

CONSTRUCTION europa

THE MAGAZINE FOR EUROPE'S CONSTRUCTION INDUSTRY

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A KHL Group publication

Volume 31 | Number 3 | April 2020

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Access Equipment

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Haulers

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COVID-19 CRISIS UPDATE
Responses to
pandemic
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CONSTRUCTION europe

Volume 31 Number 3 APRIL 2020



ISSN 0964-0665
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Construction Europe is published 10 times a year. This issue is mailed on 14th April 2020. Annual subscription rates: £215, €260, US\$345. For further information please visit www.khl.com



Circulation audited by BPA Worldwide

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Produced in co-operation with the European Construction Industry Federation

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HAULERS 14

It's often the case - in quarries and on large-scale construction projects - that only a truck with the size and power to shift some serious material will do. *Joe Sargent* investigates the latest haulers on the market



MINI EXCAVATORS 19

Katherine Weir reports on OEMs choosing electric power for their mini excavators, and others who have updated their engines to be Stage V compliant and lower in noise pollution to stay desirable in this market



COUNTRY REPORT: FRANCE 24

As the people of France confine themselves to prevent the spread of the coronavirus, some of Europe's largest construction companies will be hoping for a speedy return to business as usual, as *Mike Hayes* reports



ACCESS EQUIPMENT 28

As the call for aerial work platforms increases at a steady pace within the construction industry, the pros and cons of boom and scissor lifts is examined by *CE's* sister magazine, *Access International*

EVENTS DIARY

2020

Steinexpo

August 26-29, 2020
Homburg
Germany
www.steinexpo.eu

Bauma CTT Russia

September 8-11, 2020
Moscow
Russia
www.bauma-ctt.ru/en

APEX

September 8-10, 2020
Maastricht
The Netherlands
www.apexshow.com

SMOPYC

September 23-26, 2020
Zaragoza
Spain
www.feriazaragoza.com

IPAF Summit /
IAPA Awards

October 8, 2020
London
UK
www.iapa-summit.info

SaMoTer 2020

October 21-25, 2020
Verona
Italy
www.samoter.it

ESTA Awards

October 13, 2020
Amsterdam
Netherlands
[www.khl-group.com/
events/esta/](http://www.khl-group.com/events/esta/)

EUROPE

COVID-19 crisis hits construction hard

Industry stalled with most European countries yet to experience the worst of the pandemic

Europe's construction industry was struggling to adapt to the COVID-19 pandemic as CE was going to press on 2 April, faced with an unprecedented mix of financial, regulatory and safety challenges.

Work at many construction sites in the region has been halted or slowed, while other countries were attempting to keep construction on track, but struggling with supply chain disruptions and the health implications for workers.

Construction industries in the Netherlands, Germany and the UK aimed to continue activity, while there was a mixed picture in France and Spain. In many cases, contractors 'paused' their sites as they sought guidance on how to continue safely. In the UK's case, that came in the form of quickly agreed Safe Operating Procedures (SOP).

If worker safety is one immediate concern, then financial survival is another. Contractors are assessing the various government schemes being put in place to provide financial support, and have particular fears that they will be liable for cost and penalties relating to project delays.

As a result, FIEC, the European Construction Industry Federation, called for urgent action from the European Union, requesting financial support and EU recognition of COVID-19 as a force majeure event, to eliminate penalties for companies that suspended work.

In Germany, the three main trade bodies for contractors said they had reached agreements with Federal ministries to discuss the "fair distribution" of additional costs incurred by construction projects, including for increased health protection of workers.

At the time of writing, industry bodies around the region were fighting for construction work to continue. Maxime Verhagen of Bouwend Nederland, the main



construction association in the Netherlands, said the industry and government were doing everything they could to keep work going; "The sector is vital for the Dutch economy must therefore be kept afloat as much as possible."

Reinhard Quast, President of the National Association of Construction in Germany (ZDB), said; "The continuation and new tendering of infrastructure construction sites is an essential pillar of the domestic economy, which must be maintained."

However, major contractors including Strabag, Royal BAM and Sir Robert McAlpine took decisions in mid-March to close sites, even while activity was still being permitted. Both BAM and Strabag had started re-opening sites at the start of April, having established safety protocols.

Paul Hamer, CEO of McAlpine, said the government containment measures in the UK made it unfeasible to continue on all sites, except where critical work was being done; "While this will have a detrimental impact on progress and impact heavily on our people, we recognise that this action is in the best interests of wider society. It is quite simply the right thing to do."

The pandemic is far from over and the long-term implications for construction are far from clear.

ce

Fehmarn Belt financing cleared

Denmark's public funding of the Fehmarn Belt link has been found to be legitimate, following an investigation by the European Commission (EC).

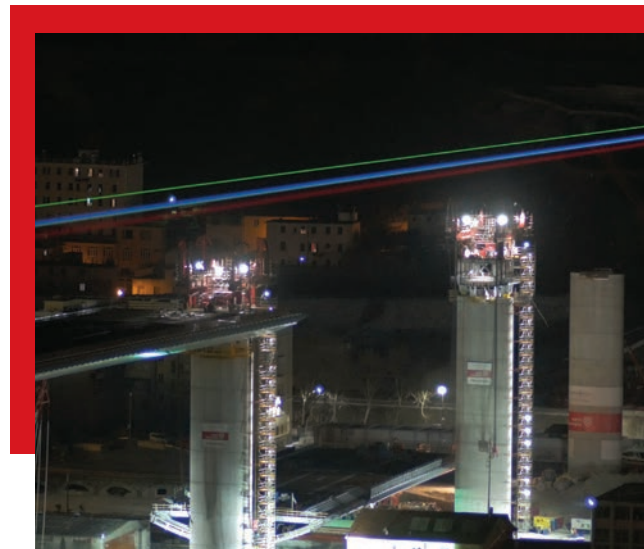
The aid given to the undersea road-and-rail tunnel project, set to link Germany and Denmark, was challenged by Scandlines and Stena Lines ferry services.

However, EC executive vice-president Margrethe Vestager, who is in charge of competition policy, said the benefits of the link outweigh any distortion of competition rules.

"The Fehmarn Belt fixed link," she said, "will contribute to the cross-border integration of the two regions it will connect. It will be key to complete the main north-south route connecting central Europe and the Nordic countries to the benefit of the European economy."

"Following an in-depth investigation, we concluded that the Danish measures to support this project of common European interest are in line with EU state aid rules, as the positive effects of the project clearly outweigh any potential distortion of competition."

The fixed rail and road link will run between Rodby on the Danish island of Lolland and Puttgarden in Germany and will include a 19km-long undersea tunnel with a double-track railway line, plus a four-lane motorway.





EUROPE

Deep impact of outbreak revealed by survey

Almost one third of CECE (Committee for European Construction Equipment) members included in a survey are being "significantly affected" by the COVID-19 pandemic with 30% already closing factories, a new report said.

A flash survey was carried out between March 23 and 27 by CECE which represents the interests of national construction equipment manufacturer associations in 13 European countries including some 1,200 companies that employ approximately 300,000 people directly and indirectly.

In its Annual Economic Report, published today, Belgium-based CECE said that at the beginning of 2020, the CECE Business Climate Index showed an optimistic trend, which turned again into a dramatic decline in March with the early sign of the COVID-19 disruptions.

CECE and other European industry associations representing the non-road mobile machinery sector have also called on the EU to adopt swift measures in response to disruptions caused by the COVID-19 pandemic.

CECE added: "By the time of writing the Annual Economic Report, a 10% decline in global sales and a 5% decline in the European market were realistic scenarios, considering the current demand of equipment and economic cycles.

"However, as of mid-March 2020, any forecast has become impossible because of the emerging COVID-19 crisis, which will certainly have a severe impact on the construction equipment industry as well as the overall economy.

"A CECE flash Barometer survey carried out between 23rd and 27th March shows clear concerns amongst CECE member companies with 32% of respondents being significantly affected by the crisis and 30% already closing factories.

"The COVID-19 pandemic challenges the customer-related issues, namely shutdown of construction sites and cancellation of projects. With 40% of respondents foreseeing between 10% and 30% decrease in sales one thing is certain: the COVID-19 crisis is affecting and will affect the construction equipment sector."

The report added that 2019 turned out to be a better year for the European construction equipment sector than initially expected. Whereas CECE had forecast a "soft landing" with a modest market decline across the industry, total sales in Europe in 2019 grew by 3.4% compared to 2018.

It added though that the slowing momentum over the year was in line with expectations: after +7.1% in Q1 and +6.5% in Q2, the market turned negative and declined by 0.1% and 2.5%, respectively in Q3 and Q4.

The European market reached a new high after the economic crisis of 2008, without hitting the record volumes of 2007.



Italian construction firm Salini Impregilo has launched an initiative to beam lights the colour of the Italian flag across the under-construction Genoa bridge in Liguria.

Salini said the move was intended as a message of hope and a symbol of solidarity for the Italian people affected by the coronavirus outbreak.

The company added that the gesture paid homage to the many citizens working so hard to aid the sick, keep order in the country and bring essential items, including food and medicine, to those most in need.

The Genoa bridge will be lit up each evening at 7.30pm local time, as the national anthem plays.



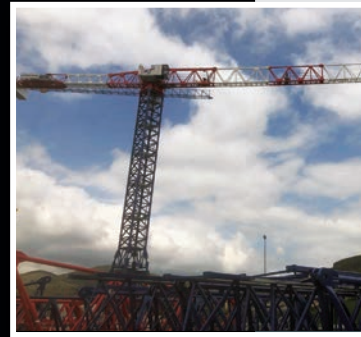
NEWS IN BRIEF

FIEC CALLS FOR EU SUPPORT

The European Construction Industry Federation (FIEC) has called for immediate action from the EU Commission to support the construction industry through the COVID-19 crisis. The Federation - whose members are 32 construction associations in 28 countries - said the EU needed to ensure that COVID-19 is considered a force majeure, to eliminate penalties for companies that have to suspend work; and to increase European funds to cover the increased costs of the work.

WHAT TO DO WITH TOWER CRANES

Safety advice has been issued by the Construction Plant-hire Association (CPA) on how to safely leave tower cranes out of service, potentially for several months, due to the coronavirus. Advice includes: leave the jib of luffing cranes at the longest possible radius while allowing for surrounding obstacles; make sure the mechanism for free slewing is working, leave the crane in that position and report any faults; note the direction the jib is pointing in relation to the wind direction.



DISCRIMINATION 'COMMON' IN CONSTRUCTION

Around 79% of women in the UK construction industry have experienced gender discrimination in the workplace, according to new research. Human resources and recruitment specialist Randstad carried out the poll of 4,200 construction workers in 2019. The company's latest report also showed that 41% of female construction workers received inappropriate comments from male colleagues and that 45% of those women who reported having been sexually harassed said it impacted their careers.

IMAGE:

DYNAPAC/TRIMBLE ROLL OUT TECH

Road construction equipment manufacturer Dynapac and technology firm Trimble have partnered to develop rollers with autonomous functionality. Dynapac showcased the joint development at ConExpo in Las Vegas, with demonstrations of the latest automated soil compaction process. The new development introduces automatic steering and speed functions, giving operators the opportunity to 'map' the area to be compacted before the roller undertakes the compaction autonomously.



EUROPE

European construction: 'Urgent measures required'

Joint statement by 15 sector bodies calls for help to protect workers and support business

Europe's construction sector has issued a joint statement calling for urgent measures to protect workers' health, support economic activity and help the sector to recover in the wake of the Coronavirus pandemic.

The 15 organisations who put together the joint statement include the European Construction Industry Federation (FIEC)

The statement, drawn up by 15 bodies including the European Construction Industry Federation (FIEC), the Committee for European Construction Equipment (CECE) and the continent's Demolition and Rental associations, also called on the European Commission to open a dialogue with industry stakeholders "as soon as circumstances allow it".

Specific short-term measures requested of European Member States are as follows:

- Put in place tailor-made health and safety measures, protocols and guidelines with the active involvement of relevant stakeholders
- Support the construction supply chain by putting in place measures allowing the efficient functioning of the EU (European Union) internal market
- Carry out massive support and stimulus programmes
- Ease the administrative burden and the conditions for employers to implement temporary unemployment measures.

The statement added: "A performing construction supply chain is crucial for maintaining the activity, with proper health and safety conditions. It is therefore essential to guarantee the circulation of construction products; equipment and provision of services in full respect of the instructions delivered by public health authorities.

"In this context, we call upon...authorities to take into account the scale of disruption to our sector and to prevent the foreseen economic downturn from becoming a meltdown of historic proportions with far-reaching social consequences."



Thomas Birtel,
CEO of Strabag SE

AUSTRIA

Strabag gradually restarts work in Austria

Austria's largest construction group Strabag is gradually resuming work on more than 1000 construction sites in the country after almost 10 days of suspended activity.

The move, announced on 27 March, follows a 'social partner agreement' on construction-related COVID-19 protective measures. On 18 March Strabag said it would halt its regular construction activity in Austria.

Under the new agreement, the minimum distance between staff engaged on essential

work need not be maintained, as long as the mouth and nose of all persons involved are protected and that no members of risk groups are working on the task.

Other measures include regular disinfection of facilities and organisational measures such as staggering work over time.

"In the coming days we will look at each of our over one thousand construction sites in Austria to see whether and how the health precautions can be kept," said Thomas Birtel, CEO of

Strabag SE.

The company said it believed that the hygiene and organisational measures will be possible at the majority of its sites over the coming weeks.

Individual agreements are being reached with clients to determine which construction sites can be resumed, given the supply chain disruptions due to the border closures.

Those employees who cannot yet be deployed or are currently only able to work to a limited extent will do part-time work.

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KHL events rescheduled

Due to a lack of testing in many countries, the ultimate scale – and timescale – of the coronavirus pandemic is not yet known. For this reason, many European events – such as SaMoTer, Smopyc and Bauma CTT Russia – have made the decision to postpone to a date considerably later than originally planned.

