 16	March
65 t	Tadano-Faun	ATF 65G-4	2007	8 x 6 x 8	44 / 16	direct
65 t	Tadano-Faun	ATF 65G-4	2007	8 x 6 x 8	44 / 16	direct
65 t	Faun	RTF 65-4	1994	8 x 6 x 8	40.5 / 16	direct
60 t	Faun	ATF 60-3	2007	6 x 6 x 6	40.2 / 16	direct
60 t	Faun	ATF 60-3	2006	6 x 6 x 6	40.2 / 16	direct
60 t	Faun	ATF 60-3	2005	6 x 6 x 6	40.2 / 16	direct
60 t	Faun	ATF 60-3	2005	6 x 6 x 6	40.2	direct
60 t	Faun	ATF 60-3	2005	6 x 6 x 6	40.2	direct
55 t	Liebherr	LTM 1055-3.2	2012	6 x 6 x 6	40 / 16	direct
55 t	Liebherr	LTM 1055-3.1	2007	6 x 6 x 6	40 / 16	March
55 t	Terex-PPM	AC 55 L	2007	6 x 6 x 6	44	direct
55 t	Terex-Demag	AC 55 City	2006	6 x 6 x 6	40 / 1,3	direct
55 t	Grove	GMK 3055	2006	6 x 6 x 6	43 / 15	direct
55 t	Terex-PPM	AC 55 L	2005	6 x 6 x 6	44 / 15	May
55 t	Terex-PPM	AC 55 L	2005	6 x 6 x 6	44 / 15	May
55 t	Liebherr	LTM 1055-3.1	2005	6 x 6 x 6	40 / 16	direct
55 t	Liebherr	LTM 1055/1	2004	6 x 6 x 6	40 / 16+2,5+r.	direct
50 t	PPM	ATT 600/2	2002	6 x 6 x 6	40 / 15	direct
45 t	Grove	GCK 3045	2010	6 x 6 x 6	34	direct
40 t	Terex	AC 40-2 L	2010	4 x 4 x 4	37.4 / 8	March
40 t	Terex	AC 40-2 L	2009	4 x 4 x 4	37.4 / 8	March
40 t	Terex	AC 40-2 L	2008	4 x 4 x 4	37.4 / 8	direct
40 t	Liebherr	LTM 1040-2.1	2006	4 x 4 x 4	35	direct
40 t	Terex-Demag	AC 40-1 City	2002	6 x 6 x 6	31.2 / 13+s.h.	direct
40 t	Demag	AC 95	1997	4 x 4 x 4	32.2	direct

ROUGH TERRAIN CRANES

60 t	Liebherr	LTL 1060	1984	4 x 4 x 4	32	direct
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More machines, crane details and photos on: www.homar.nl

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ALL TERRAIN CRANES

1x 100 t	Liebherr LTM 1100-5.2	2018
1x 160 t	Tadano AC 5.160-1	NEW!
1x 250 t	Tadano AC 5.250-1	NEW!
1x 300 t	Grove GMK 6300L	2016
1x 450 t	Liebherr LTM 1450-8.1	2021

CRAWLER CRANES

1x 100 t	Liebherr LTR 1100	NEW!
1x 650 t	Demag CC 3800 + SWSL	
1x 650 t	Demag CC 3800 + WIND	
1x 650 t	Demag CC 3800 + BOOM BOOSTER	

ROUGH TERRAIN CRANES

1x 100 t	Liebherr LRT 1100-2.1	NEW!
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TELESCOPIC CRAWLER CRANES

1x 156 t	Tadano GTC 1800	NEW!
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Liebherr LTM 1450-8.1



Grove GMK 6300L



Demag CC3800 - SN 36184



Tadano GTC-1800

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ALL TERRAIN-CRANES

Make / Type	y. o. m.	Drive	Boom / Fly Jib
35 t Liebherr LTM 1030-2.1	2008	4x4x4	30,00m + 15,00m
40 t Demag AC 40-1	2002	6x6x6	31,20m + 13,00m+1,20m
45 t Grove GCK 3045	2010	6x6x6	34,0m
55 t Terex-Demag AC 55 City	2006	6x6x6	40,00m + 1,30m
55 t Liebherr LTM 1055/1	2004	6x6x6	40,00m + 16,00m+2,50m
55 t Liebherr LTM 1055-3.1	2006	6x6x6	40,00m + 16,00m
55 t Liebherr LTM 1055-3.1	2007	6x6x6	40,00m + 16,00m
55 t Terex-PPM AC 55 L	2007	6x6x6	44,00m
60 t Tadano Faun ATF 60-3	2005	6x6x6	40,00m
65 t Tadano Faun ATF 65G-4	2007	8x6x8	44,00m + 16,00m
70 t Tadano Faun ATF 70G-4	2018	8x6x8	44,00m + 16,00m
90 t Liebherr LTM 1090-4.1	2007	8x8x8	50,00m + 19,00m
100 t Terex-Demag AC 100/4L	2016	8x6x8	59,40m + 19,00m
100 t Grove GMK 4100	2015	8x6x8	52,00m + 17,00m
110 t Tadano Faun ATF 110G-5	2008	10x6x8	52,00m + 16,00m+Runner
130 t Grove GMK 5130-1	2007	10x8x10	60,00m + 18,00m
160 t Tadano Faun ATF 160G-5	2010	10x8x8	60,00m + 13,20m
160 t Terex-Demag AC 160-2	2006	10x8x10	63,90m + 33,00m

LATTICE-BOOM CRAWLER-CRANES

80 t Zoomlion QUY80	2012	58,00m
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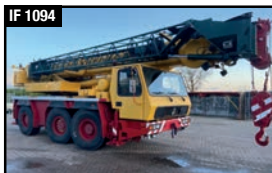
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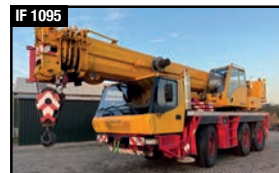
LIEBHERR LTM 1130-5.1
Year 2010
In good technical condition



TEREX/ DEMAG AC 350 SSL
Year 2006
Full specifications



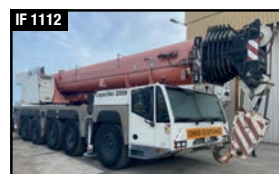
GROVE GMK 3050
Year 2006
Reliable crane



GROVE GMK 3050-1
Year 2005
Hydraulic swingaway



GROVE GMK 3060
Year 2005
Tier 4i engine



TEREX/ DEMAG AC 200-1
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Interesting pricing



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LIEBHERR LTM 1130-5.1 2019



DEMAG AC 220-5 2017



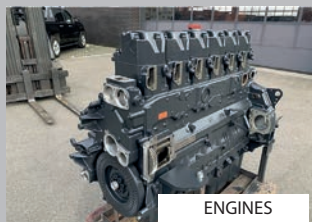
DEMAG AC 140 2005



LIEBHERR MK 63 2009



CABINS

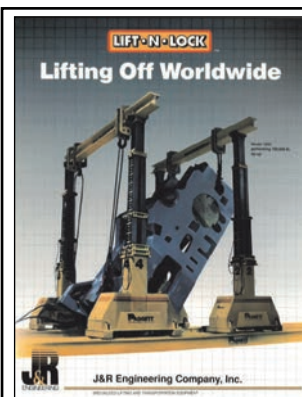


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