

CONSTRUCTION europe

THE MAGAZINE FOR EUROPE'S CONSTRUCTION INDUSTRY

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February 2014
Volume 25 Number 1



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FEATURES



CONEXPO 24

Over 130,000 visitors are expected to flock to this year's ConExpo exhibition – the major event for the global construction equipment industry this year. *CE* presents a preview of some of the equipment that will be on show



SPECIALISED TRANSPORT 33

Forward planning is essential when it comes to tackling the myriad of challenges involved with the transportation of heavy components across Europe. *Helen Wright* finds out more about it



WHEELED LOADERS 41

There are certain features that almost all purchasers of construction equipment are looking for. In this issue, *Sandy Guthrie* looks at some key requirements where wheeled loaders are concerned



WASSARA JOB SITE 49

Water-powered drills from Wassara and dewatering pumps from Grindex are working together on a complex rail project in Stockholm, Sweden. *Helen Wright* reports from the site

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EVENTS DIARY

2014

Executive Hire Show
12-13 February, 2014
Coventry, UK
www.executivehireshow.com

ConExpo-Con/Agg
March 4 - 8, 2014
Las Vegas, USA
www.conexpoconagg.com

SMOPYC 2014
April 1 - 5, 2014
Zaragoza, Spain
www.smopyc.com

IAPAs – International Awards for Powered Access
April 3, 2014
Windsor, UK
www.iapa-summit.info

ESTA Awards of Excellence
April 24, 2014
Amsterdam, The Netherlands
www.khl-group.com/events/esta

Samoter 2014
May 8 - 11, 2014
Verona, Italy
www.samoter.com

APEX (Access Platform Exhibition)
June 24 - 26, 2014
Amsterdam, The Netherlands
www.apexshow.com

International Rental Exhibition (IRE)
June 24 - 26, 2014
Amsterdam, The Netherlands
www.ireshow.com

Hillhead 2014
June 24 - 26, 2014
Buxton, UK
www.hillhead.com

Europlatform
September 25, 2014
Berlin, Germany
www.europlatform.info

ICEF – International Construction Economic Forum
October 30-31, 2014
London, UK
www.icef.biz

Cement firms forced to sell assets in the UK

Competition Commission rules that companies will have to sell production to allow new producer into the market

The UK Competition Commission is to force Lafarge Tarmac and Hanson to sell some of their cement production assets to allow the entry of a new producer into the country.

Following a two-year investigation into the UK market for aggregates, cement and ready-mixed concrete, the regulator estimated that higher prices resulting from lack of competition cost customers up to £50 million (£60 million) a year.

In the cement market, it said the issue was costing customers at least £30 million (€36 million) a year, and a further £15 million (€18 million) to £20 million (€24 million) in the market for ground granulated blast furnace slag (GGBS).

The Competition Commission said it would also take action to limit the flow of pricing information shared between producers.

This would mean that publication of data on cement production would be required to be delayed by at least three months, while cement suppliers would also be prohibited from sending generic price announcement letters to their customers.

Instead, the regulator said any future price announcement letters would have to be specific and relevant to the customers receiving them.

There are currently three major cement producers – Lafarge Tarmac, Cemex and Hanson (a new entrant) – in the UK market.

Hanson is owned by HeidelbergCement, while Holcim owns Aggregate Industries.

The regulator said it would require Lafarge Tarmac to sell a cement plant and some accompanying ready-mixed concrete plants if necessary to facilitate entry of a new producer.

It said Lafarge Tarmac would be required to choose between selling either its Cauldon or its Tunstead cement plant.

The purchaser of the asset would also be able to acquire a limited number of ready-mixed concrete plants from Lafarge Tarmac if certain conditions are met.

The buyer would have to be approved by the Competition Commission and cannot be one of the UK's existing cement producers.

Additionally, the authority said it was looking to increase competition in the supply chain for GGBS by requiring Hanson to sell one of its GGBS production facilities.

Hanson is the only domestic producer of GGBS in the UK, with exclusive rights to use the output of Lafarge Tarmac, the single domestic producer of granulated blast furnace slag (GBS), which is the main raw material input into GGBS.

It said Lafarge Tarmac would also be required to enter into a long-term agreement to supply GBS to the acquirer of the Hanson GGBS production facility. This buyer would also have to be approved by the Commission, and cannot be an existing UK cement producer.

The regulator said its investigation did not identify any problems with the markets for aggregates or ready-mixed concrete.

ce

European output trend still on down slope

Compared with November 2012, construction output among all European member states (EU28) fell 1.6% in November last year, according to the latest data issued by Eurostat.

It found that in the Eurozone, output was down by 1.7% year-on-year.

The statistics follow an almost unbroken string of year-on-year decreases in construction output in Europe for each month of 2013.

The strongest year-on-year decreases for November were registered in Portugal (13%), Italy (10.8%), Bulgaria (9.1%) and the

Czech Republic (8.3%).

The highest increases were seen in Slovenia (30.7%), Hungary (18.9%) and Sweden (5.9%).

In terms of sectors, building construction output dropped 1.4% in both the Eurozone and the EU28, while civil engineering output fell 3.1% in the Eurozone and 3.2% in the EU28.

Compared with October 2013, construction output for November last year also registered declines.

In the EU28, construction output was down 1.1% month-on-month, and fell 0.6% in the Eurozone.

Between October and November last year, the

largest decreases were observed in the Czech Republic (5.6%), Romania (4.9%) and the UK (4.0%), and the highest increases in Slovenia (9.6%), Poland (3.9%) and Hungary (3.0%).

Building construction output was down 1.1% in the Eurozone and 1.4% in the EU28, while civil engineering output increased 1% in the Eurozone, but decreased 0.3% in the EU28.

ce



'Missed opportunity' over procurement

A new public procurement directive adopted in January by the European Parliament is being labelled as a missed opportunity.

Ulrich Paetzold, director general of FIEC (the European Construction Industry Federation), said, "The EU institutions did not seize the opportunity to solve one of the most severe shortcomings of the existing public procurement directives.

"I mean by that the identification and treatment of abnormally low tenders, which is a real curse in the construction sector."

The European Parliament adopted three directives of the public procurement package (classical, utilities and concessions), which means the new rules could come into force before the European elections, with a two-year transposition period.

European Commissioner Michel Barnier welcomed the vote on 15 January, saying that these directives constituted one of the 12 priorities of the Single Market Act I.

He said the new rules had three objectives – simplification, flexibility and legal certainty.

"Through this reform, public authorities can optimise their use of public procurement which, with nearly 19% of European GDP, is a key driver of our economy."

At FIEC, Paetzold said the new rules "will not change the world, apart from maybe the brand new concessions directive, which now needs to prove its worth." **ce**

Road projects in Romania and Italy for Salini Impregilo

Italy's Salini Impregilo Group has been awarded Lot 1 of the Sebes-Turda motorway in Transylvania, continuing a 20-year presence in Romania.

Also, a joint venture led by the group has been awarded the contract to build and operate a new road connection between the Italian Port of Ancona, the A14 motorway and the Adriatic State Highway 16.

The Romanian contract has been awarded by the Romanian National Company of Motorways & National Roads (CNADNR), and the project is said to be worth around €121 million.

The Sebes-Turda motorway is in the centre of Transylvania in the provinces of Alba and Cluj. It will aim to provide a fast and safe connection between the Sibiu-Arad motorway (Pan-European Corridor IV) and the Bucharest-Brasov-Bors motorway (Transylvanian motorway).

Lot 1 of the contract consists of 17km of motorway with two lanes in each direction and a hard shoulder. It includes approximately 81,000m² of bridges and viaducts, as well as three motorway intersections.

Salini Impregilo is also working on the

completion of Lot 3 of the Orastie-Sibiu motorway, and the design and construction of Lot 2 of the Lugoj-Deva motorway.

The Italian project is worth €480 million and the duration of the concession is 30 years from the completion of the works. The investment involves a greenfields concession worth approximately €2.5 billion. The new arterial road stretches for 11km, with main road networks and connecting roads.

Work is scheduled to start in 2015 and is scheduled to take five years to complete. **ce**

The Emaar Square development in Istanbul is progressing with the help of Alimak hoists, which are supporting materials and personnel lifting on site. Emaar Turkey, a division of Dubai-based Emaar Properties, is developing Emaar Square – a project set in Camlica, on the Asian side of Istanbul, which includes seven high-rise towers, a five-star hotel, residential and business units, a shopping mall, an amusement park, an ice rink, a 2,400-seat cinema complex, and a six-level underground car park. Sera Yapi Construction, one of the project's main contractors is using the hoists in conjunction with 14 tower cranes to supply all the lifting needs on the project. Emaar Square will be completed over several phases between 2015 and 2017.