The decision to postpone an event is always a painful one but it is vastly preferable to cancellation. So far, during this exceptional period, no major construction industry events have been cancelled.

KHL has a raft of events around the world, crossing many construction sectors, and, with a number set to take place this year, has had to make the same difficult decisions about postponement.

So far, the following European events have found new dates in the calendar:

The European Rental (ERA) Awards 2020, the International Rental Exhibition (IRE) and the APEX aerial platform Exhibition will all now be co-located at the MECC in Maastricht.

The Apex show and IRE, both originally set for June, will now take place between 8 and 10 September, while the European Rental Awards will be held during the European Rental Association's annual convention between 9 and 10 September.

Another aerial work platform event – the IPAF Summit and IAPA awards for powered access – originally due to be held in April, has now moved to 8 October, but will retain its original venue of the Millennium Gloucester Hotel in Kensington, London.

It is important to note that we are paying close attention to the guidelines being issued by the World Health Organisation (WHO) and the authorities in the nations hosting our events.

Our priority will always be to safeguard the health and safety of visitors, sponsors, employees and suppliers.

Staying with you through the crisis

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We have a rolling news story on Coronavirus on our website, providing stories and information from all over the world.

We are also now producing a high-frequency newsletter, Construction & Coronavirus, focusing on the impact that COVID-19 is having on construction – on sites, in factories, and in offices. Visit khl.com to subscribe to the newsletter.

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WORLD IN BRIEF

US

Caterpillar said on 26 March that the COVID-19 pandemic was starting to impact its supply chain, although it continued to run the majority of its US operations and in other parts of the world, where permitted. Production at some facilities is being suspended, said the company; "due to uncertain economic conditions resulting in weaker demand, potential supply constraints and the spread of the COVID-19 pandemic and related government actions, Caterpillar is temporarily suspending operations at certain facilities. The company will continue to monitor the situation and may suspend operations at additional facilities as the situation warrants."

UAE

The construction industry in the United Arab Emirates (UAE) is continuing as 'usual' despite the impact of Coronavirus, according to data and analytics company GlobalData. Colin Foreman, deputy editor at GlobalData, said, "So far, UAE authorities have managed to implement social activity suspensions without severely affecting economic output." Nevertheless, as a result of the worldwide implementation of precautionary health measures to help stop the spread of the virus, the country's trade, tourism and transport industries have all been affected by the global slowdown of these industries.



ANTARCTIC

The Australian Government has deployed a Grove RT540E rough-terrain crane to work at Davis station, one of the four research stations in the Australian Antarctic Program. The RT540E joins five other Grove rough-terrain cranes at the site and is used to load and unload cargo for resupply at the stations, as well as construct and maintain the station's infrastructure. At the remote Antarctic site, the RT540E works in some of the harshest climates in the world. Davis station is the most southern station in the Australian Antarctic Program; temperatures at the station can drop down to -60 °C.



The Grove RT540E rough-terrain crane working at the Australian Antarctic station



CHINA

China 'speeds up' construction - but not yet in Hubei Province

Work on major infrastructure projects is now reported to be accelerating

China has resumed construction on just under 90% of 'key projects' according to an official with the National Development and Reform Commission (NDRC) and as reported on China.org.

Construction of 89.1% of 11,000 key projects is ongoing – although this figure does not include the Hubei Province which suffered large numbers of people being infected with the coronavirus.

The NDRC is reported to have pledged efforts to speed up the resumption of key projects by solving the problems of labour shortage, transportation and supply of raw materials with accurate measures.

All major railway projects have resumed operation, with 97% of major highway and waterway projects and 87% of airport projects also resuming construction.

The construction of 'new infrastructure' projects such as 5G networks and data centres will be expedited.

China is 'further along' in its response to the coronavirus than other countries due to the country suffering with people being infected first and the government's hard-line policy on ensuring people self-isolated.

Due to these factors work life is beginning to slowly return to a level of normality. **ce**

US

Construction should continue on US projects, say officials

US construction officials say new federal guidance should signal to state and local officials the need to allow construction activity to continue, or resume, during the coronavirus pandemic.

New guidance suggests more government for support for US construction as 'essential'.

The Associated General Contractors of America (AGC) has been urging the Department of Homeland Security (DHS) to declare construction an essential industry. New Guidance version 2.0 appears to clarify construction's critical role in supporting essential infrastructure.

"Federal officials have, wisely, heeded our advice and opted to release new guidance that makes it clear that construction activities are included in its list of essential critical infrastructure workers," Stephen E. Sandherr, chief executive officer of AGC, said in a statement.

"This new federal guidance should help eliminate the confusion and ambiguity that has led several state and local officials to

needlessly order halts to construction activity that is clearly essential.

"Specifically, federal officials have opted to identify construction and related activities, including the manufacture and delivery of construction supplies and safety equipment and the permitting and inspection of projects, in 25 different parts of its guidelines, compared to four times in its prior iteration." **ce**



GLOBAL

Komatsu announces temporary plant closures

Komatsu to temporarily close manufacturing facilities in Europe, Brazil and India

Komatsu is temporarily closing its manufacturing facilities in Europe, Brazil and India. Its factories in Japan continue to function, as do its Chinese facilities which were fully functional by 17 February.

In a statement, the Japanese manufacturer said; "In response to the policies of different governments, we... are working to prevent coronavirus from spreading as it places top priority on the health and safety of customers, local communities, and employees."

"In compliance with the policies, some manufacturing plants of the Komatsu Group are going to halt production temporarily... At business bases in operation, we are implementing a wide range of countermeasures, including fever checks, the use of face masks, flex commuting, the prohibition of business trips, and teleworking"

Komatsu's Italian plant closed on 26 March and will remain so until 3 April. Komatsu Germany's plant will close from 4 to 13 April, and the UK factory from 30 March to 17 April. Its Indian facility will close from 24 to 31 March, and the plant in Brazil from 6 April to 21 April.

Komatsu said it was working on global cross-sourcing and procurement of finished machines and parts to absorb the impact of changes in demand and exchange rates. "Although we are planning to halt production at some manufacturing plants, there are no critical effects on Komatsu Group's production for FY2019, due to alternative procurement and inventory reallocation", said the company.

ce



Komatsu's operations continue at its facility in Tochigi, Japan

WORLD IN BRIEF

**CHINA**

Global mining, aggregates and recycling company Metso has announced in a statement that the Chinese factories it uses were successfully restarted in February and are now running at a normal capacity. In a statement the company added that, "The order intake from China in the first quarter is estimated to be on the planned level, while sales in China will be lower than planned, having a minor impact on Metso's financial performance." The company said that worldwide measures to limit the spread of COVID-19, such as self-isolation, are impacting Metso's field operations.

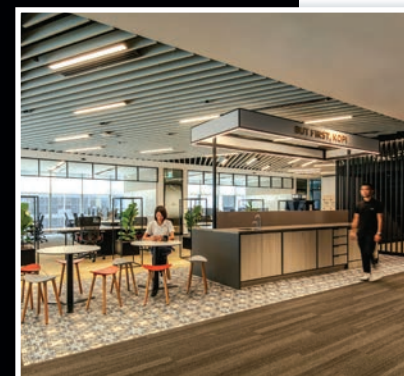
FRANCE

Vinci group, the parent company of Vinci Construction, has revealed that a large number of projects in France have been halted since 16 March as a result of virus containment measures. The company said; "Industry organisations have held talks with the public authorities to define conditions under which works can resume gradually while ensuring the health of those involved." Outside France, the situation is more varied and despite "significant logistical difficulties" it has maintained activity in many countries, while complying with health measures. That applies to projects in Southeast Asia, Oceania, the Middle East, Africa and Latin America, along with certain European countries and US states.

SINGAPORE

Software company Bentley Systems and French energy and automation specialist Schneider Electric have collaborated on the rollout of a digital twin for Microsoft's Asia Pacific headquarters in Singapore. The virtual replica of the Microsoft's facility was developed using Bentley's OpenCities Planner and Microsoft's Azure cloud platform and Power BI analytics service. The digital twin uses lighting, air quality and temperature data from inside the Asian headquarters, which is collected by Schneider from around 180 Bluetooth beacons and 900 sensors that were installed in the building, in order to monitor the usage, energy and utilities of the facility.

Microsoft's digital twin could aid the efficiency of its physical asset



NEW ZEALAND

New Zealand stops all but 'essential' construction

New Zealand has entered 'Alert Level 4' in its response to the COVID-19 strain of the Coronavirus and has told all but 'essential' businesses to shut down.

The Ministry of Business, Innovation and Employment (MBIE) has though given three criteria for what it considers to be 'essential' construction activity.

According to the government's website this is defined as: any entity involved in building and construction related to essential services and critical infrastructure; any entity involved in building and construction required



immediately to maintain human health and safety; any entity involved in building and resource consenting necessary for the above purposes.

MBIE deputy chief executive, Paul Stocks, said, "COVID-19 alert level 4 is not business as usual and means there will be significant restrictions

on what New Zealanders are able to purchase. However, these changes are essential to stop the spread of the virus.

"We are ready to change the list if necessary. If we discover there are essential services that have not been made available we will react to that as we go."

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JLG's Augmented Reality app

JLG Industries has introduced its new Augmented Reality (AR) App, the latest introduction in the company's expanding portfolio of connected solutions that provide customers with mobile phone and/or tablet-based productivity and safety advantages on the job site.

The JLG Augmented Reality (AR) app uses next-generation augmented reality visualisation to enable faster and more accurate project planning and onsite equipment management.

"One of the JLG core values is to deliver solutions that drive meaningful results to a customers' bottom line. We've looked at their businesses holistically from sales to service to operations, identified pain points and are developing a series of digital tools that make both their jobs and workday run smoother," said Korry Kobel, JLG director of engineering.

"We're very excited to have leveraged the latest in augmented reality technology to develop this app. It represents our company's first step in utilizing this powerful, rapidly evolving technology."



AI solution for Greek tollways

Greek consulting and software firm InVision has partnered with New York and Tel Aviv-based tech company Dynamic Infrastructure to offer toll operators in Greece a predictive maintenance solution grounded in artificial intelligence.

Developed by Dynamic Infrastructure, the system creates what the company calls 'medical files' for bridges, tunnels and elevated highways, using photos taken during inspections to 'learn' every structural aspect of a particular asset. It then compares the historic images with new ones, to detect maintenance issues or defects that could lead to major failures and the data and diagnostics are easily accessed online.

InVision, which currently supplies software to a number of Greece's leading tollway operators, will now begin to roll out the technology in the country.

Picture courtesy: Joseph Sohm



construction
TECHNOLOGY

The next Construction Technology supplement will be in the July-August issue

Danfoss promises transformative pumps

Danish components specialist introduces next generation of digital displacement technology

Danish components manufacturer Danfoss has released a new generation of digital displacement pumps for construction vehicles which it says can dramatically reduce overall energy consumption.

The technology, was developed by Danfoss with its Scotland-based subsidiary Artemis, and Danfoss is now building a centre of excellence in Edinburgh to develop what the company calls "a pathway for the electric off-highway machines of the future".

The pump can replace a standard hydraulic pump on diesel hybrid or fully-electric machines, which, according to Danfoss is hugely inefficient – wasting as much as 70% of the engine's power.

At the heart of the digital displacement technology is a radial piston machine that enables cylinders, using valves which combine electronic and mechanical systems.

Danfoss says the new pumps can harness 100% of engine torque in maximum power mode. It also claims that reduced losses introduce the potential to downsize engine size, without loss of either power or control.

This being the case, the company claims the new pump has the potential to increase productivity by up to 28% and reduce fuel usage by up to 40%. **ce**



Hitachi teams with Topcon for grade control

Hitachi has launched new grade control technology it developed with Topcon Positioning Systems.

Hitachi Solution Linkage Integrated Grade Control allows excavator operators to focus on the machine's arm, while the machine itself controls the boom and bucket.

Hitachi said the system can reduce the number of passes required to achieve the correct grade,

as well as allowing less experienced operators to grade without the need for intensive supervision.

The system reduces over-excavation, as it prevents digging below a pre-set elevation.

It will be offered on future models of Hitachi's Dash-6 construction excavators, with optional 2D or 3D Grade Control. The 2D version controls the elevation of the



cutting edge in relation to a benchmark, while the 3D includes Global Navigation Satellite System (GNSS), which controls position and elevation with respect to a global reference. **ce**

Case unveils fully electric backhoe

Case Construction Equipment introduced 'Project Zeus', the 580 EV (Electric Vehicle), the construction industry's first fully electric backhoe loader at ConExpo in Las Vegas, US.

According to a company press release, the power and performance of the 580 EV is equivalent to other diesel-powered backhoes in the Case product line and provides considerably lower daily operating costs while also producing zero emissions.

City governments and municipalities will also benefit from the elimination of emissions for working in urban environments and close to other buildings/people, as well as the reduced noise generated by the equipment.



Symptomatic stocks

The global Coronavirus, COVID-19, pandemic has created huge disruption for companies in the construction sector. Joe Sargent sums up.

Though it had been a concern for some time that recession in Europe was on the horizon, following the good business of 2018 and 2019, few would have thought it could be brought on so abruptly.

Europe is not officially in recession, although it is now set to sink into one. Construction analyst Scott Hazleton at IHS Markit, a financial consultancy, said that the outbreak would impact all regions, with US GDP growth falling from 2.1% to 1.8%, and Europe from an already modest 0.9% to close to zero growth.

Hazleton added, "The biggest problem is Europe, which we now think will go into recession." He did, however, emphasise that the rapidly changing picture on the outbreak made forecasting very difficult.

It's difficult to predict a

pandemic and this is a situation that few of us can ever say we have experience in dealing with; it is a largely unpredictable time. Trying to make some sense of the situation, Chris Sleight, managing director at specialist forecasting company Off-Highway Research suggested that the virus could trigger a short, sharp downturn in construction equipment sales.

Sleight explained, "What we will see as a result of the virus is a sudden dip in sales mid-year", said Sleight, "but we think it will bounce back and be a temporary thing. We are already seeing stimulus efforts [in China]."

EQUIPMENT

Moving on to CE's listed equipment manufacturers, during the examined period of weeks six to 13, the CE Equipment Index shrunk by as much as 26.21%. During

weeks one to six the sector had shrunk by 3.7%, but a boost was anticipated in May, on the back of the largest planned construction show in the world for 2020, ConExpo.

Of course, there has been no share price boost following the positive company news produced from ConExpo. In fact, the show itself felt rather subdued to many in attendance, with the coronavirus being the most prevalent topic of conversation.

Of all the manufacturers, Manitowoc felt the biggest impact during this period, its share value plummeting by 52.3% after the company shared the news that the coronavirus had begun to impact its global operations and supply chain outside of China.

A statement from Manitowoc said, "The magnitude of the Covid-19 pandemic on Manitowoc's business, financial position, results of operations and liquidity, which could be material, cannot be reasonably estimated at this time due to the rapid pace of developments associated with the pandemic. Manitowoc's financial results for 2020 will be determined by the length of time the pandemic continues, its geographic spread, its effect on the demand for our products and services, our supply chain, as well as the effect of governmental regulations imposed in response to the pandemic."

In light of this, the company has withdrawn its financial outlook for 2020. It stated, however, that it retains a strong financial

EQUIPMENT MANUFACTURERS		-26.21%			
Company	Currency	Price at start	Price at end	Change	Change (%)
CEE INDEX		340.83	251.50	-89.32	-26.21%
Astec Industries	US\$	45.23	31.53	-13.70	-30.29%
Bell Equipment	ZAR	8.50	6.20	-2.30	-27.06%
Caterpillar	US\$	137.25	105.78	-31.47	-22.93%
CNH Industrial	€	8.99	5.54	-3.45	-38.38%
Deere	US\$	168.86	135.29	-33.57	-19.88%
Doosan Infracore	WON	4,925	3,085	-1,840	-37.36%
Epiroc (A)	SEK	117.50	93.48	-24.02	-20.44%
Haulotte Group	€	4.86	4.14	-0.72	-14.83%
Hitachi CM	YEN	3,025	2,230	-795	-26.28%
Hyundai CE	WON	24,550	14,500	-10,050	-40.94%
Kobe Steel	YEN	504	354	-150	-29.76%
Komatsu	YEN	2,398	1,878	-520	-21.68%
Kubota	YEN	1,792	1,398	-394	-21.99%
Manitou	€	18.10	13.04	-5.06	-27.96%
Manitowoc	US\$	16.52	7.88	-8.64	-52.30%
Metso	€	34.06	19.74	-14.32	-42.04%
Palfinger	€	27.65	16.50	-11.15	-40.33%
Sandvik	SEK	184.70	137.35	-47.35	-25.64%
Tadano	YEN	1,068	796	-272	-25.47%
Terex	US\$	26.80	13.32	-13.48	-50.30%
Volvo (B)	SEK	170.90	111.90	-59.00	-34.52%
Wacker Neuson	€	14.69	9.37	-5.32	-36.22%

Period: Week 6-13, 2020

CONTRACTORS		-33.43%			
Company	Currency	Price at start	Price at end	Change	Change (%)
CEC INDEX		281.28	187.26	-94.03	-33.43%
Accsa	€	105.30	89.15	-16.15	-15.34%
ACS	€	30.24	16.00	-14.24	-47.09%
Astaldi	€	0.56	0.37	-0.19	-33.54%
Balfour Beatty	UK£	2.65	2.09	-0.56	-21.28%
Bam Group	€	2.57	1.31	-1.26	-49.03%
Bauer	€	16.32	10.20	-6.12	-37.50%
Bilfinger	€	32.62	14.34	-18.28	-56.04%
Bouygues	€	37.04	27.63	-9.41	-25.40%
Caiffion	UK£	0.00	0.00	0.00	#DIV/0!
Eiffage	€	107.10	66.86	-40.24	-37.57%
FCC	€	11.46	7.43	-4.03	-35.17%
Ferrovial	€	28.87	21.75	-7.12	-24.66%
Hochtief	€	107.00	59.25	-47.75	-44.63%
Keller Group	UK£	8.38	4.95	-3.43	-40.94%
Kier	UK£	1.07	0.80	-0.27	-24.95%
Lemminkäinen	€	0.00	0.00	0.00	#DIV/0!
Morgan Sindall	UK£	18.60	11.54	-7.06	-37.96%
Mota Engil	€	1.69	1.07	-0.62	-36.69%
NCC (B)	SEK	188.70	125.00	-63.70	-33.76%
OHL	€	1.16	0.57	-0.59	-50.64%
Peab (B)	SEK	102.80	68.15	-34.65	-33.71%
Porr	€	15.90	15.20	-0.70	-4.40%
Sacyr	€	2.57	1.24	-1.33	-51.79%
Salini Impregilo	€	1.48	1.06	-0.42	-28.61%
Skanska (B)	SEK	228.20	145.00	-83.20	-36.46%
Strabag SE	€	30.55	20.15	-10.40	-34.04%
Taylor Wimpey	UK£	2.16	1.15	-1.01	-46.76%
Tecnicas Reunidas	€	21.54	11.54	-10.00	-46.43%
Trevi Group	€	0.19	0.12	-0.06	-33.62%
Veidekke	NOK	118.80	82.80	-36.00	-30.30%
Vinci	€	104.00	72.00	-32.00	-30.77%
YIT	€	6.75	3.88	-2.87	-42.52%

Period: Week 6-13, 2020

position, with US\$199 million of cash on hand and total liquidity of \$445 million at the end of 2019. The company believes it has adequate liquidity to meet its cash requirements over the foreseeable future and remains in close contact with its banking partners.

CONTRACTORS

During this period of seven weeks, contractors have had the worst experience of the three groups. The CE Contractor Index figure for weeks six to 13 fell by 33.43%.

It is not surprising that this figure has taken such a blow as global consensus on how best to deal with the virus asks

for social distancing and only necessary work to be conducted. Around the world, there are many different attitudes to construction sites remaining open; most employers want to do right by their staff and close; some have supply chain difficulties and others are doing their best to remain in operation, taking all possible safety measures.

Many European contractors have halted work on jobsites, such as Netherlands-based Royal BAM group (-49.03%) halting all activity in Belgium and the UK alongside giants like France-based Vinci (-30.77%), which has ceased all operations on sites in its home country.

MATERIALS PRODUCERS -28.16%					
Company	Currency	Price at start	Price at end	Change	Change (%)
CEM INDEX		210.94	151.54	-59.40	-28.16%
Buzzi Unicem (Ord)	€	22.79	16.19	-6.61	-28.98%
Cemex (CPO)	MX\$	7.76	4.29	-3.47	-44.72%
CRH	€	35.07	23.13	-11.94	-34.05%
HeidelbergCement	€	63.56	36.67	-26.89	-42.31%
Ferguson	UK£	7336.00	5080.00	-2256.00	-30.75%
Kone (B)	€	59.14	49.82	-9.32	-15.76%
LafargeHolcim	€	46.45	31.60	-14.85	-31.97%
Saint-Gobain	€	34.86	21.05	-13.82	-39.63%
Schindler (BPC)	CHF	241.20	192.10	-49.10	-20.36%
Schneider Electric	€	95.92	79.54	-16.38	-17.08%
Titan Cement Int. (Common)	€	18.44	10.26	-8.18	-44.36%
Vicat Group (Common)	€	39.55	24.45	-15.10	-38.18%
Wienerberger	€	26.70	14.20	-12.50	-46.82%

Period: Week 6-13, 2020

KEY INDEXES -28.79%				
Index	Beginning of period	End of period	Change	Change (%)
CEE (Equipment)	340.83	251.50	-89.32	-26.21%
CEM (Materials)	210.94	151.54	-59.40	-28.16%
CEC (Contractors)	281.28	187.26	-94.03	-33.43%
CET (Total)	268.22	190.99	-77.23	-28.79%
Dow	29,380	21,637	-7,743	-26.35%
FTSE 100	7,476	5,510	-1,966	-26.29%
Nikkei 225	23,828	19,085	-4,743	-19.91%
CAC 40	6,040	4,316	-1,724	-28.54%
DAX Xetra	13,536	9,633	46	-28.84%

Period: Week 6-13, 2020

The biggest fall in share price for the whole group of listed companies was German contractor Bilfinger (-56.04%). The company announced that as a result of COVID-19 it would postpone its Annual General Meeting (AGM), "In this respect," the company said, "the protection of the health of shareholders, employees and the service providers involved is given the highest priority."

The company added that a future date for the AGM therefore depends on the further waves of infection and the preventive measures taken by the authorities.

MATERIAL PRODUCERS

Not escaping the effects of the virus are the material producers who have, across the board, struggled to keep plants open to supply demand, and when plants

are open are suffering from a serious lack of demand.

The CE Material Index fell by 28.16% between weeks six and 13. During the period, four material producers fell by more than 40%. Austria-based brick producer Wienerberger suffered the most dramatically, falling by 46.82%.

Commenting on the situation, Wienerberger said, "In these challenging times, reducing health risks and the safety of our employees, customers, partners and all other stakeholders is our top priority. Wienerberger continuously monitors the situation in all markets in order to implement the measures prescribed by the respective governments accordingly."

In closing, it's probably not a surprise to hear that not a single company has increased in value over the period.

CE BAROMETER **Slowing, and with worse to come** **CE FEB-MAR SURVEY RESULTS**

The CE Barometer for the months of February and March make for predictable reading.

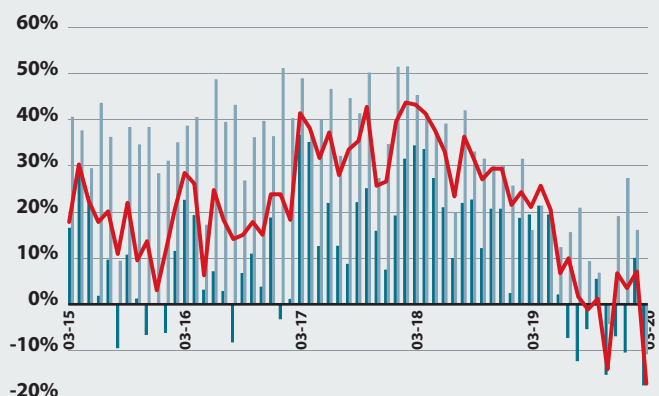
In the first two months of the year, sentiment was clearly influenced by the COVID-19 outbreak in China, with its impact on supply chains and the potential for a broader unsettling of the economy.

By March, of course, these concerns had moved much closer to home, and by the time readers in Europe were completing the CE Barometer survey - between 9 and 23 March - the impact was becoming clear.

That means the results for March paint a downbeat picture, with sentiment on the various measures all lower than they had been for many years: since 2014 for current conditions; since 2011 on prospects for a year ahead; and since early 2010 for conditions compared with a year ago.

That all wraps up into an 'overall climate' balance of -16.9%, the worse since July 2009, which is saying something.

It is probably not heartening to say so, but the full impact of the COVID-19 crisis was only really dawning when many people responded to the survey before mid-March: the survey in April will likely tell a brutal story.



CURRENT SITUATION **FUTURE OUTLOOK** **OVERALL CLIMATE**

TAKE PART

The survey, which takes just one minute to complete, is open to all construction professionals currently working in Europe.

Full information can be found at www.cebarometer.eu

Going long haul

Sometimes nothing less than a truck with the size and power to shift some serious material will do.

Joe Sargent investigates the latest haulers on the market

The European market for off-road rigid and articulated dump trucks (ADTs) stood at some 1,800 units per year in 2018 and 2019, according to specialist market research and forecasting company, Off-Highway Research. This is healthy compared with the early part of the 2010s, but weak compared with the 2000s. Demand was comfortably above 2,500 units per year in the 2000s, until the global economic crisis, and peaked at more than 3,600 trucks in 2007.

Out of the two types of truck, it is the rigid hauler market which shrank the most following the crisis and which has been the most sluggish since. At around 300 trucks per year at the moment in Europe, demand for this type of equipment is less than half what it was in the boom of the 2000s. The articulated dump truck market is also much smaller than it was 15 years or so ago, but it has bounced back a little more than has the demand for rigid framed trucks.

Off-Highway Research believes there are several factors at play. First, mining is in long-term decline in Europe and this impacts particularly on the demand for rigid trucks. Second, the emergence of larger ADTs has taken some market share from rigid trucks in both quarrying and mining. Third, rigid trucks are very long-lived and can often be cost-effectively rebuilt. This can be a barrier to sales of new trucks.

Before recent setbacks from the COVID-19 outbreak of Coronavirus have even been taken into account, Chris Sleight, managing director of Off-Highway Research, said, "Although the market is less than spectacular at the moment, the next few years should see ADT sales into civil engineering applications rise thanks to an increased focus on infrastructure construction in Europe."

Four Terex Trucks TA400 articulated haulers have clocked up around 48,000 hours in a remote coal mine in Siberia, Russia, where they are braving extreme conditions and sub-zero temperatures



Michael Miller, articulated haulers product application specialist (Caterpillar)

"The most important project in this regard is the HS2 high-speed rail project in the UK which is expected to require several hundred trucks at the peak of the earthmoving phase. This should see the value of the European hauler segment remain at the higher end of the US\$600-US\$700 million [€552-€644 million] range."

SIMPLER OPERATION

Recently demonstrated by Caterpillar at the US construction show ConExpo in Las Vegas, the new 24 tonne 725 articulated haulers from Caterpillar come with key automation features such as advanced automatic traction control, automatic retarder control and the assisted hoist system to aid in operation.