BUSINESS NEWS

■ CONTRACTOR ACQUISITION

UK-headquartered contractor Amec has made an offer to acquire contractor Foster Wheeler, which also has its operational base in the UK, for £1.9 billion (€2.3 billion). The deal would see Foster Wheeler shareholders receive cash and shares worth US\$32 (€23.4) for each Foster Wheeler share they sell. If the offer is accepted, Foster Wheeler shareholders would own 23% of the combined companies. The board of Foster Wheeler is considering the offer, which is also subject to shareholder approval, and has agreed not to solicit alternative proposals until 22 February.

■ FINANCIAL TURNAROUND

UK contractor Mouchel reported revenues of £555.3 million (€660 million) and underlying operating profit of £28.1 million (€33.3 million) for the year ended September 30, 2013. It said the results exceeded its expectations, following the company's buyout by its management and lenders in August 2012. The company restructured in 2012 after reporting a €76 million loss in the 2011 financial year.

■ ASSET SALES

Cement producer Lafarge has sold its 20% minority stake in European and South American gypsum business Siniat – continuing a string of recent asset sales. The 20% share has been acquired by Etex for €145 million. "After a successful collaboration with Lafarge Gypsum spanning almost 20 years, Etex will have

full control over the Siniat gypsum business in Europe and Latin America," Etex said.

■ RAIL SALE

UK-based Contractor Balfour Beatty has sold its Scandinavian rail business to Strukton Rail for £4 million (€4.8 million). The company said the deal equated broadly to net asset value and was expected to complete in January 2014. Balfour Beatty is seeking to sell all of its mainland European rail operations – which are within its construction services business – as part of a streamlining strategy.

■ NAME CHANGE

Rolls-Royce Power Systems is to be the new name for Tognum – which produces the MTU brand of engines – in a change that will take place immediately. Since March 2013, the specialist manufacturer of large engines, propulsion systems and distributed energy systems has been a wholly-owned subsidiary of Rolls-Royce and Daimler. Both companies have a 50% shareholding in the company through a joint venture.

■ RECORD EXPECTATIONS

UK homebuilder Galliford Try is expecting a record half-year profit following a strong performance in its construction division, which it said had contributed to a lower than expected increase in net debt, at £90 million (€110 million), up from £58 million (€70 million) in 2012. In construction, Galliford Try's order book remains strong at £1.75 billion (€2.1 billion).



Hochtief reorganises further in Europe

European division is now formed of four independent business units

Hochtief has continued its European reorganisation with the announcement that Hochtief Solutions AG has now separated into four independent business units to form the basis of the company's European Division.

On 1 January this year, the building, infrastructure and engineering business segments were launched as independent companies, working alongside the existing Hochtief PPP Solutions.

Marcelino Fernández Verdes, CEO of Hochtief, said, "We want to be closer to our customers and to the market. With this new structure, we combine the advantages of a strong small-and-medium-enterprises-oriented business approach optimally with the service spectrum of an internationally experienced construction group."

Hochtief Building will focus on building construction business in Germany. The branches in the big cities will expand their market presence into the regions so that they can better meet customer needs there. Dirk Rehaag is managing director of Hochtief Building.

Hochtief Infrastructure is charged with strengthening country units in Europe and selected regions around the world, including South America and the Middle East. The new business unit will be run by managing director Willfried Rammler, and will offer a Technical Competence Centre, bringing together experts with special expertise and project teams.

Hochtief Engineering combines its abilities in planning, technical advising, design management and building information modelling (BIM), and is led by managing director, Dr Hansgeorg Balhaus.

Finance, planning, construction and operation support will be provided by Hochtief PPP Solutions, which is run by managing director Peter Coenen.

The new companies will report to the executive board of Hochtief Solutions. **ce**

The £154 million (€185.2 million) contract to transform the UK's London 2012 Olympic Stadium into a multi-use venue has gone to Balfour Beatty. Also, 300 homes at the gateway to the Queen Elizabeth Olympic Park have gone on sale. Glasshouse Gardens, is being developed by Lend Lease. The transformation work at the Olympic Stadium are for its operator E20 Stadium – a joint venture between the London Legacy Development Corporation and Newham Council. The venue will host Rugby World Cup 2015 matches, and will be the home of West Ham United Football Club from 2016. It will become the new UK national athletics stadium as well as hosting elite international athletics events and other sporting, cultural and community events. A new community athletics track will also be provided.



Hungarian rail boost

The EIB (European Investment Bank) is to lend €250 million to Hungary to finance a railway infrastructure rehabilitation and upgrade programme.

The works, to be carried out between now and 2016, will improve the safety, capacity and performance of the existing conventional railway infrastructure.

Work will be carried out on tracks, signalling, telecommunications and bridges. Stations and passenger buildings will also be modernised, including increasing accessibility for people with reduced mobility.

The aim is for Hungarian rail to become more competitive in comparison will less environmentally-friendly transport such as road. **ce**

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2014 Preview

with Sandy Guthrie, editor, and
Helen Wright, deputy editor, *Construction Europe*

FIRST FOR GLOBAL CONSTRUCTION INFORMATION



New CE video is a review/preview

Construction Europe has released a new video, available from the khl.com Videozone, reviewing the major events of 2013 and previewing what is in store for this year.

CE editor Sandy Guthrie and deputy editor Helen Wright discuss the news that made the headlines in the construction market in Europe during the last 12 months from both the contracting and manufacturing sides of the industry.

They also look at two of the largest construction projects of the year – the Crossrail project in London, UK, which is still ongoing, and preparations for the Sochi Winter Olympics in Russia, which start this month (February).

The video also runs through some of the exhibitions from 2013, including the giant industry event that was April's Bauma Munich construction equipment show in Germany.

There is also a preview of upcoming exhibitions in 2014 and offers a brief market outlook for the construction industry in Europe over the next 12 months. It looks like Europe's construction markets may have bottomed out in 2013, and a slow recovery forecast to begin in 2014, gaining further momentum in 2015 and 2016.

It said this year represented the lowest point for construction volumes, with total output across the 19 countries monitored by Euroconstruct forecast to fall 3%.

To view the video, go to the Videozone and search for 'Review'.

Alternatively, use a smart phone to scan the QR code (right) and it will lead straight to the Videozone web page.



This month's podcast for *Construction Europe* will be available online within a few days of the magazine's publication. To listen, go to: www.khl.com/audio-podcasts

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WORLD IN BRIEF

CHINA

Bai Zhongren, the president of Chinese state-owned contractor China Railway Group, has died suddenly. The company, which ranked as the third largest contractor in the world in the 2013 Global Top 200 with revenues of US\$74.6 billion (€55 million), said Bai died in an accident. However, local media reported the 53-year-old executive's fall from a building as suicide. Bai had not been implicated in any safety or corruption investigations.

INDIA

The World Bank has approved a US\$500 million (€367 million) credit for India's Rural Water Supply & Sanitation project for low-income states. The credit will fund improvements to the piped water supply and sanitation services through decentralised delivery systems in the Indian states of Assam, Bihar, Jharkhand and Uttar Pradesh. Currently, less than a third of India's rural households have access to tap water and domestic toilets. The project will be implemented over a six-year period.

BRAZIL

The Inter-American Development Bank has approved a US\$480 million (€352 million) loan to support the rehabilitation of 570km of highways in the state of São Paulo, Brazil. Improved access facilities will be built, together with the construction and paving of extra lanes and signage upgrades. The São Paulo Department of Highways will implement the programme.

US

Construction employment in the US declined by 16,000 month-on-month in December, according to figures released by the Associated General Contractors of America. The decline in employment was possibly exacerbated by cold weather, but also reflected underlying weakness in the construction sector. However, construction employment totalled 5,833,000 in December, an increase of 122,000 from a year earlier. Despite this, construction employment remains nearly 1.9 million below the sector's April 2006 peak.

INDIA

The Asian Development Bank has approved a loan of US\$176 million (€129 million) to extend the first metro line in Jaipur, India, and to support plans to build a second line in the fast-growing Indian city. Under the Jaipur Development Authority's public transport plan, the local government is constructing the 9.7km elevated metro Line 1 from Mansarovar, in the western part of the city, to Chandpole, on the western edge of the central business district.

CHILE

The Inter-American Development Bank has approved a US\$195 million (€143 million) loan to support construction of the 531MW Alto Maipo Hydroelectric Project in Chile. The funds will go to developer Alto Maipo, which is 60% owned by Chilean power company AES Gener and 40% owned by mining group Antofagasta Minerals, as part of a financing package worth over US\$1.2 billion (€880 million).

PANAMA

Canal contractors in threat to suspend

Stalemate between Canal Authority and consortium behind expansion project

The Panama Canal Authority (PCA) has proposed a US\$283 million (€208 million) funding package in an effort to end a stalemate with the Grupo Unidos por el Canal (GUC) consortium that has threatened to halt work on the Panama Canal expansion project.

The package proposes that each side contributes US\$100 million (€73.4 million), while the PCA would delay repayment of a US\$83 million (€61 million) advance.