The Bell B45E is based on the concept of the larger B60E

Michael Miller, articulated haulers product application specialist with Cat, discussed these key features and what they mean for Cat's ADTs as its range progresses.

Describing the action of the automatic traction control, which controls the differential locks on the machine, he said, "You've got to keep all six wheels on the ground and keep all six wheels moving. What the advanced traction control does is to modulate the lockup between the front and rear and across all three axles."

According to Miller, to successfully implement a full axle lockup in the past, the operator would have had to manually engage a floor switch by pressing and holding for the interaxle lock and would also have to engage a rocker switch for the cross-axle locks. "Now," Miller says, "it's completely transparent to the operator and there's nothing for them to do. It's on permanently."

The machine constantly monitors its traction levels and is able to distribute lock-up proportionally across the axles; if it requires a 7% lock up at the front and 17% at the back then it will apply the necessary measures.

Again, with the automatic retarder on the new machine, there is nothing that the operator needs to do to engage the slowing mechanism. This ensures all round safety, in





Liebherr's prototypes

German OEM Liebherr has long prided itself on the safety of its machines and once again the company are striving to do just that with its latest prototype range currently under rigorous testing.

The firm has developed a new test track at its Kirchdorf facility in Austria designed, to really put the new prototype TA230 articulated dump truck through its paces.

In fact, the testing process is so thorough that to put an operator through that process would be potentially damaging to them. Instead, a hi-tech semi-autonomous set-up has been installed in the haulers to enable them to run the track without anybody on board and at higher speeds.

The aim is to test the durability of the machines and to establish reliability data, proving Liebherr's capabilities in this segment. Not only will this show reliability but it will also allow Liebherr to identify any problems and have the chance to prevent them.



HAULERS

Three Liebherr TA230 prototypes line up to run the test track in Kirchdorf



The B45E 4x4 introduces the conceptual advantages of Bell Equipment's two-axle ADT to the 40-tonne payload class

case an inexperienced operator selects a gear that is too high for descending a hill.

Discussing further benefits on the machine Miller said, "On the older machines you had a separate hoist and transmission lever. In order to lift the body, you would, reverse the machine into position, put it into neutral, put the part brake on, then you'd pull the highest lever, hold it, and then you control the speed that the body goes up using the throttle.

"So, you've got to use your arm and you've got to use your foot in order to lift the body. You can still do it manually if you want, but there's now an assisted hoist system. When it's enabled, you reverse to the heap and all you have to do is flick a switch; it neutralises the transmission, puts the service brakes on all six wheels and then it powers the body up itself."

MOVING UP A GEAR

A part of the Volvo group since 2014, Terex Trucks has been producing articulated haulers from its site in Motherwell Scotland since the 1950s. The latest offerings from the specialist company are also the company's only two products; the TA300 and TA400.

Both are now sold in Europe with a three-

year warranty, telematics and planned maintenance included as standard.

The TA300 is equipped with true independent front suspension as standard to enhance operator comfort, enable better traction control and benefit productivity. Another thing that Terex Trucks has improved on the TA300 in the past year is the new transmission, leading to improvements in fuel efficiency, performance, productivity and operator comfort, when compared with the previous model.

The 28-tonne machine is said to deliver a 5% improvement in fuel efficiency, a 5 km/h increase in speed to 55 km/h and an increase in the length of time between oil maintenance intervals from 1,000 to 4,000 hours. In addition, the machine now comes with eight forward gears as well as four reverse gears, to help ensure smoother gear shifting and thereby higher levels of operator comfort.

The larger TA400 ADT has a maximum

Doosan's DA45-7 Stage V-compliant ADT has a payload capacity of 41 tonnes



Doosan's DA30-7 is powered by the new Scania Stage V-compliant DC09 9 litre diesel engine

The 3.95m long and 4.41m wide Mecalac TA3SH features forward and swivel tipping mechanisms



payload of 38 tonnes and a heaped capacity of 23.3 m³. Powered by an engine that develops a gross power of 331 kW (444 hp), the TA400 is designed to meet the demands of the most extreme operations such as quarries, mines and large-scale construction projects.

The TA400 also features a planetary gear transmission for smooth, efficient gear shifting and optimised fuel consumption.

EVOLVING EARTHMOVERS

South African OEM Bell Equipment is also using a planetary transmission on its new Bell 45E. Well known for its ADTs, the company recently introduced its 3rd generation range with a rated payload from 18 to 45.4 tonnes.

The new range – B20E, B25E, B30E, B45E and B50E – are designated 'E' for evolution by Bell



Wacker Neuson's Dual View dumpers have the capacity for payloads up to 10 tonnes

and feature a new oscillating frame and high-floatation tires to prevent them from being stuck on muddy, rutted or hilly terrain.

The cabs have also been fully redesigned to protect the operator by suppressing sound. Fatigue-beating controls have also been installed to the same effect. On-board the machine, an advanced diagnostic monitor provides continuous updates and a sealed-switch module for provides convenient, fingertip operation of numerous functions.

All haulers in the new range also feature a Stage V or Tier 4 final engine from Mercedes Benz. Bell's E-series machines run SCR-technology (Selective Catalytic Reduction) in combination with EGR (exhaust gas recirculation) for in fuel-efficient emission control, designed specifically for the off-highway market to be compliant to Tier 4f. Engine power and fuel consumption have been further optimised through event dependent software that controls retardation, cooling and charging of accumulators.

RIGOROUS TESTING

Doosan Construction Equipment is launching the new DA30-7 and DA45-7 Stage V compliant articulated dump trucks (ADTs). The new DA30-7 and DA45-7 replace the previous DA30-5 and DA40-5 Stage IV models, respectively. The DA30-7 has a payload of 28 tonne, while that of the DA45-7 is 41 tonne.

The DA30-7 is powered by the new Scania Stage V compliant DC09 9 litre diesel engine providing 276 kW (375 HP) of power. The DA45-7 is driven by the new Scania Stage V DC13 13 litre diesel engine with an output of 368 kW (500 HP).

The new Scania engines have undergone two years of very intensive testing in exacting construction and mining environments and whilst the core of the Scania engines has not changed, the main difference in the new engines from their predecessors is the improved after-treatment system.

Boliden Kevitsa, a Finnish Pit mine, recently received its 17th new electric drive 830E-5 hauler from Komatsu



SMALLER SITES

Sometimes a good amount of material is required to be shifted at worksites on a slightly smaller scale and one company aiming to cater for that specific market segment is German OEM Wacker Neuson. The company has developed "Dual View" wheeled dumpers – the DV60, DV90 and DV100 – with the capacity for maximum payloads between up to ten tonnes.

In the cab, the Dual View allows the operator to quickly change the seat position through a 180-degree rotation of the entire control panel and the seat console. This provides the operator with a complete view in the direction of travel – during transport, loading and dumping procedures. The console unlocks simply and can then be turned to the desired viewing position.

The new dumpers have also been developed with an articulated pendulum joint, making the machine more manoeuvrable and off-road capable than trucks. Wacker says that even under full load, the machine will always remain in contact with the ground, even on uneven terrain.

French OEM Mecalac has also produced a new innovative Power Swivel site dumper, the TA3SH, for increased versatility and safety on crowded or confined jobsites.

The TA3SH is 3.95m long and 4.41m wide. The Power Swivel technology onboard the machine features forward and swivel tipping mechanisms, allowing the load to rotate 90 degrees on either side before being tipped.

This reduces the need to move equipment, potentially enhancing productivity.

The Mecalac range of Power Swivel site dumpers features payload options from 1 to 10 tonnes. The TA3SH's payload capacity is 3,000 kg, making it useful for applications such as concreting, landscaping and urban construction.

All of Mecalac's Power Swivel site dumpers feature a heavy-duty locking device, keeping the skip facing forward while on the move. Each dumper meets the latest emissions standards, and to avoid DEF- and DPF-related costs, engines are rated at under 19kW. All models are equipped with Tier IV engines.

THE BIG ONES

Of course hauler trucks also play a big role, literally, in the mining industry. Boliden Kevitsa, a Finnish pit mine, recently received the final instalment in its order for 17 new haul trucks from Komatsu.

Not only was this a significant order for the company, these machines also featured an electric drive marking the entry of Komatsu electric dump trucks to the European market.

The 830E-5s feature a 220-tonne payload and have been purchased to reduce production costs in the mine. To further increase efficiency and productivity, the trucks have been equipped with dispatch and maintenance systems from Modular Mining, a mining services company based in Texas, US, to enable optimised production and tracking as well as supporting maintenance of the fleet.

ce

The Metso body

The Metso Truck Body is a one-piece hybrid haul truck body that combines the benefits of rubber and high-strength steel. The elastic rubber lining absorbs the energy of every impact, allowing for a lighter steel structure underneath.

Thanks to the characteristics of the rubber, the Metso Truck Body can absorb maximum shock at the lowest possible weight. The low weight means that more payload can be hauled per round, while the long-lasting rubber lining reduces the need for maintenance. The result is lower overall operating costs.

Lars Skoog, Vice President, Loading and Hauling Solutions at Metso, said "Our truck bodies weigh 20-30% less than OEM bodies and can haul up to 12% more payload, which improves process efficiency. In addition, the rubber lining significantly enhances the working environment by lowering the noise level by 50% (10-15 dB) and reducing vibrations by up to 97%."

The Metso Truck Body was launched at Bauma 2019 and is available for all major off-highway truck models used in quarrying and mining operations.



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Rise of the minis

Many OEMs are choosing electric power for their mini excavators, while others have updated their engines to be Stage V compliant and lower in noise pollution, as Katherine Weir reports

Compact construction equipment includes products that are small, robust, cost effective and versatile in application. Their rise in popularity can also be attributed to the increasing adoption of electromobility, with manufacturers investing heavily in developing electric solutions for which mini excavators are ideal.

According to specialist market research and forecasting company, Off-Highway Research (OHR), mini excavators have never been more popular. Global sales of machines under 6 tonnes in operating weight are believed to have reached 290,000 units last year; the third year in a row that global sales of minis have set a new record.

OHR says that mini excavators are replacing other types of traditional machines – particularly backhoe loaders – in many developed markets, as well as gaining ground in many emerging markets due to rising labour costs and the need to complete projects quicker.

LEADING ELECTRIFICATION

In February, JCB showed the fast charge version of its first fully electric mini excavator at the Executive Hire Show in Coventry, UK.

The 19C-1E is powered by four lithium-ion batteries to provide 20kWh of energy storage; enough for a full working shift on a single charge, the company said. With the fast charge option, the excavator is fully charged in just two and a half hours, benefiting customers who require unplanned, quick responses, such as utility services.

The rapid charge time is achieved by directly taking 415V, 3 phase supply from the grid and converting this supply from AC to DC power.

JCB said that the zero emissions 19C-1E delivers all the performance of a conventional diesel-powered 1.9-tonne mini excavator with a reduction of both internal and external noise levels. Other features include a Bosch Rexroth load-sensing hydraulic system, a convenient 110V input on-board charger for 16-hour recharging capability and the option

Takeuchi says the swing boom on its TB260 allows the unit to dig offset on both the left and right sides of the machine without repositioning

for 230V charging when required.

The machine's three operating modes can be controlled by a rotary dial: the 'low' setting runs the electric motor at 1,200rpm, 'general' at 1,600rpm and 'high' at 1,800rpm. Auto Kick Up mode for tracking has the machine operating at 2,300rpm for rapid movement between digging sites.

With the same adjustable undercarriage and choice of digging equipment as the diesel model, the 19C-1E provides a maximum digging depth of 2,891 mm with the longer 1,344mm dipper arm, JCB said.

A range of power packs are also being launched by the manufacturer to support its growing line of fully electric machinery, including the 19C-1E. The zero-emissions power packs are designed to offer electrical back-up to remote and urban construction projects, available with a choice of four or eight 'automotive quality', maintenance-free lithium-ion batteries.

The power packs will deliver power outputs of 5kVA, in both single and three-phase supply, and, with a 50Hz to 60Hz frequency, it will be available for customers in the UK, Europe and North America.

QUIETER CONSTRUCTION

Italy-based Sampierana is also entering the electric market, under its Eurocomach brand, with its first mini excavator designed for electrical operation expected in 2021. It will have the same weight and appearance of the company's 14SR model, as well as the same hydraulic function. It mounts a lithium battery integrated in the rear compartment and has an external battery charger for construction sites. The range is expected to go up to 5 tonnes.

New excavator models will also be shown at the 31st SaMoTer exhibition in Verona, Italy. This was due to take place in March but has

Kobelco's next-generation SK75SR-7 and SK85MSR-7 models have been popular across central Europe





New 6-tonne excavator models include the zero tail 60ZT with monolithic boom and the short radius 65TR with triple boom

the electric drive and its performance. The excavator has been designed to perform and handle like a diesel-powered model.

Of course, there are other considerations to factor into the purchasing of mini excavators than just their power source.

been postponed to October due to the rapid spread of the Covid-19 strain of Coronavirus.

In the 6-tonne excavator segment, the company is displaying the zero tail 60ZT with monolithic boom and the short radius 65TR with triple boom. Both models come with a Stage V Kubota engine and are said to be quieter because of a Fan Drive system.

In terms of operator comfort, the cabin is installed on four hydraulic silent blocks to eliminate vibrations on board, as well as soft touch servo-assisted manipulators and a double-sided cushioned seat complete with armrests. Storage compartments, including a mobile phone holder, are also present along with a radio with Bluetooth speaker.

The company's technical department have been working on new excavator models for the 4 to 4.5-tonne range, with a prototype of the 4-tonne excavator being unveiled at SaMoTer. This will be the first example of this segment with a 'completely renewed' design, in line with the new 6 tonne range. It is due to enter the market around the end of 2020.

An increasing number of original equipment manufacturers are releasing electric-powered construction equipment to the market, mainly for compact models. Other notable machines include Bobcat's new E10e zero tail swing electric mini excavator, which sold out just

after the models rolled off the production line in min-2019. The company says the E10e is 'just the start' of expanding its portfolio in alternative power sources.

The mini can pass through a single doorway at just 71cm in width, and with its lack of exhaust fumes it is suitable for indoor use. It is powered by a maintenance-free lithium-ion battery that can operate for up to four hours on one overnight charge using a standard 230V socket.

German compact equipment manufacturer Wacker Neuson has won a SaMoTer Innovation Award in the hydraulic mini excavator category for its first electric mini excavator, the EZ17e. The award was given for its efficiency, the optimal integration of

INCREASED DEMAND

Edging into the midi range of excavators is Kobelco's next-generation SK75SR-7 and SK85MSR-7 models that were launched at the Bauma, Munich, exhibition last April.

Kobelco said that there has been popularity across central Europe, with several machines already being sold to customers in Scandinavia, UK, Benelux, France, Austria and Germany on simple construction projects and road building to agriculture and housebuilding.

The SK75SR-7 and SK85MSR-7 are the updated models of the SK75SR-3 and SK85MSR-3 excavators, and, according to Kobelco, through years of research and development, including consultation with

Hitachi mini is 'perfect fit' for groundworks project

A new Zaxis-6 mini excavator has been added to UK-based civil engineering firm Jim Dorricott's fleet for a groundworks project. The ZX26U-6 was delivered by HCM(UK) to begin work on a commercial/retail development on the outskirts of Telford, UK.

The mini excavator is being used to excavate parts of the two-hectare site so that operators can investigate and remove the existing services. Hitachi said that the company selected the ZX26U-6 due to positive experiences with its four Zaxis medium excavators. One of these, a ZX225USLC-5, is working alongside the mini to dig deeper and lay sewage pipes connecting the site to the main sewer.

Russell Buckley, director at Jim Dorricott, described the new excavator as having 'excellent all-round visibility' and said the company found it to be 'noticeably more economical'.

Derek Jones, an experienced operator with the contractor who has been using the mini, said, "I've been working in the construction industry for 38 years, operating machines from two to 70 tonnes. The ZX26U-6 is comfortable, and easy to get in and out of to change attachments. This is really important as it saves time on this type of project."



In February, JCB showed the fast charge version of its first fully electric mini excavator – 19C-1E – at the Executive Hire Show in the UK





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Hitachi Construction Machinery (Europe) (HCME) has released new Zaxis-6 mini excavator models said to be suitable for multiple applications

European dealers and customers, it made 'significant improvements' on the design. These improvements include an increase of 20 millimetres (mm) between the machine's upper structure and undercarriage to reduce damage by rocks, improved blade geometry for operation in mountainous regions and a 15 % reduction in digging cycle and 37 % increase in arm digging speed.

In terms of urban working credentials, both models benefit from short radius designs as well as Kobelco's Integrated Noise and Dust Reduction Cooling System (iNDR).

Inside the larger-sized cabin, a heated air suspension seat is installed as standard and the armrests and joystick moves with seat for an 'optimum' working position, the manufacturer says.

Also released at Bauma was a selection of new mini excavators from Hitachi Construction Machinery (Europe) (HCME), all with Stage V engines. The new Zaxis-6 models – ZX17U-6, ZX19U-6, ZX26U-6, ZX33U-6, ZX55U-6, ZX65USB-6 and ZX85USB-6 – are said to be suitable for rental, utilities, foundation work, landscaping and indoor demolition or construction projects.

Ranging from an operating weight of 1.7 tonnes to a not so mini 9 tonnes, the new line has a quick cycle time and high workload. Lower noise levels can be expected, the

Four new minis for Komatsu Europe

Komatsu Europe has announced the release of four new MR-5 mini excavators due to be presented at the 31st SaMoTer exhibition in Verona, Italy. This was due to happen in March but has been postponed to 16 to 20 May 2020 due to the rapid spread of the Covid-19 strain of Coronavirus.

The MR-5 range – PC18MR-5, PC22MR-5, PC26MR-5 and PC58MR-5 – builds on the company's MR-3 product line with 'a full host of improved customer-focused features' including a seat belt indicator, an easily accessible secondary shut down switch and protected PPC levers.

Simone Reddi, mini excavator product manager at Komatsu Europe, said, "The MR-5 range concentrates on the quality and performance of the larger Komatsu construction range into a compact package."

Compliant with Stage V emission standards, the four MR-5 models – due for introduction to the European market in the second half of 2020 – have operating weights ranging from 1.8 tonnes to 2.7 tonnes and digging depths of 2.3 metres (m) to 4.1m.



manufacturer says, along with new LED lights on each model.

Seigo Yamamoto, product manager for mini and compact products at HCME, said, "Zaxis-6 mini excavators are designed to be user-friendly, which makes them ideal for first-time users of the machine, such as in the rental market, for example. They are invaluable additions to any fleet, thanks to their versatility for working on a variety of job sites with different attachments, and impressive comfort and easy maintenance features."

Regarding the largest excavator in the mini range, Yamamoto said, "The ZX85USB-6 may be classed as a compact excavator, but operators will experience the power of a larger machine with the new 41.8kW engine. The muffler filter after-treatment device reduces harmful emissions, helping to create a healthier environment for the operator to work in."

Japan-based Takeuchi, who claims to have

released the first compact excavator in 1971, has the Tier 4 Final hydraulic excavator TB260. Although not new to the market, this conventional tail swing model has recently increased in cabin size as well as giving improved service access by a reconfiguration under the hood, said by the company to reduce maintenance times.

Inside the cab, standard features include a high-back suspension seat, a colour monitor, Bluetooth radio and 'low-effort' pilot controls. Outside of the cab, a steel-reinforced heavy-duty blade has been redesigned for better material retention and to keep material rolling to the front and away from the machine.

The TB260's triple-flange track rollers maintain two points of contact at all times, the manufacturer said, making it less susceptible to detracking. Rubber, segmented rubber and steel track options are available.

Takeuchi says that the heavy-duty construction of the swing boom allows the unit to dig offset on both the left and right sides of the machine without repositioning.

Regarding telematics, Takeuchi Fleet Management (TFM) is available on all current excavator models providing alerts and service information.

Cat recently made an entrance into the 6-tonne class of hydraulic excavators with its new 306 CR. The company says the machine boasts enhanced performance and operator experience, but also benefits from extended service intervals and simplified maintenance. New standard features for operators include stick steer and a new LCD monitor.

The controls layout and common components of the new machine will be familiar Cat devotees, but the 306 CR features a heavy-duty structure and enhanced fuel efficiency, plus load-sensing hydraulics.

The excavator has a maximum dig depth of 4 110mm and 7,175kg maximum operating weight when equipped with the sealed and pressurised cab. Cat says a canopy alternative to the pressurised cab will be available this year.

ce



Caterpillar has entered the 6-tonne class of mini excavators with the 306 CR Next Generation machine

European giant

As France confines itself to prevent the spread of the coronavirus, some of Europe's largest construction companies will be hoping for a speedy return to normality, as CE reports.

At the time of writing, France is little more than a week into its national confinement, part of the government's measures to counteract the spread of the coronavirus.

Currently, over 40,000 people have tested positive for the virus and just over 2,600 people have died. Meanwhile, the numbers grow every day.

Meanwhile, although severe restrictions on movement are in place, the French President, Emmanuel Macron, has stressed the need to keep working where possible. "We have to continue to produce and to keep the country running," he said last week.

He has also pledged that no business, whatever its size, will face bankruptcy, and promised unlimited state aid and guarantees for bank loans to companies.

At the end of March, Insee, France's National Institute of Statistics and Economic Studies, produced its first report estimating the impact of the virus on the country's economy.

While the organisation's director general, Jean-Luc Tavernier, said he hesitated before releasing the report, due to the "fragile" aspect of the statistics, the numbers are nonetheless dramatic.

In the week of the report's release, Insee estimated that general economic activity across the country had fallen by 35%,

compared with the norm.

However, the story was far worse for construction, which had seen a 90% fall in activity.

On the back of the worsening situation, Insee predicted a fall in GDP of approximately three percentage points over the course of 2020 – three times more severe than previous estimates.

While, in neighbouring Germany, a group of construction industry associations lobbied the government to keep sites open, the French Building Confederation (FFB) advised its own members to cease operations in an effort to keep workers safe and avoid spreading the virus.

A political furore ensued, with France's employment minister, Muriel Pénicaud, accusing the FFB of "scandalous defeatism" and of taking advantage of aid offered by the government.

MIXED MESSAGES

In a TV interview, reported by *Global Construction Review*, she said, "It is not right that some people are continuing to work while others are not," adding that she was shocked that one of the branches of Capex – the confederation of small construction businesses – had advised its members to stop work, telling them that the government would cover the loss of revenue.

In response to these statements, Jacques Chanut, FFB's president, sent an open letter to the minister, stating that his members were fully aware of the "disastrous consequences" the decision to close sites would have on their businesses, but the "sacrifice" was made "in conscience and responsibility".

He also spoke to the media about the



The Arc de Triomphe in Paris, on an eerily quiet Champs-Élysées

government's decision not to call for the shutdown of sites and called for a 10-day period to consider the best next step to ensure the safety of construction workers.

Echoing the sentiments of many in the UK construction industry, who have complained about the mixed messages coming from government, Chanut told France Info, "It's an emergency, because we've just lived through a totally chaotic 48 hours in which our colleagues in the building and public works sector don't know whether they can or should work. There are very contradictory signs because, beyond the construction site itself, which raises real questions in terms of the protection of our employees, we don't know whether or not we can work."

No one reading this will need reminding about the seriousness of the virus from an economic perspective, but it's worth stressing that the French construction sector employs approximately 1.5 million people within the country's borders and accounts for some 6% of its GDP.

The damage being done to the French economy, as major construction sites lie idle



French President Emmanuel Macron



Vinci currently manages over 40 airports around the world, the majority of which are suffering under coronavirus measures

at a standstill



Jacques Chanut president of the French Building Confederation (FFB)

cannot be overstated.

As an example, even at this early stage of measures, French construction and concessions giant Vinci has given notice that it will not be able to meet its revenue targets for 2020.

Vinci is responsible for a number of airports and toll roads in the country, none of which are likely to see a great deal of traffic in the coming weeks and possibly months. The company said it had seen a fall in passenger numbers of approximately 40% in the first three weeks of March – numbers that are soon likely to appear relatively healthy.

The company's toll roads experienced a 16% drop in business, and Vinci will be hoping harsher measures are not required, which might further restrict road use.

As Vinci's share price tumbled, the company said it is currently impossible to accurately forecast its 2020 earnings.

The French road builder Colas – part of

construction giant Bouygues – has called a halt to all of its construction activities in the country and simultaneously cancelled all of its bitumen purchases.

From a business perspective, the timing could not be worse for an industry that should now be emerging from its traditional winter slowdown.

PROJECTS ON HOLD

Following the government's announcement that only essential travel should be undertaken for a 15-day period, Colas responded by sending its staff home for the same period – with an expectation that an extension will follow.

Both Colas and Vinci have said their business operations in other countries have not been as severely affected at this time.

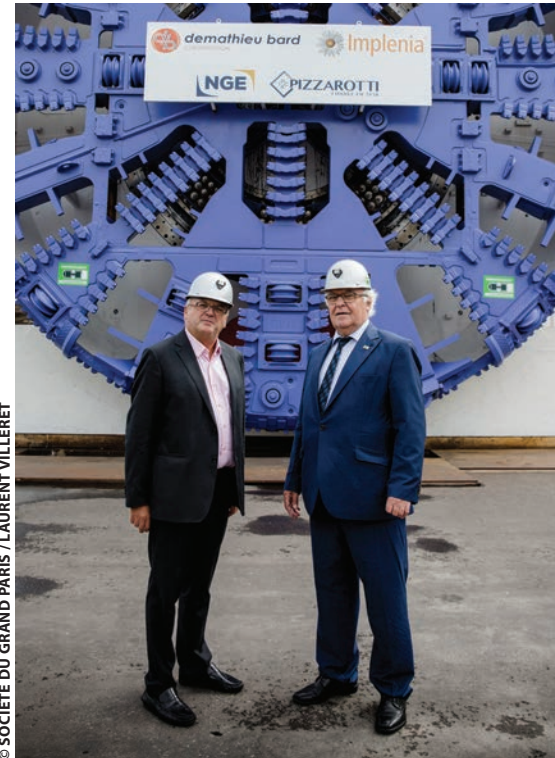
As with most other European countries, key projects are currently being allowed to continue.

Probably most notable is the Grand Paris project – arguably Europe's largest infrastructure project – in which Vinci is playing a leading role.

One would expect that a juggernaut of a project such as this is proof against even such an era-defining event as Covid-19; it began, after all, in 2010 and was not scheduled to be completed before 2030. Yet, within the overall scope of a project set to transform a large chunk of the Ile de France region, there could be elements that will feel the pinch of a tightening government budget.

Vinci has mobilised numerous different divisions to work on aspects of the project; Vinci Construction for civil engineering works; Eurovia for urban development and the railway network; Vinci Energies for IT and electric engineering; and Vinci Immobilier for the development of real estate.

Now, the Société du Grand Paris – the body charged with delivering the monumental



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Société du Grand Paris chairman Philippe Yvin (left), at the Herrenknecht factory in Schwanau, Germany, where the first tunnel boring machine of the Grand Paris Express was built

project – has pulled the plug on all projects linked to it, for an indefinite period.

A Société du Grand Paris spokesperson said, "In the exceptional context resulting from the introduction of measures to limit travel, the conditions are no longer met to guarantee the safety of journeymen on construction sites without continuing to mobilise, directly or indirectly, the rescue services strongly mobilized elsewhere."

So, the project sits completely idle. The four >

A 3,000-ton slab is moved into place – part of the future roof of the Arcueil-Cachan station on the Grand Paris Express



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The long-awaited third reactor at Flamanville – for which France will now have to wait a little longer

new lines (15 (basically circling Paris), 16, 17 and 18), two extensions (11 and 14) and 68 new stations across the region are halted, as is the progress of the various tunnel boring machines, partway to digging some 200km of new track.