But the funds fall far short of the US\$1.6 billion (€1.2 billion) demanded by the GUC consortium – which consists of lead contractor Sacyr, Salini Impregilo, Jan De Nul and CUSA Urban Construction – to cover cost overruns on the project.

After initially rejecting the consortium's demand and claiming it has no legal basis to halt construction, the PCA has now proposed the package that it said should be agreed "against milestones and deliverables", including a promise that the consortium must rehire the workers needed and cancel its threat to suspend the works.

The GUC has requested an advance of US\$400 million (€294 million) in funding, instead of the amount being offered. It added that it was committed to completing the work, and that the two sides had entered arbitration proceedings to resolve the issue.

But in another statement, contractor Salini Impregilo proposed two different alternatives – it called for either a US\$1 billion (€734 million) contribution from PCA for the completion of the project, or PCA funding of US\$500 million (€367 million) plus the consolidation of advances it had approved to date, pending the result of arbitration proceedings.

The PCA has accused the GUC of intentionally slowing down construction and a general failure to progress works in accordance with its contractual obligations. **ce**

PHILIPPINES

€5.9 billion for reconstruction

Reconstruction in the Philippines after Typhoon Haiyan, which hit the eastern and central islands in November, will exceed US\$8 billion (€5.9 billion), according to the Asian Development Bank (ADB).

The ADB said it was ready to provide over US\$1 billion (€734 million) in support for reconstruction. It approved a US\$500

million (€367 million) emergency loan directly after the storm, and has added an extra US\$400 million (€294 million) to this figure to support infrastructure reconstruction and climate resilience initiatives in communities.

The ADB said up to US\$150 million (€110 million) from ongoing projects could also be

reallocated to support rebuilding efforts.

The ADB said it was also establishing a field office in Tacloban to help implement projects as part of the government's reconstruction plan.

The World Bank also pledged US\$500 million (€367 million), and construction equipment manufacturers have donated machines and funds. **ce**



Elevator manufacturer Schindler has been awarded a contract to equip the 115-storey tall Ping An Finance Center tower, which is under construction in Shenzhen, in China's Guangdong province. When complete, Shenzhen's Ping An Finance Center will include office and retail space and stand 660m high, making it the tallest building in China. Commissioned by the Ping An Insurance Group, one of the largest insurance firms in China, the Ping An Finance Center will feature 33 Schindler 7000 series double-deck elevators. The installation of the office elevator section started in December 2013, with a completion date of April 2015.

GLOBAL

Emerging markets to drive aggregates

Growth in Asia, Africa and the Middle East will see the global market increase

Global demand for construction aggregates is set to reach 53.3 billion tonnes by 2017, according to research company Freedonia. Growth is expected to average 5.8% per year between 2012 and 2017, with the most robust increases coming from emerging markets in Africa, Asia and the Middle East.

The company said China would account for more than half of the new demand that will be seen over the five-year period. However, growth in India, the second largest market in Asia, will be faster, as the Chinese market matures and decelerates from the high growth levels seen in the 2000s.

These factors will contribute to annual average growth in aggregates demand of 6.2% in the region between 2012 and 2017. The volume of aggregates sold in Asia is expected to rise to 36.5 billion tonnes per year by 2017 – almost 70% of the global total.

North America will be more subdued, at an average of 4.2% between 2012 and 2017. This is expected to take demand to 3.75 billion tonnes of aggregates per year by 2017. The downturn between 2007 and 2012 means in volume terms, the market in 2017 will be about level with 2007.

Western Europe is expected to see the weakest growth between 2012 and 2017, at an annual average rate of 0.3%. The volume of aggregates sales in the region is expected to hit 3 billion tonnes by 2017, still 275 million tonnes less than in 2007.

Other regions of the world are forecast to account for some 9.95 billion tonnes of aggregates by 2017, following average annual growth of 5.7% between 2012 and 2017. **CE**

SOUTH KOREA

€924 million penalty for cartel

South Korea's Fair Trade Commission has imposed penalties totalling KRW1.32 trillion (€924 million) on 21 contractors it accuses of collusion in bidding for contracts on a metro project in the city of Incheon.

The contractors involved include Hyundai Engineering & Construction, Hyundai Development Company, POSCO E&C, GS E&C, SK E&C and Daewoo E&C.

They are accused of rigging bids for the 29.3km Incheon Subway Line 2 project, which includes 27 stations. Construction started in 2009 and is planned for completion in 2016.

The contractors are said to have acted anti-competitively by colluding to decide which would submit the most advantageous bids to construct the metro, with others submitting

low-quality designs.

According to local media, the FTC plans to refer 15 of the companies for further investigation.

The news comes after the South Korean government in October 2013 banned ten companies from public projects for up to 15 months following price fixing allegations on the Four Rivers Restoration project for South Korea's main waterways. **CE**



Michel Denis, a former CEO of European truck rental group Fraikin, will be the new president and CEO of Manitou Group. He takes over from interim president and CEO Dominique Bamas. During his career, Denis managed French company MC International which later became Johnson Controls, a specialist in industrial and commercial refrigeration. In 2003, he joined the Fraikin Group, a European leader in truck rentals, for which he was CEO until August 2013. He helped grow the group's international standing, influenced the design of industrial vehicles, and developed services and financing associated with its 60,000-strong fleet. Denis took over the position at Manitou on 13 January for a four-year term expiring at the 2017 shareholders' meeting.

WORLD IN BRIEF

AFRICA

Plans to boost the connectivity of the 9,022km Trans-Sahara Highway (TSH) linking several African countries, have been boosted following the approval of a US\$185 million (€252 million) loan for the project from the African Development Bank (AfDB). The funds will be used to support construction and asphaltting of 565km of roads linking the main axis and the Chadian branch of the TSH, including a 543m bridge on the River Niger at Farié.

INDIA

The World Bank has approved a US\$175 million (€128 million) loan to improve connectivity in the state of Gujarat. The funds will go towards the Second Gujarat State Highway Project, which aims to improve 635km of the road network passing through 16 districts within the state, particularly the underdeveloped eastern tribal region.

DRC

The African Development Bank has approved funding of US\$105 million (€77 million) to support construction of a 56km stretch of road in the Democratic Republic of Congo. The funds – in the form of two grants and a loan – will finance the Lovua to Tshikapa section of the 433km Batshamba-Tshikapa road project in the country's Bandundu and West Kasai Provinces. The project includes the construction of a new bridge over the Kasai River, which crosses Tshikapa town.

PAKISTAN

The Asian Development Bank has approved a US\$900 million (€661 million) loan for a new coal power generation unit in Pakistan. Pakistan currently has only one coal-fired power plant in operation generating 0.7% of the generation mix. The new unit will generate an additional 600MW of electricity for the national energy grid. The coal-fired generation unit will be built at an existing power plant in the town of Jamshoro in Sindh province, about 150km east of the Karachi.

NICARAGUA

Authorities in Nicaragua have delayed construction of a planned US\$40 billion (€29 billion) canal linking the Atlantic to the Pacific Ocean by a year. The Nicaraguan Canal Authority said more time was needed to carry out feasibility studies and finalise the route. The Nicaraguan Canal would be a rival to the Panama project, connecting the Caribbean with the Pacific via Lake Nicaragua or Cocibolca, Central America's largest freshwater lake. Depending on which is chosen, a route of at least 100km and up to 300km would need to be excavated for the canal.

CHINA

German foundations equipment manufacturer and contractor Bauer Maschinen has opened a new production centre in Tianjin, China. Bauer Tianjin Technologies moved into the factory in the Xi Qing district in Tianjin in October 2013. At 65,814m², the new plant offers 30,717m² of production space, and employs more than 220 staff. The plant is expected to produce up to 90 machines a year.

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Review of 2013

Last year saw remarkable growth on the world's stock markets, and many contractors' and some material producers' share prices enjoyed steep increases as well. However, equipment manufacturers had a tough time, as Chris Sleight reports

Considering that economic growth was weak last year – the International Monetary Fund (IMF) says world GDP rose 2.9% – stock markets around the world enjoyed a spectacular rally.

It was an unusual year, with rises in share prices being driven by changing investor patterns and unconventional economic policies, rather than the usual market factors that impact on corporate profitability.

Most spectacular was the Nikkei 225, which gained some 51.85% in value over the course of the year. The driving force behind this was the current policy of "Abenomics", named after Prime Minister Shinzo Abe, who has put a programme in place to try to stimulate the economy out of its two-year run of negligible growth and deflation.

Another spectacular riser was the Dow, which gained 23.11%. This was its best performance in more than a decade, eclipsing the 15% rise seen in the bounce-back year of 2009, as well as the best performance during the boom of the previous decade – 2003's near 20% increase.