Another huge project severely affected is the already significantly delayed construction of the 1,650MW third reactor at the Flamanville nuclear power plant in northern France.

Before the coronavirus struck, the reactor project had been beset by technical problems and EDF (the group developing the project) had tripled the estimated construction time, from 5 years to more than 15. At the same time, the required budget had rocketed by more than 200% – now totalling approximately €12.5 billion.

LOOKING TO THE FUTURE

Now EDF has said that construction work on the site has been reduced, but the project will continue and the government has given permission for the completion date of the reactor to be put back to 2024.

Staff numbers have also been reduced at the two in-commission reactors, which have been offline since January and September 2019, respectively, while major maintenance work is carried out.

When the coronavirus episode is over, the world will be a very different place. Amid



The many nations involved in the ITER experimental reactor project in Provence will hope for a speedy return to construction

the doom and gloom, there have been very few rays of light, but one has been the fall in air pollution, which is receiving increasing attention in the media. Undoubtedly, the case for renewable energy will be strengthened by this and France is already moving on a number of relevant projects.

In September 2019, a consortium of EDF Renouvelables and Enbridge announced that its Saint-Nazaire offshore wind project was nearing construction start. As recently as last month, contracts were being awarded for engineering firms to work on the project.

Whether it will still be operational in 2022, as had been expected, is now very much open to question.

The 480MW wind farm will be located some 12km off the coast of Loire-Atlantique in western France and will comprise 80 GE Haliade turbines, manufactured in France.

An offshore substation will be designed, built and installed by a consortium of Atlantique Offshore Energy, GE Grid Solutions and Société de Dragage International. At the same time, another consortium, between the Belgian marine engineering firm DEME and French construction firm Eiffage, will construct and install 80 monopile foundations.

The choppy waters of France's confinement are also being negotiated by two of Europe's largest communications organisations, who will work together to roll out the country's state-of-the-art fibre optic network.

France's Bouygues Telecom and Spain's Cellnex recently announced that they would invest around €1 billion over the next seven years in a network that would also include telecommunications sites and data processing centres – with a major part of the remit for the joint venture to accelerate the roll-out of 5G in the country.

One further construction site that will hope to quickly become active when the country's virus measures ease is ITER (the International Thermonuclear Experimental Reactor) in Provence.

This is the biggest fusion machine in history, a €22.5 billion project designed to test the theoretical possibility of using atomic fusion to economically generate electricity.

There has been phenomenal activity at the site in the past year, yet the reactor was not set to come online until 2025 – and that was before the crisis. Now, the site is quiet and the seven member entities funding the project – the EU, India, Japan, China, Russia, South Korea and the US – must wait for the virus to run its course, before engineers, construction workers and scientists can get back to work on the multi-billion-euro experiment.

If it proves to be a success, the brave new post-coronavirus world will certainly contain some bright sparks.



Cable systems engineers Prysmian Group is working on a number of EDF offshore wind projects in France



Bouygues Telcom and Cellnex have promised to roll out a €1 billion fibre optic network in France

The height of construction

As the call for access platforms increases within the construction industry, the pros and cons of boom and scissor lifts is examined by CE's sister magazine, *Access International*

A US report from 2019 predicts the global market for aerial work platforms (AWPs) could reach US\$24 billion (€21.5 billion) by 2024. When compared with expectations for the ever-popular mini-excavator of around US\$7.5 billion (€6.6 billion) by 2024, the strength of the AWP market is clear.

While AWP's are now being used on applications across various industries – including commercial, warehouses and maintenance work – the construction industry is the primary driver for the growing popularity.

Within construction, AWP's are becoming increasingly prevalent on infrastructure projects, including the construction of manufacturing facilities, airports, power plants and roads.

One of the primary reasons for having AWP's on site – largely boom lifts and scissor lifts – is safety. Throughout Europe, the need to create safer working environments within construction have driven companies to employ advanced equipment for staff working at height.

The question of which type of lift is

required can sometimes be simply answered; if the required height exceeds 20m, then it's a boom every time. That said, on major sites, both machines are often required, adapted as they are to very different applications.

The largest booms can rise to between two and three times the height of large scissor lifts. They also have the ability to lift over obstacles; scissors can only lift vertically.

Where scissors come into their own, however, is when multiple workers need to be lifted, as booms, in general, can only lift one person at a time.

Scissors are also generally a cheaper option, which can be a significant factor when buying a machine, as opposed to renting; another is that training is required for operators if the team is anticipating working at heights above 11m.

ROUGH-TERRAIN SCISSORS

While there is also a tendency to think of booms as being more mobile and more suited to rough terrain construction sites, it is worth noting that rough-terrain scissors, well suited to construction work, can lift not



Manitou's 220TJ+ telescopic boom lift

only multiple workers, but also a significant amount of equipment and material.

The rough-terrain scissor lift has been adapting to European Stage V emission regulations and the new ANSI standards, which have sparked a new breed of machines for inside and outside use.

Skyjack redesigned its line-up of full-size rough-terrain scissor lifts in 2019. The new range replaces Skyjack's previous 88 and 92 models and consists of the SJ9233, SJ9243, and SJ9253 RT, at 10m, 13m and 16m respectively. The new machines were first introduced earlier in 2019 at both ARA and Bauma and go into production January this year. The company will now add a 19m model to the same range. It will be the company's highest reaching scissor lift to date. Sharing many features with its smaller counterparts.

Corey Connolly, product manager at Skyjack, said, "Rough-terrain scissors are sometimes seen as a necessary evil within a rental fleet – everyone needs them but they don't necessarily provide the best return. Cognisant of the costs associated with these design and emissions changes Skyjack was

Snorkel launch world's largest boom

Snorkel has launched the world's largest self-propelled boom lift at ConExpo 2020.

Dubbed as a Mega Boom, the new Snorkel 2100SJ telescopic boom lift reaches a maximum platform height of 210 ft (64m), provides an industry-leading horizontal outreach up to 100 ft (30.4m), and an unrestricted platform capacity of 660 pounds (300kg).

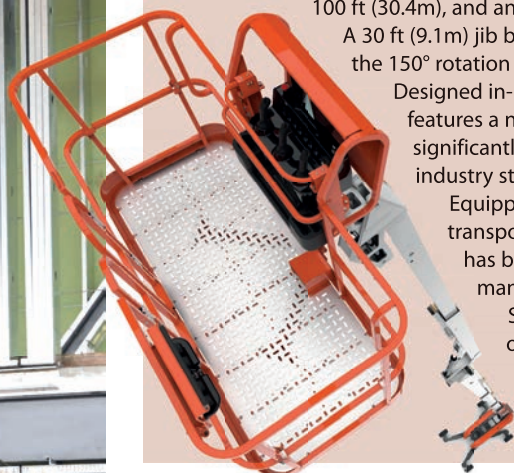
A 30 ft (9.1m) jib boom, with a working arc of -55° to +73°, combines with the 150° rotation of the 8 ft x 3 ft (2.4m x 0.9m) tri-entry platform.

Designed in-house by Snorkel's engineering team, the 2100SJ features a number of patent pending innovations, and a significantly increased working envelope over the current industry standard, said the manufacturer.

Equipped with five steering modes, and with a stowed transport width of just 8 ft 2 in (2.5m), the Snorkel 2100SJ has been designed for ease of transportation and manoeuvrability on the jobsite.

Shown as a preview, Snorkel will be accepting pre-orders for the 2100SJ at the show, with first deliveries scheduled for early 2021.

Snorkel's 210 ft platform height S2100SJ.



MEC's new Micro 26 compact scissor

very focused on providing a quality product that also kept our costs and our customers' costs down. In the end hopefully our customers can at least maintain the same returns on these machines, if not improve them."

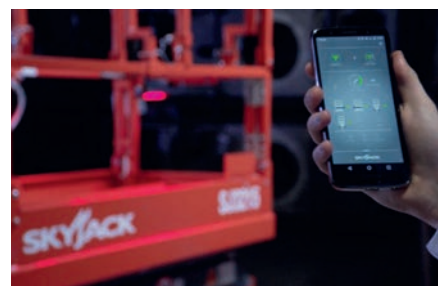
Skyjack has kept up with standards and emission changes throughout the years, but this was the first major redesign since its large RTs were introduced over 25 years ago. The new range boasts increased height,

capacities, and drive performance, including a more rigid scissor stack, while maintaining features like the true four-wheel axle-based Axldrive system, oversized dual deck platform, and its unique clevis-based scissor end design. The Skycoded control system has also been updated.

Skyjack's CE rough-terrain scissors were redesigned in conjunction with new Euro Stage V emission standards, while the ANSI/CSA-compliant versions have undergone changes for those standards. Load sensing on North American machines is the most recognisable change as it is something that has been present on European machines for over 15 years, but completely new to that market.

Fellow US-based manufacturer MEC has also been extending its scissor range. MEC's latest rough-terrain models are the renewed and enhanced 69 Series, which consists of four models – diesel and electric models at both 10m and 12.2m platform heights. They were introduced in early 2019 and feature an oscillating front axle, 40% gradeability, and an integrated sheet material rack.

The company said, "More energy efficient hydraulic drive and lift systems that allow a smaller engine to do the same job has become a trend in RT scissor lifts." The company added that reducing engine complexity fuel



The automated self-check system developed by Skyjack

consumption for faster and simpler servicing is also important with the challenge of tier 4 Final engines.

SAFETY FIRST

The rack is integrated outside the platform and allows operators to safely position materials, such as dry wall, plywood and glass outside the platform, reducing the fatigue experienced from lifting materials over the guardrails and the risk of materials being damaged and personnel getting injured. Next the company will introduce its Proactive Platform Safety System (PPSS) secondary guarding on to RT scissor lifts. Another safety feature is MEC's optional pipe rack which attaches to rails outside the platform for more manoeuvrability inside the platform.

New models from Italy-based Airo are also based around diesel and electric options. The 12m and 14m working height X12 RTD/ X14 RTD compact models' standard equipment includes Euro Stage V diesel engine, four-wheel drive, oscillating axle and outriggers with automatic levelling system.

The electric X12 RTE/ X14 RTE versions include traction batteries as standard equipment, along with four-wheel drive, oscillating axle and outriggers with automatic levelling system. The compact machines offer a 1500mm extension that allows the same 400kg capacity across the whole of the platform.

The new tracked Genie S-45 HF boom



ACCESS EQUIPMENT

Airo said, "On RTE models, traction batteries are an extraordinary feature, in order to have guaranteed autonomy for all the working day."

The launch of the new XL RTD and RTE range is scheduled for the second half of 2020.

Of course, booms are still favoured on many construction sites, with their ability to overcome hazards and reach heights way beyond those of scissors.

In fact, launches of big telescopic booms were a major talking point just a few years ago, as Genie brought out its 180ft (54.8m) XC-180, closely followed by JLG's world's tallest 185ft (56.4m) model. Since then, manufacturers have been relatively silent on the topic, as newer technologies, like telematics and hybrid/electric deployments have stolen the limelight.

In more recent times XCMG pushed its envelope with its latest big telescopic boom, launched at Bauma China last year, the 56.6m platform height GTBZ58S, and Sinoboom introduced the 46.6m platform height GTZZ46J articulating boom at APEX Asia – it just tops JLG's 45.7m platform height 1500AJ. Nevertheless, the talk in the industry has been focused on technological advances.

JLG boom goes electric

Smart Platform Solutions (SPS) has introduced a 100% electric JLG E660SJ model boom lift to its range.

The JLG machines, which were originally diesel powered, were retrofitted with an electric motor by SPS.

The company installed a 48V lead-acid battery package which, according to SPS, provides enough power for a full working day.

Benefiting from low noise pollution and zero carbon emissions, SPS said the machine was suitable for use in residential areas and indoor spaces.



The Skyjack SJ66T

Examples of this abound, with JLG's new electric range, Genie's FE range, Haulotte's Pulseo and Manitou's electric range, previewed at last year's Bauma Munich.

So, where do the major manufacturers now stand on the topic of telescopic booms breaking the 58m barrier, and beyond? The recent response was mixed and non-committal before being answered very recently by Snorkel (see box story).

At the time of asking, Sean Larin, Genie product manager, Terex AWP, said, "There was a time when the industry thought a 100 ft [30.5m] telescopic boom was the largest a jobsite would ever need, but jobs get larger and workers continue to reach higher. Genie works hard to stay close to our customers and make sure that we're developing the next big thing, when it's needed."

HIGH AND MIGHTY

Manitou, which has been growing its self-propelled boom range, refers to the growing urban population and therefore the increased requirement for taller buildings to accommodate it. "So of course, we could imagine in the future having telescopic booms higher than 190ft (58m). The only thing that could complicate the construction of a taller machine is if it's too heavy, it will be difficult to transport."

At Haulotte, Product manager for rough-terrain equipment from 16m, Julien Micheli, agrees that, assuming these new heights are technically possible, easy transportation of the boom must be considered. "Going above 190ft may create issues. Moreover, the higher we go the stronger the competition is with truck mounted platforms. We definitely think that over 125ft to 135ft [38.1m to 31.1m] workers feel more safe and comfortable using [truck mounts] than telescopic booms."

Haulotte's latest telescopic boom was the HT28 rough terrain model, with 28m working height.

It has an outreach of 23.8m and up to 350kg load in basket, allowing users to reduce lift cycles and keep working with all tools and materials needed.

Skyjack believes in slower uptake of hybrid-based telescopic equipment, saying, "The growing demand is more focused on the articulating booms, and the job site versatility they can provide, working both indoors and outdoors. As demand for cleaner machines grows and the infrastructure to support hybrid/electric machines also grows, their likely will grow demand for the telescopic booms as well."

In terms of traditionally-powered machines, Manitou launched into the 22m market with the 220 TJ and 220 TJ+ at the end of 2017.

The company said both models have an outreach of more than 17m, with another significant feature being the 45 HP, a small engine made possible thanks to the proportional management of the motor bearings.

Manitou's experience in rough-terrain equipment has also been brought to bear on the equipment with 4WD and 4WS as standard, and 40% of gradeability. Oscillating axles are also included.

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Haulotte's latest telescopic launch, the ht28 RTJ Pro



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Too much red tape is just a 'waste' of time

CECE calls on the European Commission to reconsider its latest directive on chemical recycling

Everyone wants a greener world and can only welcome the EU's Green Deal.

Circular economy is one of the decisive solutions to handle modern societies' waste problems. Nevertheless, regulations and procedures should be implemented in a reasonable and feasible way and not as mission impossible.

The European Commission's upcoming implementation of Waste Framework Directive (WFD) for Substances of Very High Concern (SVHCs) in articles go far beyond the requirements of REACH Article 33.1. (REACH is the Registration, Evaluation, Authorisation and Restriction of Chemicals.)

CECE questions this unmanageable task for manufacturers of long-life highly complex non-road mobile machinery, which shall be liable from January 2021.

What is the problem? A new database mandated by the Waste Framework Directive is being set up by the European Chemicals Agency (ECHA) on behalf of the European Commission (EC) to oblige that 'any supplier of an article provides the information pursuant to Article 33(1) of Regulation (EC) 1907/2006 (REACH) to the European Chemicals Agency as from 5 January 2021'.

The aim of this obligation is to provide recyclers with information on the presence of SVHCs in order to have better recycled material available for a circular economy. An additional goal is to inform consumers and the wider public on the presence of those substances. Transposition into the national legislation of the EU member states must be completed by July 2020.

EXCESSIVE REGULATION

Article 33(1) of the REACH Regulation defines that any supplier of an article containing a substance meeting the criteria ... in a concentration above 0.1% weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance.

Back in September 2019, ECHA published the detailed information requirements for the Substances of Concern In articles, as such or in complex objects (Products)

database (SCIP).

The current ECHA proposal requests information which exceeds the scope of REACH Article 33.1.

This extension of the scope is not justified and has not been subject to an impact assessment, which would be standard procedure. This extension imposes obligations on article suppliers to provide information to ECHA such as article identifiers, whether a product has been produced within the EU, links to upstream suppliers, version of the Candidate List, concentration ranges and material categories.

Machinery manufacturers have been complying with REACH requirements for the last ten years, informing customers if a SVHC exceeds a concentration of 0.1% in the article. However, due to the newly created mandatory data fields, they must collect data from the full supply chain and report on millions of components. This extended procedure will cost significant amounts of time and money.

CECE, along with other industry voices, have requested ECHA and the EC limit the information

requirements on the database to only the provisions of REACH Article 33.1.

Regarding timing, the database is still in its prototype testing period and it will not be completed before October 2020. Looking at the time schedule, less than half a year is allocated to manufacturers to start using the database. This is rather hasty. However, the EC is sticking to its plans and calling on the industry to implement the database within the legal deadline.

Apart from the mandatory requirements, the construction industry raises several questions that are crucial and need to be urgently answered by ECHA.

The notification mechanisms for complex articles with multi-source suppliers are still unclear and companies will need time to adapt to them. The construction equipment manufacturers have broad model ranges that may extend to thousands of types of products, including customised ones. Excessive duplication of identical submissions should therefore be avoided for complex products. Instead, an aggregated format is favourable.

The database will inform waste treatment operators, national authorities and consumers upon request on the presence of SVHCs as defined in the REACH Regulation.

A truly critical point in this matter is confidentiality of data. The industry and its representatives are deeply concerned that ECHA has not established a sound security policy to protect sensitive business data in relation to supply chain disclosure. This point must be clarified urgently before data is finally submitted to the database.

The European construction equipment industry, which includes numerous SMEs, is committed to assisting the development of a workable database, however, CECE asks ECHA to take these concerns seriously and revise the current structure.

Riccardo Viaggi,
secretary general of CECE



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Construction and the software revolution

European contractors' association FIEC states its position on the strengthening grip technology firms have on the construction industry

For a couple of years already, FIEC has heard warnings about the ambitions of software giants, which are increasingly moving into the construction industry.

Some of our experts predict that contractors could find themselves as future subcontractors in major contracts won by construction branches of these software giants; others are just pointing to the loss of control by contractors, finding themselves locked into unfavourable software contracts.

These sometimes limit choice and force users into long-term agreements, because of the necessity to upgrade with compatible updates, only available from the existing supplier.

This scenario reflects the one many of us have experienced with our phones and other hardware, for which the operating platforms are geared towards one brand of software products, effectively tying us in to a long-term relationship with our provider, even when we would prefer to choose another.

Convenience and compatibility end up determining our choices and it can often feel like we don't have a choice at all.

DATA – THE SOURCE OF OUR INTERDEPENDENCE

Looking at the situation in the context of the construction industry, data has become the key driver of the ambitions of the software industry and the subsequent loss of choice and control on the part of the contractors. The new way of designing, building and managing the built environment, increasingly digital in nature, has led to both the generation of critical and valuable data on the one hand and the absolute need for access to it on the other.

Control of this data gives power to the provider of software services, as well as lucrative commercial opportunities.

Not least among these is the kind of contract that locks in the user to a potentially long-term – or expensive – or both – arrangement, for which there is little scope to switch provider, without major inconvenience and/or loss of access to vital data.

In theory, the data should belong to the client, namely the building owner or public body that has procured construction works. However, the untreated data per se is useless without the intervention of a supplier that knows how to gather, process, store and secure it and facilitate its use.

FIEC'S POSITION ON THE RELATIONSHIP BETWEEN TECHNOLOGY USERS AND PROVIDERS

The thorny issues related to this new reality have been tackled in FIEC's recently published position on the subject. The

paper explains the dominant position that has been achieved by a few software providers. Although these are sometimes referred to as "giants" not all of them have enjoyed such dominance until recently.

As the paper explains, BIM (Building Information Modelling) created an opportunity, which was seized by entrepreneurial software developers. Now they sometimes offer leasing arrangements, meaning that the user does not actually purchase the software.

The release of regular updates, which need to be deployed across an entire team of users involved in the relevant project, render the contractor powerless to decide the pace at which it wants to upgrade.

Apart from the expense of such arrangements, there is another problem; software developers are not usually experienced in the construction industry.

While their interest in the industry is considerable – the potential of smart buildings and infrastructure and the need for services in the use phase making a compelling business case – their lack of expertise means that the new solutions being developed might not be the right ones, meaning the problems of cost and lack of choice for the contractor are exacerbated by the potential difficulties created by the inadequacy of the product itself.

To address the challenges raised by FIEC in its position paper, the federation calls for action from the EU policy makers, including the following:

- Targeted initiatives on relevant competition matters
- An initiative on fair and site-specific contractual conditions
- Choice for users regarding where their data is stored

- The creation of a European cloud network
- The requirement for EU standards, interoperability and open access for non-EU software services
- Greater vigilance regarding infringements of the EU public procurement rules
- Specific measures aimed at protecting the data owner.

THE EU'S REACTION TO FIEC'S POSITION

At the time of writing, it is too early to report on the reaction of the policy makers to FIEC's position paper in particular. However, even before the paper was published, certain plans had been outlined by the new European Commissioner for the Internal Market, Thierry Breton, who recently spoke of an EU common data market as well as the forthcoming Digital Services Act.

The EU institutions have long been aware of the precarious weakness of the bloc – both collectively and at Member State level – compared with the dominance of other major powers.

This is not only about the speed with which these countries have cornered the market for relevant data services; it is also about the lack of investment in the EU's data infrastructure and its slow response to the potential of new technologies such as Artificial Intelligence.

For the construction industry, which is accelerating in terms of implementing digitalisation, EU policy solutions aimed at protecting users from unfavourable conditions imposed by the software giants, cannot come too soon.

Further information on this subject can be found at: <http://www.fiec.eu/en/fiec-positions/position-papers.aspx>

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Rental - one answer to the climate conundrum

While we need to build, we also need to decarbonise, recycle and reduce waste. The European Rental Association says rental offers part of the solution.

Equipment rental can help the construction sector decarbonise and meet Europe's climate goals.

In December 2019, the EU set out its plans to become the world's first climate neutral continent by 2050 in the European Green Deal. This will also serve as a new growth strategy to enable a sustainable green transition for business and industry.

Starting with the 'Climate Law', which will make net-zero carbon emissions by 2050 a legally binding target and will be directly transposed into national law in every EU Member State, the Green Deal will provide an ambitious policy framework for the next five years.

As the Intergovernmental Panel on Climate Change (IPCC) has said, the construction sector will need to decarbonise by 2050 in order to help meet these ambitious goals, and a number of policy initiatives within the Green Deal will affect the construction industry. These include a new Circular Economy Action Plan, further guidance on Green Public Procurement and a Decarbonisation Package.

In this context, the use of construction equipment is one of the areas in which the climate impact of the construction sector can be reduced.

RENTAL IS PART OF THE SOLUTION

A recent study commissioned by the European Rental Association (ERA) and produced by three independent research companies – Climate Neutral Group, CE Delft and SGS Search – shows that renting construction equipment, as a circular business model, can provide significant benefits and help reduce the carbon footprint of construction equipment.

This is primarily due to optimisation in four key areas and, depending on how equipment is used, can bring significant reductions in emissions, in the range of 30-50%.

First, with large fleets and a wide range of equipment, rental companies can provide the optimal piece of equipment for a given job.

Second, because of large and dense networks of rental depots, rental companies can minimise transport distances and, consequently, emissions by dropping off and picking up machinery, as well as optimising load factors.

Third, rented equipment has a high utilisation rate, which increases the fuel consumption efficiency per hour of use over the whole lifecycle.

Finally, rented equipment is usually well maintained,

increasing the efficiency and extending the lifetime of equipment.

CAMPAIGN

With pressure on the construction sector to decarbonise set to intensify, ERA has launched a campaign to raise awareness of the rental model and the benefits it can bring in terms of efficiency, optimisation and sustainability among policymakers and equipment stakeholders.

These benefits can help the construction industry meet the targets set out in the Paris Agreement and the EU's climate law, as well as adapt to the demands of the green transition. Circular business models that emphasise access to goods over ownership are a growing trend as businesses seek to become more sustainable and rental, as an inherently circular model, goes hand in hand with the transition to climate neutrality.

The rental industry is also well placed to further support the sustainability of construction equipment, including making responsible fuel and alternative energy choices, optimising logistics and transport and ensuring proper recycling to maximise the recovery of materials used in construction equipment.

CALCULATING CARBON

Looking to the future and the need to make more sustainable choices, ERA has started work on a 'CO2 Calculator' for general use by equipment stakeholders, based on the calculator the researchers developed for the study.

Combined with the ERA Total

Rental could play an important role in the fight against climate change

“...the use of construction equipment is one of the areas in which the climate impact of the sector can be reduced”

Cost of Ownership calculator, the 'CO2 Calculator' will enable companies to make efficient and environmentally friendly choices when using construction equipment, as well as being a useful tool for understanding and demonstrating the carbon impact of construction equipment.

THE RIGHT OBJECTIVE AT THE RIGHT TIME

Climate neutrality by 2050 is the right objective at the right time. The EU has made decarbonisation the central pillar of its strategy for the green transition and industrial growth, and all industries will be required to play their part.

The need for decarbonisation in the construction sector is clear and the rental industry stands ready to help.

The Carbon Footprint of Construction Equipment study can be downloaded here: <https://erarental.org/en/publications/sustainability/carbon-footprint-of-construction-equipment> **ce**



About ERA

The European Rental Association was created in 2006 to represent national rental associations and equipment rental companies in Europe. Today, the membership includes over 5,000 rental companies, either directly or through 15 rental associations. ERA is active through its committees in the fields of Promotion, Sustainability, Statistics, Technical and through its Future Group.

■ Extensive information on ERA's activities, reports, and publications is available on the ERA website at www.erarental.org.



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Force majeure in a time of crisis

Frédéric Gillion & Toshima Issur of Pinsent Masons discuss force majeure – a potential ally for contractors in light of the coronavirus outbreak

Coronavirus was first diagnosed in Wuhan in December 2019. Since then, more than 785,000 cases of this virus, officially known as Covid-19, were reported across the world by the end of March 2020.

As per the latest news reports, as many as 105 countries could be concerned with China, Italy, Spain and the USA among the most heavily hit countries. As new cases crop up each day, the number of infected people is expected to keep rising steadily.

OECD has warned of the dramatic consequences that this outbreak is likely to have on the global economy and regards Covid-19 as the biggest threat since the last global financial crisis. The travel, aviation and events industries have been especially impacted, but the resulting commercial disruption is unlikely to remain confined to these sectors. The construction industry has been heavily impacted and construction projects are facing delays and disruptions owing for instance to difficulties regarding the delivery of goods and materials (which are often part of a supply chain) and site closures in order to minimise risks of infection.

In such circumstances, the principle of force majeure might be relevant in assessing contractors' risks and liabilities under the contract. In this regard, there is a marked difference between civil and common law.

In contrast to civil law jurisdictions such as France,

common law jurisdictions such as England do not have a general concept of force majeure, which makes it necessary to take special care while drafting their force majeure clauses.

THE CONCEPT OF FORCE MAJEURE UNDER FRENCH LAW

On 28 February 2020, France's Minister of Economy and Finance, Bruno Lemaire, announced that coronavirus will be considered as a case of force majeure for businesses and that in case of late deliveries in the context of public procurement contracts, liquidated damages will not be levied.