It was also a year which saw the Dow set a series of record highs. The first quarter of the year saw it break the 14,000-point mark for only the second time in its

history, setting a new high. Later in the year it broke through the 15,000-point barrier and ended 2013 at unprecedented levels, over 16,000 points.

This was all the more remarkable given the domestic and global picture. In the US, the year was characterised by the political stalemate around the country's deficit and debt ceiling, which saw a partial government shut-down take place in October. This frustrating situation is not

EQUIPMENT MANUFACTURERS

Company	Currency	Price at start	Price at end	Change	Change (%)
CEE Index		256.65	250.16	-6.49	-2.53
Astec Industries	US\$	34.89	36.70	1.81	5.20
Atlas Copco (A)	SEK	182.80	174.63	-8.17	-4.47
Bell Equipment	ZAR	25.45	19.67	-5.78	-22.72
Caterpillar	US\$	94.40	88.40	-6.00	-6.35
CNH Industrial	US\$	N/A	8.87	N/A	N/A
Deere	WON	88	89	2	1.84
Doosan Infracore	€	17550.00	12300.00	-5250.00	-29.91
Haulotte Group	YEN	6	11	5	95.13
Hitachi CM	WON	1882	2180	298	15.82
Hyundai Heavy Industries	YEN	243500	245667	2167	0.89
Kobe Steel	YEN	112	177	65	57.74
Komatsu	YEN	2290	2068	-222	-9.68
Kubota	€	1028.00	1696.00	668.00	64.98
Manitou	US\$	13.25	13.87	0.62	4.68
Manitowoc	€	16.63	22.68	6.05	36.38
Metso	€	33.41	25.06	-8.35	-25.00
Palfinger	SEK	17.01	29.35	12.35	72.62
Sandvik	YEN	105	89	-16	-15.61
Tadano	US\$	749.00	1387.67	638.67	85.27
Terex	SEK	29.06	40.14	11.08	38.14
Volvo (B)	€	92.90	83.82	-9.08	-9.78

Period: Week 1 - 52, 2013

CONTRACTORS

Company	Currency	Price at start	Price at end	Change	Change (%)
CEC Index		130.69	155.94	25.25	19.32
Acciona	€	61.50	40.74	-20.76	-33.75
ACS	€	19.62	24.03	4.41	22.49
Astaldi	€	5.31	7.52	2.21	41.59
Balfour Beatty	UK£	2.81	2.83	0.03	0.96
Ballast Nedam	€	10.69	10.42	-0.27	-2.48
Bam Group	€	3.38	3.65	0.27	7.98
Bauer	€	19.90	18.51	-1.39	-7.00
Bilfinger	€	73.79	80.19	6.40	8.67
Bouygues	€	22.83	26.89	4.07	17.81
Carillion	UK£	3.19	3.21	0.02	0.71
Eiffage	€	34.87	40.92	6.05	17.35
FCC	€	9.85	16.52	6.67	67.75
Ferrovial	€	11.69	13.74	2.05	17.56
Hochtief	€	45.36	61.10	15.75	34.72
Impregilo Salini	€	3.71	4.74	1.03	27.85
Keller Group	UK£	7.05	11.55	4.50	63.78
Kier	UK£	13.18	18.09	4.91	37.29
Lemminkäinen	€	15.20	15.21	0.01	0.04
Morgan Sindall	UK£	5.22	7.60	2.38	45.55
Mota Engil	€	1.73	4.52	2.80	162.11
NCC (B)	SEK	139.40	210.50	71.10	51.00
OHL	€	23.03	28.81	5.78	25.11
Peab (B)	SEK	32.34	38.81	6.47	20.02
Sacyr Vallehermoso	€	1.74	3.38	1.64	94.52
Skanska (B)	SEK	109.80	128.03	18.23	16.61
Strabag SE	€	20.13	21.00	0.87	4.33
Taylor Wimpey	UK£	0.68	1.12	0.43	63.66
Tecnicas Reunidas	€	36.92	38.76	1.84	4.97
Trevi Group	€	4.27	6.25	1.98	46.36
Veidekke	NOK	44.30	48.77	4.47	10.08
Vinci	€	36.70	47.01	10.32	28.11
YIT	€	15.34	9.74	-5.60	-36.48

Period: Week 1 - 52, 2013

only holding back the economy through failures of policy-making, but also eroding America's credibility on the international stage.

Combined with relatively weak economic growth both at home and abroad, it is surprising that the Dow moved up at all in 2013. However, there were different factors at work.

With the price of gold falling and government bonds offering poor returns in the current era of low interest rates, investors were short on options for safe haven investments. Stock markets are a more risky class of assets, but given the alternatives, the Dow is a safe-enough bet – it comprises 30 huge US blue-chip companies – and has the advantage that there is a steady yield in the form of dividends.

In Europe, there were also good performances for the most-watched market indicators.

The UK's FTSE 100 gained 10.76% in value over the course of the year, while in France the CAC 40 was up 14.42% and the German DAX managed an impressive 23.46% rise. To a certain extent, these indices benefited from the same drivers as the Dow.

In addition, there was evidence

that the Eurozone economy is finally recovering, and some of the gains were in anticipation of improving markets and corporate profitability.

CONSTRUCTION SHARES

The construction sector enjoyed some of the buoyancy of the wider markets in 2013. The CET Index for the whole industry was up 5.71% over the course of the year. Not as impressive as the blue-chip indicators, but not a loss either.

However, this middle-of-the-road figure masked wide divergences between different sectors of the industry. On the positive side, contractors' shares performed particularly well, with the CEC Index up 19.32%.

This was the best the sector has performed since 2009, when it grew 19.81% on the rebound from the stock market collapse triggered by Lehman Bros in September 2008. However, last year's rally was still not on a par with the boom years of 2004 to 2006, when contractors' shares had a run of three years of 30%-plus growth.

Still, any improvement was good news against the backdrop of a still shrinking European construction market. The

MATERIALS PRODUCERS					
Company	Currency	Price at start	Price at end	Change	Change (%)
CEM Index		138.41	150.99	12.58	9.09
Buzzi Unicem (Ord)	€	10.66	12.97	2.31	21.70
Cemex (CPO)	MXP	13.18	15.02	1.84	13.99
Cimpor	€	3.31	2.68	-0.63	-19.13
CRH	€	15.62	18.26	2.65	16.94
Heidelberg Cement	€	47.08	55.29	8.22	17.45
Holcim	CHF	68.50	65.68	-2.82	-4.11
Italcementi	€	4.71	6.26	1.55	32.80
Kone (B)	€	58.10	32.50	N/A	11.87
Lafarge	€	48.82	52.77	3.95	8.08
Saint-Gobain	€	33.13	38.40	5.27	15.92
Schindler (BPC)	CHF	131.90	130.10	-1.80	-1.36
Schneider Electric	€	55.86	61.14	5.28	9.46
Titan Group (Common)	€	15.07	19.90	4.83	32.03
Vicat Group (Common)	€	48.62	53.38	4.77	9.81
Wienerberger	€	7.26	11.62	4.36	60.09
Wolseley	UK£	29.87	33.56	3.69	12.37

Period: Week 1 - 52, 2013 Kone 2-for-1 share split in week 50

positives last year were that the domestic market was showing signs of improvement in the second half of 2013, and that European contractors have seen some success in diversifying into other regions and businesses in the face of problems at home.

Some of the best performers last year were companies bouncing back from difficulties in 2012 and before that. For Spanish groups FCC and Sacyr, 2013 was a year when they started to put the problems of the past behind them. Both had improving financial performances – Sacyr as a result of a less debt-laden financial structure and some significant projects, including its part in the consortium rebuilding the Panama Canal.

For FCC, 2013 was a painful

year with the bankruptcy of its Austrian subsidiary Alpine. However, the company said that breaking the tie with the company it had acquired in 2007 was necessary because it had been an era when too many risks were taken in new markets, resulting in poor financial performance.

But the biggest gainer last year was Portugal's Mota-Engil, which saw its share price increase a massive 162%. The company's international expansion saw projects outside Portugal account for 70% of its revenues and 80% of its order book. With a moderate increase in revenues in the first half, but profits up more than 30% and an order book equivalent to 3½ years' work, the company looks in good shape.

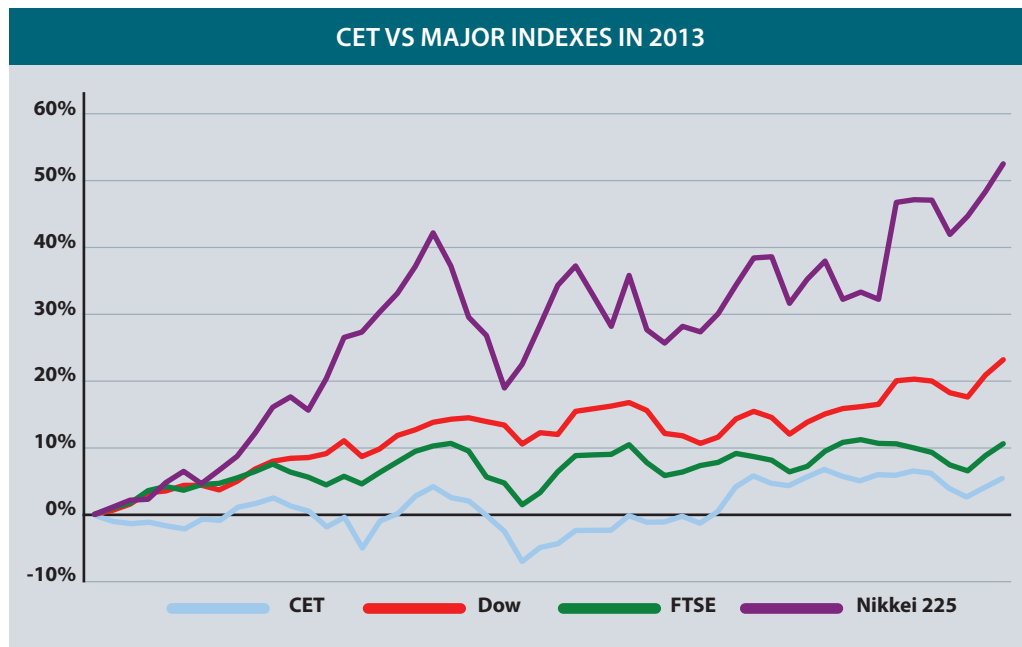
At the other end of the scale, there were significant falls in the share price of Acciona, Bauer and YIT. Finland's YIT said difficult markets – particularly domestically – had hit its profits, which in turn were reflected in the company's falling share price.

German foundations contractor and specialist equipment maker Bauer, meanwhile, said its expected net loss for 2013 was a result of a series of one-off issues linked to a project in Jordan. Subsequent reorganisation and restructuring costs are also expected to have an impact.

Acciona has seen profits fall at its energy and infrastructure division throughout 2013, which it said had largely been down to factors in its domestic Spanish market.

But on the whole it was a good

The construction sector enjoyed some of the buoyancy of the wider markets in 2013. The CET Index for the whole industry was up 5.71% over the course of the year



year for contractors' shares. All but four of the companies that make up the CEC Index saw their share prices rise in 2013, and the majority of them were double-digit increases. These included, with the exception of Acciona, all of the European construction sectors' top ten players.

MATERIALS & EQUIPMENT

Last year was also a good one for materials producers, with the CEM Index for the industry rising 9.09%.

The only companies to lose ground were Cimpor, Holcim and Schindler, and while many were around the industry average in terms of their gains, star performers included Wienerberger, Italcementi, Titan and Buzzi Unicem.

It is interesting to reflect that Greece's Titan and the Italian duo of Italcementi and Buzzi Unicem are located in two of Europe's weaker construction markets. It is true that all three face difficulties and a poor outlook in their domestic markets, but in 2013, it was improvements in businesses elsewhere in the world that drove their share price growth.

Similarly, brick manufacturer Wienerberger can thank markets such as the US, along with a restructuring programme initiated last year, for an improvement in financial results and the consequent rise in its share price.

In the equipment sector, meanwhile, it was domestic markets that helped some of Japan's largest manufacturers to big share price increases in 2013. The high-flyers included Tadano, Kubota, Kobe Steel and Hitachi, along with several niche players, such as Haulotte, Palfinger, Manitowoc and Terex, which essentially plays in several vertical markets.

However, the overall performance from the sector last year was poor, with the CEE Index losing 2.53% of its value. Despite the gains for several companies, share price falls for some of the industry's biggest players, including Caterpillar, Komatsu and Volvo, drove 2013's net loss.

One of the biggest problems for the industry last year was outside the construction sector in the mining industry, where softening commodity prices has had a huge impact on sales of mining machinery.

This was a particular problem

for Caterpillar and Komatsu – two of the leaders in the industry for very large mining machines – as well as specialists like Metso and Sandvik.

However, it was an issue for the whole industry to some extent, as even makers of relatively small earthmoving class machines sell these to smaller scale mines in various parts of the world.

Add to this fairly uninspiring equipment markets around the world, with developed regions like the US and Europe looking flat, despite a good recovery in North America in 2011 and 2012, and major emerging countries like China and India continuing to grow sluggishly in the post-crisis era.

Perhaps of most interest is China, which has seen something

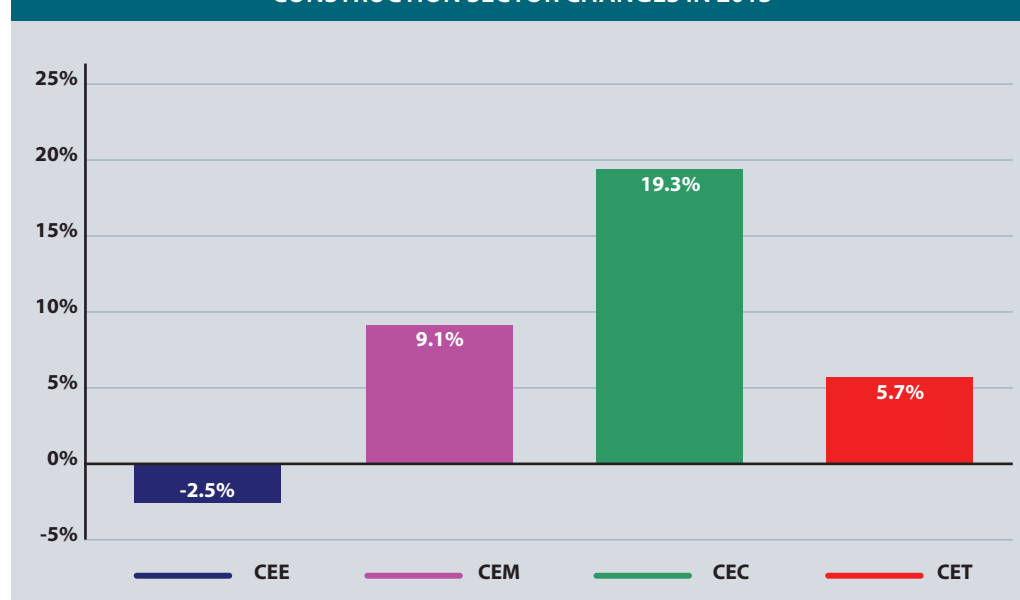
One of the biggest problems for the industry last year was outside the construction sector in the mining industry, where softening commodity prices has had a huge impact on sales of mining machinery

of a boom-and-bust cycle since the crisis. In 2009, 2010 and the early part of 2011, the government's stimulus plans saw the equipment market rise to such an extent that the number of machines sold in China was greater than those sold in the rest of the world put together.

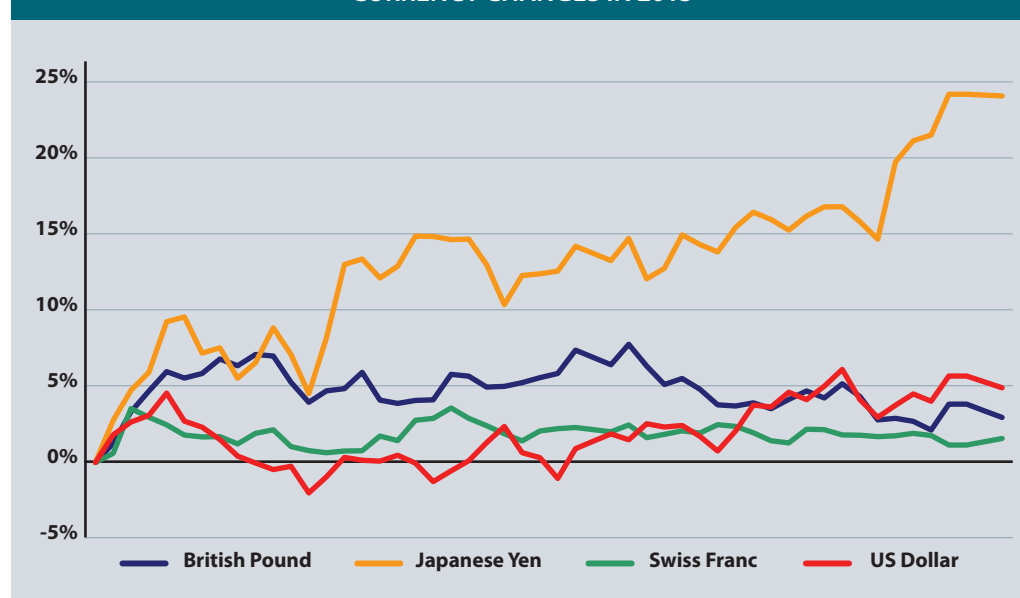
There was a sharp dip after the stimulus boom, and the market

has not really recovered since. Construction growth in China is expected to stay lower than in the last decade (although still enviably high by developed world standards), as the government tries to steer towards a more balanced economy, with less emphasis on infrastructure and exports, and more on internal consumption.