In the context of private works contracts, under French law, even in the absence of a specific contractual clause, contractors may rely on Article 1218 of the French civil code which defines force majeure as an event (i) which is beyond the control of a party, (ii) which could not have been reasonably foreseen at the time of entering into the contract, (iii) whose effects cannot be avoided through adequate measures and (iv) which prevents a party from performing its obligations under the contract. The outbreak of the coronavirus would potentially qualify as force majeure under this provision.

Such qualification has for instance previously been retained by the Paris Court of Appeal with regards to the Ebola virus outbreak (Paris

Court of Appeal, 17 March 2016). However, the parties would still need to demonstrate that all the four conditions set out under Article 1218 of the French Civil code have been met. As far as the available remedies are concerned, Article 1218 distinguishes according to whether the impediment is temporary or permanent. Thus, a temporary impediment would in principle justify suspension of performance under the contract, unless the resulting delay justifies termination of the contract.

If the impediment is permanent, the termination of the contract would be justified.

THE ABSENCE OF THE LEGAL CONCEPT OF FORCE MAJEURE UNDER ENGLISH LAW

Under English law, contractual obligations are generally regarded as absolute. English law neither recognises nor defines the legal concept of force majeure. Consequently, parties to a contract are advised to include a force majeure clause under their contracts, which would define force majeure, provide for a comprehensive list of events likely to qualify as a force majeure event, the consequences attached to the occurrence of such an event and the notice requirements which parties would need to abide by as a result.

Clause 19 of the 1999 editions of the FIDIC Red, Yellow and Silver Books provides a good example of such a clause. Clause 19.1 defines force majeure as "an exceptional event or circumstance" which (i) is beyond a Party's control, (ii) such Party could not have reasonably provided against before entering into the Contract, (iii) having arisen, such Party could not reasonably have avoided or overcome, and (iv) is not

substantially attributable to the other Party.

The clause goes on to provide a non-exhaustive list of exceptional events or circumstances that might amount to force majeure under this provision, as well as to list the various relief available to the Party which is prevented from performing the contract as a result of the force majeure event.

If a force majeure event is held to be constituted on the basis of the foregoing four conditions, depending on the effect and duration of the event, the Party may be excused from performance under the contract, or be entitled to an extension of time and/or additional costs, on the condition of abiding by the stipulated notice requirements.

Clause 18 of the 2017 editions of the FIDIC Red, Yellow and Silver Books contains analogous provisions, with the notable exception that clause 18 uses the terminology "exceptional event" instead of "force majeure". However, the definition of the event and the relief available under both editions do not materially differ. Prima facie, the virus outbreaks satisfy the four conditions set out under these provisions and could therefore potentially qualify as a force majeure or exceptional event.

To be able to claim adequate relief and minimise loss in view of the coronavirus outbreak under contracts governed by English law, contractors would therefore be well-advised to scrutinise their contracts to see if they contain any force majeure clauses, and in case of the existence of such a clause, abide by any requisite notice requirements while maintaining adequate records of activities on site (including details of any disruptions owing to the coronavirus outbreak). Such records will be invaluable in backing up any subsequent claims.

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About Pinsent Masons

Pinsent Masons LLP is a construction law firm with a true infrastructure and energy sector focus. Pinsent Masons LLP is ranked No 1 for construction law by all legal directories in the UK. It is an international law firm with offices across Europe, the Gulf and Asia.

● Further information on any legal or contractual issue can be obtained from Pinsent Masons by visiting:

www.pinsentmasons.com, or calling +44 (0)20 7418 7000

Cat introduces the 395 excavator

Hydrostatic swing circuit increases production and fuel efficiency

Caterpillar introduced the Next Generation Cat 395 excavator at Conexpo in Las Vegas, promising contractors up to 10% more production, two times more structural durability, and up to 20% less maintenance costs than the machine it replaces, the 390F.

"We increased swing torque and stick force by 10%," said Brian Abbott, worldwide product manager for Caterpillar large excavators. "These increases enable contractors to use larger buckets for much greater productivity."

The 395's production comes from a dedicated hydrostatic swing circuit — a feature found only on larger Cat mining shovels like the 6015B.

"The circuit enables the excavator to regenerate swing brake energy and independently manage cylinder oil flow," said Abbott. "What that means for owners and operators is greater fuel efficiency along with smoother, more predictable

performance when multitasking with the machine."

Three modes of operation are available: Power, Smart, and ECO. Power mode is maximum power at all times; ECO mode lowers engine speed and cycle times while maintaining breakout force. Smart mode takes the guesswork out by automatically matching engine and hydraulic power to the actual digging conditions — all to reduce fuel consumption and optimise performance.

The cooling system features a new on-demand fan that's designed to operate only when required, which helps save fuel. An available auto reverse function assists with cleaning debris from the cooling cores, which enhances operating efficiency.

"The 395 has the industry's most comprehensive offering of factory-installed technology in its size class," said Abbott. "Our goal is to take an owner's operating efficiency to a much higher level."

Cat Payload helps increase loading efficiency with on-the-

The Caterpillar 395 replaces the 390F



go weighing; real-time payload estimates can be calculated without swinging to help prevent overloading and underloading trucks. The monitor's USP port lets operators download results from a single shift all the way up to 30 days of work with no need for an internet connection or VisionLink subscription.

Cat Grade with 2D gives operators visual guidance to grade via the standard touchscreen monitor so they can make more accurate cuts. The system is readily upgradable to Cat Grade with Advanced 2D or Cat Grade with 3D for enhanced accuracy. Advanced 2D includes an additional touchscreen monitor to enable in-field design.

3D adds GPS and GLONASS positioning for pinpoint accuracy. The 395's built-in communication technology makes it easier than ever to connect to 3D services like Trimble Connected Community or Virtual Reference Station.

Lift Assist is a new safety feature that helps prevent the excavator from tipping. It calculates the weight of the actual load being lifted and compares it to the excavator's rated capability. Visual and auditory alerts show and tell the operator if the excavator is within a safe working range.

Whether equipped with a bucket or hammer, standard 2D E-Fence prevents the excavator from moving outside operator-defined points. **ce**

Mecalac talks innovation

At ConExpo, Patrick Brehmer, head of design and product management for Mecalac, described a number of innovations for 2020.

He drew special attention to the MCR series excavators, which Brehmer said overcome many of the shortcomings of competitor models.

Firstly, he mentioned issues of speed with regular crawler excavators, which can travel at little more than 5kph. The new MCR compact crawler excavator has a maximum travel speed of 10kph, due, he said, to its "revolutionary design with a triangular undercarriage".

In doing so, he added that the MCR series is almost as mobile as

a wheeled excavator or backhoe loader.

He moved on to space management, explaining that the MCR's boom being at the side of the body, as opposed to the front boom that is currently standard on compact tracked excavators.

Brehmer explained that, when using the side-boomed Mecalac machine in an urban environment, the area required to work in is greatly reduced, potentially meaning the difference between closing a street and allowing it to remain open.

As well as the reduction in the boom

swing, he said, the turning radius of the excavator is as little as 50% that required by standard

compact tracked excavators.

In terms of the lifting capacity of the excavator, he said, it is able to carry up to 50% more material, due to the architecture of the boom, which gives it extra stiffness when fully utilising the loader bucket. **ce**



Mecalac's MCR series compact crawler excavator

John Deere focuses on tech

US-based OEM showcases SmartWeigh and SmartAttach systems

John Deere has shown its latest technological solutions for the construction industry at ConExpo, with the company stating that new technology is 'changing the construction industry.'

The new offerings, which include obstacle intelligence, SmartWeigh, SmartAttach and a new scraper earthmoving productivity system, will assist operators while boosting job site productivity and efficiency.

"The construction industry is rapidly changing, and technology is a driving factor in this evolution," said Kevin Very, director of technology and product marketing, John Deere Construction & Forestry. "The right technology impacts how a customer bids a job, manages their fleet, assists with operator recruitment and retention, and ultimately improves overall profitability. Technology development is changing the construction industry, and we are continuing to accelerate our technology innovation across equipment and job sites."

One of the more forward-thinking technology solutions

is the Advanced Rear Object Detection System that is part of the 944K Hybrid Wheeled Loader showcase. This is one of the Obstacle Intelligence solutions that helps to supplement the operator's situational awareness by identifying objects in close proximity to the equipment.

John Deere's SmartWeigh integrated payload weighing system is currently in development for John Deere's four-wheel-drive

loaders (744L, 824L, 844L, 944K Hybrid) in the near future.

Shared through the touchscreen in-cab monitor, the factory-installed system enables operators to accurately load material without interruption and is integrated with JDLink to track and visualise payload data in the JDLink portal and JDLink Mobile. By enabling the operator to quickly weigh and track loads, workflow is maximised and productivity is increased.

The company also offers the SmartAttach system, which it says will make installing

attachments easier in the future by automatically configuring the machine to the attachment. SmartAttach reduces setup time, decreases the likelihood of damage due to incorrect settings.

Using SmartAttach, the operator spends less time setting up equipment and can instead focus on the actual job at hand. SmartAttach is integrated with JDLink via a Bluetooth beacon, and together they record the location of attachments and populate that information in the JDLink portal and JDLink Mobile. **ce**



John Deere's SmartGrade 333GCTL compact tracked loader

Dressta launches TD-16N dozer

Dressta unveiled its new TD-16N dozer at the recent ConExpo exhibition in Las Vegas, describing its 309-degree visibility as "unrivalled".

The machine features a mid-cab design over a mid-mounted automatic, dual path hydrostatic drive train.

It comes with a standard six-way angle blade and is compatible with 2D and 3D grade control systems.

The controls have been made more accessible and intuitive, with the addition of electro-hydraulic joysticks.

The dozer has an operating weight of 19,090 kg and 127kW of power.

Dressta says the undercarriage design is unique, utilises a single-track gauge for all track shoe



widths, which allows the dozer to be reconfigured at any point in its life, from standard to LGP undercarriage, by changing the

track shoes and the blade. This feature promises to improve resale values by allowing future owners to reconfigure the

New TD-16N dozer promises 309-degree visibility

machine to match their needs.

The design team on the TD-16N was led by executive director of new technology, Edward Wagner, and executive director of industrial design, Gary Major.

Wagner said of the design brief, "We literally started with the operator, the blade and the tracks and then built everything around them without compromise."

Major said, "Every operator out there has a story about falling off the tracks... this is the first machine where you don't have to get onto the tracks." The non-slip steps at the rear of the machine make it the only dozer in its size class with this type of "no tracks" access. **ce**

JLG shows new booms and scissors

US-based manufacturer combines new technology with impressive reach

JLG used ConExpo to roll out a number of new products, including a 4,500kg capacity telehandler and all-electric scissor lift.

The JLG 1075 telehandler features a 22.8m boom that can lift up to eight stories – a full two stories more than comparable, competitive models – and offers a 18.3m reach.

“Customers wanted a telehandler that could reach higher than 6 stories and extend further into a building than existing models so they could place materials where they were needed, rather than placing them, then reloading them for movement to the work area,” said John Boehme, senior product manager, telehandlers, JLG. “Reducing this type of material

re-handling will drive significant productivity gains and, in some cases, eliminate or delay the use of cranes on a job site.”

The new 1075 telehandler comes standard with JLG’s Longitudinal Stability Indication (LSI) as well as a two-way right-side view camera for improved visibility and operator confidence during operation.

Optional technologies include SmartLoad and a remote-controlled boom, which can be used by an operator to place material at height from outside the cab

JLG has also launched its first all-electric Davinci scissor lift – the AE1932. The AE1932 is the first lift in a new category of all-electric lifts for JLG called the Davinci series. The features fully

Working at height with a JLG telehandler

optimised components that allow it to be powered with a single lithium-ion battery and no compromise to performance.

The 5.8m platform height, 81cm wide AE1932 scissor provides a class-leading platform capacity of 600lbs both indoors and outdoors, a 20% improvement from typical scissors and is compliant to A92.20 standards. The machine travels 2x faster than a standard scissor lift and charges 3.5x faster, delivering unmatched uptime and flexibility on the jobsite. Each wheel is controlled independently for reduced tire wear and limits damage to sensitive flooring.

Its single lithium-ion battery is backed by a class-leading warranty and is expected to last 120-plus months, so owners should never have to replace a battery during the machine’s lifespan. This will be the first unit in the industry to recover



energy while the platform is being lowered which contributes to a 70% decrease in power consumption with longer life on a charge than a standard scissor. Optimised components and fewer serviceable parts further reduce service requirements. **ce**

Allu brings new crusher buckets to the market

Finland-based attachments manufacturer Allu has launched a new range of crusher buckets for the demolition, recycling and mining industries.

Jeroen Hinnen, vice president of sales for Allu Group, said: “By bringing this new product line to market we will be able to provide customers with what they have been looking for.”

The Allu Crusher line comprises three models for 10 to 33 t excavators, one of which was on display at the company’s ConExpo stand in Las Vegas.

The heavy duty attachment “opens like a clam” for easy maintenance and features reversible crushing to reduce jamming and blockages and a pin adjustment that allows operators to change the size of the output material.

The company, which also produces the Transformer line of screener crushers and the Processor range of mixers said the range was designed for hard rock and troublesome demolition materials.

In addition to complementing the company’s current product offering, Hinnen said the Allu Crusher would help expand its customer base. **ce**



An Allu crusher bucket in action

Hidromek’s new H4 series excavator showcased

Construction equipment manufacturer Hidromek took its new H4 series excavator to the recent ConExpo exhibition in Las Vegas.

The Turkish company, which has more than 45,000 machines in operation in over 100 countries, displayed its HMK 230 model – one of five currently available in the H4 series.

The tracked machine, which is fitted with a 4-cylinder Isuzu engine, features right side and rear cameras, plus LED headlamps that are said to improve visibility at night.

Described as ‘stand out’ by Hidromek, the manufacturer said its H4 series was produced to be faster and more productive, with maximum safety features.

The H4 series comprises the HMK 145 LC SR, HMK 310 LC, HMK 390 LC HD and the HMK 500 LC HD models.



Hidromek’s HMK 230 excavator



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