CONSTRUCTION SECTOR CHANGES IN 2013



CURRENCY CHANGES IN 2013



VALUE OF €1

RESERVE CURRENCIES

	Beginning of period	End of period	Change	Change (%)
British Pound	0.8109	0.8347	0.0238	2.93
Japanese Yen	114.91	142.37	27.45	23.89
Swiss Franc	1.2092	1.2282	0.019	1.57
US Dollar	1.3025	1.3662	0.0637	4.89

EUROPEAN CURRENCIES

	Beginning of period	End of period	Change	Change (%)
British Pound	0.8109	0.8347	0.0238	2.93
Bulgarian Leva	1.9580	1.9560	-0.0020	-0.10
Czech Koruna	25.280	27.500	2.220	8.78
Danish Krone	7.4590	7.4601	0.0011	0.01
Hungarian Forint	289.40	300.63	11.23	3.88
Norwegian Krone	7.2908	8.4421	1.1513	15.79
Polish Zloty	4.1020	4.1749	0.0728	1.78
Romanian Lei	4.4167	4.4311	0.0143	0.32
Swedish Krona	8.5143	8.9463	0.4320	5.07
Swiss Franc	1.2092	1.2282	0.0190	1.57

Period: Week 1 - 52, 2013

As such, the equipment market is likely to see relatively modest growth for the foreseeable future.

CURRENCIES

Although 2013 saw the Euro strengthen across the board, in general it was a period of relative stability in terms of exchange rates. Its gains against the US Dollar were limited to just 4.89%, while it was up 1.57% against the Swiss Franc and 2.93% against the UK Pound.

The exception as far as the major reserve currencies were concerned was in terms of the Japanese Yen, where the Euro saw a massive gain of 23.89%. This was more about the weakness of the Yen than the strength of the Euro. Although this is painted as a side-effect of Abenomics, rather

than an aim, policies such as negative interest rates and huge quantitative easing – buying assets with freshly created money (printing money) – were always going to have this type of impact.

There is no doubt a weaker Yen is a huge benefit to the export-oriented Japanese economy. It means goods sold on overseas markets are cheaper, or they have a greater profit margin, or both.

The danger is that such fast and significant depreciation could be seen as a currency war with other countries around the world effectively paying for Japan's recovery. If this is the perception, retaliatory policies such as tariffs could follow, which in the long term could hinder world trade and harm global growth.

OUTLOOK

Several questions hang over the financial world moving into 2014 – how long can the rallies of 2013 last? And when they do end, how hard will the landing be?

In the US, money will clearly come out of the safe haven of the

But the positive for this year is that the world economy is expected to see better growth than in 2013, with Europe finally emerging from recession and GDP accelerating elsewhere.

CE BAROMETER

January wobble

Sentiment in the European construction sector remained similar to December's levels in January, although there was some softening in areas that were already marginal.

The overall climate slipped a little from November's balance figure of +21.9% to +17.7. The balance figure is the percentage of positive responses, minus the number of negative ones, and the CE Climate is a broad measure of sentiment in the industry.

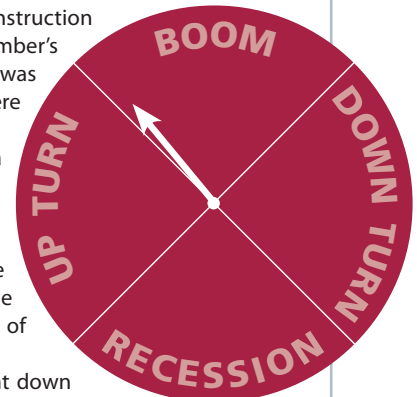
The factor that pulled sentiment down from December, was respondents views about activity levels compared to a year ago. A positive balance of only +6.1%, compared to +17.4%, said they were busier now than in January 2013.

Although still in the black, the measure of sentiment has proved to be one of the more fragile ones over 2013. January's results were the sixth in a row that were positive, but this is the lowest the figure has been since October. A positive response to this question is of course indicative of a market showing long-term growth, so any weakness here might put a question mark over whether the European construction sector is in recovery.

Sentiment about month-to-month activity moved up slightly from +1.2% in December to +3.0% for January. Although a step in the right direction, this measure of sentiment was around the +10% balance figure mark from September to October last year.

But once again, there was impressive optimism among respondents about future prospects for the industry, with a balance of +43.9% saying they expected greater activity in a year's time. This was on a par with December's figure of +45.3%.

Overall, the picture for the industry was similar in January to December, with sentiment in positive territory, but wavering downwards slightly in a few cases.



TAKE PART

The survey, which takes just a one minute to complete, is open to all construction professionals working in Europe. The CE Barometer survey is open from the 1st to the 15th of each month on our website.

■ Full information can be found at www.cebarometer.eu

Dow as the economy improves and the appetite for greater risk and reward increases among investors. In Japan, the question is

how much Abenomics can deliver without provoking retaliation, and without the country taking tougher decisions on underlying problems like its enormous public debt – at 240% of GDP, the highest for a developed country – and public sector reform.

The positive for this year is that the world economy is expected to see better growth than in 2013, with Europe finally emerging from recession and GDP accelerating elsewhere. What this means for the markets remains to be seen, as some share prices are clearly overvalued, while some – the equipment sector is an obvious example – should benefit from increased economic activity.

KEY INDEXES

Index	Beginning of period	End of period	Change	Change (%)
CEE (Equipment)	256.65	250.16	-6.49	-2.53
CEM (Materials)	138.41	150.99	12.58	9.09
CEC (Contractors)	130.69	155.94	25.25	19.32
CET (Total)	172.77	182.64	9.87	5.71
Dow	13391	16486	3095	23.11
FTSE 100	6044	6694	650	10.76
Nikkei 225	10688	16229	5541	51.85
CAC 40	3711	4246	535	14.42
DAX Xetra	7742	9559	1816	23.46

Period: Week 1 - 52, 2013

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Agreeing target costs

Target Cost Contracts were successful in the London Olympics project, and could be used elsewhere, according to Paul Prescott, senior associate at Pinsent Masons Doha, Qatar, office

With Qatar widely reported to have ambitious plans to provide world class infrastructure for the 2022 World Cup and the Qatar National Vision 2030 – which could prove an attraction for European contractors – it is interesting to consider whether lessons can be learned from the use of Target Cost Contracts on the London 2012 Olympics.

London's Olympic Delivery Authority used Target Cost Contracts successfully to deliver the big build assets on time.

Under a Target Cost Contract, a contractor is paid his actual costs to provide the works, and these actual costs are measured against the expected cost for providing the works set out in the contract.

The Target Cost is agreed between the parties at the outset of the project.

The contractor's actual costs typically include costs for staff and labour resources, for plant, materials, equipment, preliminaries and other pre-defined costs – utility, licence, registration and permits, and import costs, to name but a few.

The Target Cost Contract will also include a fee to cover the contractor's profit. This may be variable depending on the value of the actual costs incurred by the contractor, or be fixed to the duration of the programme or a set of work activities.

In some situations, the contractor will not be able to

recover certain costs as they will be treated as a disallowed cost. An example of this is where the contractor has incurred costs as a result of its own breaches of contract or to remedy its own breaches of contract.

PAIN/GAIN SHARE

A Target Cost Contract will typically include a pain/gain share mechanism to share any savings or any cost overruns on a project. The pain/gain share mechanism should cover the position where the actual costs of providing the works come under the Target Cost, and where the actual costs exceed the Target Cost and there are substantial cost overruns.

If the actual costs are less than the Target Cost, then any saving will be typically split between the parties in accordance with the gain share mechanism in the Target Cost Contract. If the actual costs exceed the Target Cost, then the cost overrun will also be split between the parties in accordance with the pre-determined percentages or amounts in the contract.

There is usually a pinch point where the employer wishes to limit its total exposure for substantial cost overruns of a project. These are typically known as Guaranteed Maximum Price contracts, and in this case the contractor carries the risk of the outturn costs greatly exceeding the Target Cost.

The London 2012 Olympic Games is testament to how Target Cost Contracts can deliver sports stadia and other major infrastructure successfully within budget and on time. The 80,000-seater Olympic Stadium, Aquatic Centre, Velodrome, and the International Broadcasting Centre & Media Press Centre were all let using a Target Cost Contracts in the form of the New Engineering Contract (NEC) Engineering & Construction Contract.

There has been much speculation on whether Target Cost Contracts will gain popularity in Qatar as they have in other parts of the world.

The standard form Target Cost Contracts are published by JCT, ICE, ICC, IChemE and NEC. Unfortunately, FIDIC does not publish a standard form of Target Cost Contract.

FIDIC FAVOURED

FIDIC is the form of contract predominately used and favoured in Qatar, and throughout the Middle East. This may explain why Target Cost Contracts have not taken off in the Middle East.

If a target cost financial

arrangement was to be adopted using a standard FIDIC form of contract, then for it to operate as a Target Cost Contract, bespoke amendments would need to be made.

Target Cost Contracts can be used very successfully but it is important to be aware of the difficulties or problems that may arise if it is unclear on the costs the contractor can recover, or it fails to state which party is responsible for significant cost overruns.

In the case AMEC Group Limited v Secretary of State for Defence [2013], the arbitral tribunal, and later the court on appeal, had to consider which party was responsible for the costs once they exceeded the Maximum Price Target Cost plus a cap.

In this case, it was decided that the employer was responsible for making further payments to the contractor once the costs exceeded the Maximum Price Target Cost plus the cap. The costs the contractor could recover had to be reasonably and properly incurred.

If anything, this case highlights that a Target Cost Contract should be absolutely clear on what costs an employer is responsible for paying to avoid any nasty surprises. The NEC approach which has a schedule of cost components identifying which cost components are recoverable as part of the contractor's actual costs would seem to be a sensible approach to help avoid disputes of this type.

There are obvious benefits in using Target Cost Contracts as they share the cost risk on complex infrastructure projects between the employer and the contractor.

If the contract is clear in terms of the costs which are recoverable and the Target Cost is realistically set, Target Cost Contracts could be successfully used in Qatar for the major infrastructure programmes ahead of 2022 and 2030.

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There are obvious benefits in using Target Cost Contracts as they share the cost risk on complex infrastructure projects between employer and contractor

The new SB 702 - unusually compact and easy to handle



The SB 702 is a hydraulic breaker with an unequalled SolidBody design and performance in the 700 kg range. Low cost of ownership is supported by low fuel consumption, an effective energy recovery system and very easy maintenance. Its high performance makes light work of a wide range of gardening, landscaping, construction and demolition jobs.

Sustainable Productivity



Improved framework

A centralised budget for certain sectors of EU funding will help over the next few years, says FIEC

The creation of a centralised budget dedicated to the development of transport, energy and telecommunication infrastructure is one of the great innovations of the EU Multiannual Financial Framework (MFF) for the programming period 2014 to 2020.

This infrastructure fund – the Connecting Europe Facility (CEF), for which FIEC has long been calling in order to obtain greater efficiency – will contribute to funding infrastructure projects of European interest.

The CEF budget will be given about €30 billion and the lion's share will go to transport infrastructure – €23.1 billion (€13.1 billion plus €10 billion ring-fenced from the Cohesion fund specifically for “Cohesion countries”, that is the Eastern European and Baltic countries).

This is not much considering the needs and the initial Commission proposal, which has been cut by €20 billion, but it is fortunately still a sizeable amount compared to the €8 billion of the current programming period.

Energy infrastructure will be allocated €5.1 billion and telecommunication infrastructure will receive €1 billion alone.

For transport infrastructure in particular, in parallel to the regulation on the Connecting Europe Facility, the European Parliament adopted on 19 November, 2013, the Trans-European Transport Network

(TEN-T) Guidelines, which provide the frame for identifying and selecting those projects which will be co-financed by the EU, according to a common methodology.

In these guidelines, the Commission's proposal to organise the network in two layers has been accepted – the Core Network, to be realised by the Member States by 2030 and on which will be concentrated the vast majority of the available EU funds; and the Comprehensive Network, which will remain in the remit of the Member States, who are encouraged to complete it by 2050.

The aim of the Core Network is to link the major social and economic centres within the EU, as well as gateways to third countries – ports, airports and land connections.

The final goal is to support the competitiveness of the Single Market.

Priority will be given to cross-border sections, bottlenecks and horizontal IT systems – such as SESAR (the technological dimension of the Single European Sky Air Traffic Management System), or ERTMS (the European Rail Traffic Management System).

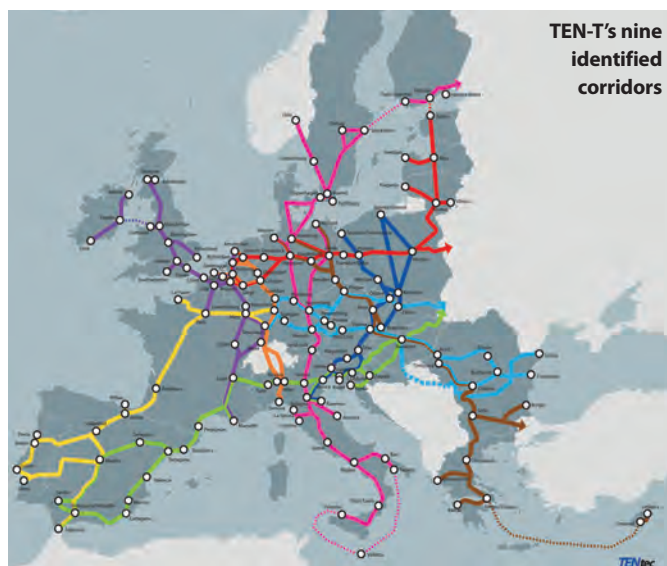
Looking at the projects that will benefit from this, basically, most of the CEF budget dedicated to transport infrastructure (80 to 85%) will be used to co-finance a series of pre-identified projects listed in an annex to the CEF regulation.

NINE CORRIDORS

These projects are part of nine identified corridors. Each of them includes three different modes of transport, the involvement of three different Member States and two cross-border sections.

These corridors are the skeleton of the core network. A co-ordinator will be in charge of each corridor in order to boost progress.

Clearly, these nine corridors



have been inspired by the existing Rail Freight Corridors – more details can be found at bit.ly/LFHdaG – and built on the basis of the 30 Priority Projects – details at bit.ly/LFHfzo – which have concentrated all the EU's attention so far, but with a stronger willingness to build a real network, rather than individual projects with little coherency.

INTELLIGENT SYSTEMS

Other projects include several horizontal priorities – for example, ITS (intelligent transportation systems), as well as some other important cross-border and bottleneck sections, both in the Core network and in the Comprehensive network.

Co-financing rates for TEN-T projects on the Core network will be up to 50% for studies and up to 20% for works – for example, exploratory works for a major tunnel. There are some opportunities to increase co-financing for cross-border projects for rail and inland waterway connections of up to 40%. Also, for some ITS projects, like ERTMS, higher co-financing of up to 50% can be made available to support Member States making the transition.

The remaining 15 to 20% of the budget will be used to co-finance other projects of the Core and Comprehensive networks, as well as several innovative financial instruments.

These financial tools are made

to play a leverage role when public and/or private money is not sufficient and while the EU cannot co-finance any single project. They are given a budget line of about €2 billion.

Indeed, the European Commission expects that the proposed financial tools – equity instruments (the Marguerite Fund, for example) or debt instruments (like LGTT, RSFF and Project Bonds) – will attract new sources of funding for infrastructure.

All projects, all modes of transport, as well as the horizontal priorities like SESAR and ERTMS will be eligible for the proposed financial instruments. According to the European Commission's estimates, €1 invested in these could generate an additional €5 to €15 on the market.

For this reason, although the uptake of some of these instruments is lagging behind somewhat, it is now urgent to make the best of them via the European Investment Bank (EIB), which will keep its implementing role in this field.

The EIB has, however, warned about what is currently a poor pipeline of projects and their lack of maturity. This is exactly what has an impact on the uptake of the financial instruments.

The first call for tenders should be by the summer of 2014 at the latest, for projects to start as soon as possible. That is why specific attention will be given to the maturity of the projects. **ce**





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Goal is to implement industry manifesto

As a new president takes the reins at the Committee for European Construction Equipment, CECE looks ahead at what 2014 will offer

Eric Lepine took over as the new president of CECE on January 1, 2014, following Johann Sailer, the chair of the association for the last two years.

Lepine, general manager of Caterpillar France in Grenoble, took over the presidency at an official handover in Paris in December, at the last CECE-Steering Group meeting of the year.

Lepine's deputy chairmen for the next two years are Christian Stryffeler, executive vice president for the machine segment of Ammann, and Giampiero Biglia, business director at CNH Industrial.

All three are spokesmen for 1,200, mainly medium-sized European construction equipment manufacturers from 14 countries.

During 26 years in the industry, Lepine has held various positions at Caterpillar in different countries such as Belgium, Hungary, Poland, Russia, the US and the UK.

MANIFESTO

Lepine's main goal for his presidency will be to ensure the implementation of the 10 points listed in the CECE-CEMA Industry Manifesto, which was presented during the 2013 CECE summit in Brussels to the members of the European Parliament and the European Commission.

Lepine believes that CECE should focus on three main priorities during his presidency – achieving a harmonisation of road safety requirements for non-road mobile machinery within Europe; ensuring that industry's needs are duly taken into account within the current revision of the exhaust emission legislation; and that the association should work for the final approval of the market surveillance legislation review, currently stuck at the European Council level.

According to CECE, a framework for effective, uniform and co-ordinated market surveillance of all products placed on the Internal Market is essential in order to guarantee fair competition in the European Single Market.

Lepine said that he would continue and step up dialogue with decision makers in Brussels at all levels.

"We will keep on promoting the

idea of fair competition and free trade for all market players in Europe. What we have to avoid is non-needed complexity in laws and regulations," he said.

CECE has made it clear more than once that EU legislation should play a positive role in driving industry in the right direction, in order to ensure sustainable development for society.

Besides legislation, it is customer demand that drives innovation and the development of equipment towards specific goals, as companies have to respond to their customers' needs. For instance, the demand for fuel-efficient equipment has led to many innovations to reduce CO2 throughout industry, though the rate of introduction of such innovations can be hampered by other legislation.

It is important to note that market-driven approaches to policy areas such as CO2 reduction need to be considered as alternatives to legislation.

One of the first tasks pushed by CECE and its partner associations CEMA (agricultural machinery) and FEM (materials handling) this year was to develop a joint machine industry proposal for the revision of transitional provisions of Directive 97/68/EC on exhaust emissions of engines (Stage V) installed on non-road mobile machinery (NRMM). The proposal was submitted to the European Commission as input to the ongoing revision of the Directive for future stages.

In this, the machine manufacturers stressed the necessity of maintaining sufficient transitional provisions, but also acknowledged the desire of the European Commission to reform the flexibility scheme and to increase transparency.

The proposal is based on the proposal made by a Swedish government representative

during the public consultation in the first half of 2013. It foresees the deletion of the end-of-series provision, and the combination of sell-off and flexibility into a single revised flexibility scheme.

The new scheme would possibly apply to all power ranges, including those now included in the scope of the revised legal text. The quantity of machines with prior-stage engines entering the market would be limited by including the machine into the revised flexibility scheme, based upon dates of engine and machine manufacture.

The proposal foresees setting an end date of five years for placing on the market both flexibility engines and flexibility machines. The CECE/CEMA/FEM proposal would prevent abnormal inventory of engines. It would apply the same rule to EU and non-EU engine and machine manufacturers, and enables effective market surveillance.

ELECTIONS

The political year in Brussels will be heavily affected by the elections to the European Parliament. They will be held in all member states of the European Union between 22 and 25 May.

A kind of paralysis of political activities and decision-making processes is more than probable. CECE's events calendar for 2014 includes various trade shows, starting off in March with Conexpo in Las Vegas, followed by Smopyc in Zaragoza, Spain, in April, and Samoter in Verona, Italy, in May, as well as CTT in Moscow, Russia, in June. The trade show year will close with Bauma China in November.

The CECE Congress, held every two years and which serves as one of the major platforms for the construction equipment industry in Europe, will be held in Antwerp, Belgium, from October 15 to 17, 2014.

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Unacea

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www.vdma.org/construction

The Las Vegas showcase

Over 130,000 visitors are expected to flock to this year's ConExpo exhibition – the major event for the global construction equipment industry this year



Manufacturers are preparing to unveil their latest technology at the 2014 edition of the three-yearly ConExpo exhibition in Las Vegas, US, and there are more than 2,400 exhibitors registered.

Over 130,000 visitors are expected to

descend on the Las Vegas Convention Center for the show, which takes place from 4 to 8 March. The exhibition takes up a total 213,680m² of indoor and outdoor space – this includes a new Platinum Lot, located directly across from South Hall and adding 35,953m² for exhibitors to showcase equipment for aggregate processing, asphalt paving, drilling, and much more.

The biggest event for the global construction equipment industry this year, ConExpo will see the launch of a wide range of new machines. While many manufacturers like to keep details of introductions secret until they can be unveiled during the event, information about some of what visitors can expect to see has already been released.

A major theme of the 2014 show looks likely to be Tier 4 Final launches – manufacturers introducing construction equipment fitted with new engines that comply with the strict diesel exhaust emissions laws that came into force at the start of the year.

The US Tier 4 Final and the broadly equivalent European Stage IV and Japanese Tier 4B legislation will see another reduction in nitrous oxide (NO_x) on top of the cut in particulate matter (PM) which was achieved under the current legislation. The 2014 laws will see PM and NO_x emissions reduced to

similar levels to the ambient atmosphere, so essentially there will be zero pollution.

For the EU and US, engines rated between 130kW and 560kW will be affected in 2014, and the 75W and 130kW power band will have to comply from 2015. Japan's Tier 4B starts to take effect in 2015.

Engine manufacturer **Cummins** plans to showcase its new, Tier 4 Final-compliant, 63 to 98kW QSF3.8 engine and the larger, 250 to 382kW QSG12 models, as well as its aftertreatment technology that helps the engines comply with the stringent emissions limits. Cummins said it would also showcase some of the first Tier 4 Final ready power packs in the industry, together with a power rental trailer.

And new machines boasting the latest engines will be a major theme on the **Caterpillar** stand. Tier 4 Final-compliant



Liugong said it would present a new Tier 4 Final-compliant skid steer loader in the form of the 375B



Cummins will showcase its new Tier 4 Final-compliant 250 to 382kW QSG12 engine

About ConExpo

WHEN:

Tuesday March 4 to Saturday March 8, 2014

OPENING TIMES:

Tuesday to Friday, 9.00am to 5.00pm
Saturday March 8, 9.00am to 3.00pm

WHERE:

Las Vegas Convention Center, Las Vegas, US.

FURTHER INFORMATION:

Show website:

www.ConExpoconagg.com

Las Vegas information:

www.IVCVA.com

Organiser, Association of Equipment Manufacturers:
www.aem.org

CONSTRUCTION
europa
Silver Lot 1-2
Stand Number 3498





Over 130,000 visitors are expected to descend on the Las Vegas Convention Center for the show, which takes place from 4 to 8 March



Tier 4 Final-compliant equipment on show on Caterpillar's stand will include the new 966M wheeled loader

equipment on show will include the manufacturer's new 966M, 966M XE, 972M and 972M XE wheeled loaders, which have bucket capacities ranging from 2.48m³ to 9.94m³, as well as the 980M and 982M wheeled loaders, which can carry buckets with capacities of between 4.2m³ and 14m³.

Caterpillar's new C-Series articulated dump trucks – the 23.6 tonne capacity 725C, 28 tonne capacity 730C, and its ejector body counterpart, the 730C EJ – will also be on show. All the models are available with either US Tier 2/EU Stage II equivalent, Tier 3/Stage IIIA equivalent, or Tier 4-Final/Stage IV-compliant engines to meet a range of emissions standards.

The same engine options are available for the company's new rigid haulers that will also be introduced at the show, in the form of the 36.3 tonne payload 770G and 47.1

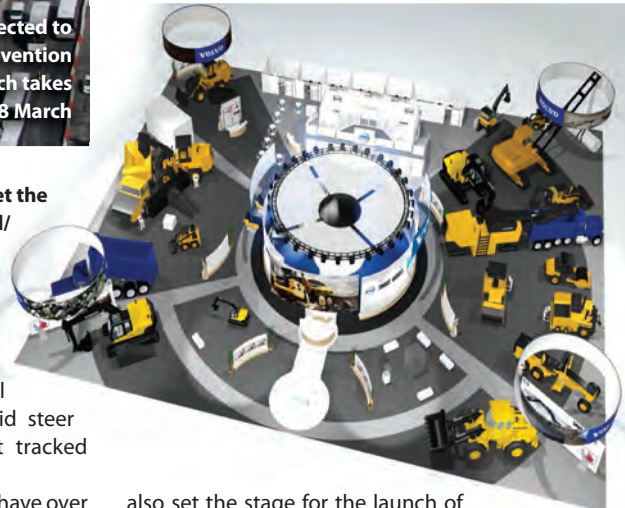
Volvo said ConExpo 2014 would set the stage for the launch of its Tier 4 Final/ Stage IV engine technology as well as its "most innovative range of machines and services to date"

tonne payload 772G. Other new equipment on Caterpillar's stand will also include four new D Series skid steer loaders, a new range of compact tracked loaders and multi-terrain loaders.

Meanwhile, **Liebherr** said it would have over 20 machines from its earthmoving, material handling and construction equipment product ranges on display – including its latest Tier 4 Final engine, which uses selective catalytic reduction to comply with this year's laws.

Construction equipment being showcased will include its 50 tonne class R956 excavator, 25 tonne class PR 736 dozer, LH 40 M and LH 60 C material handlers, LB 44-510 rotary drilling rig and THS 110 D-K crawler concrete pump. In addition, Liebherr will have a range of cranes on display, including its LTM 1300-6.2 all-terrain crane, which showcases its single-engine drive concept.

Volvo CE also said ConExpo 2014 would



also set the stage for the launch of its Tier 4 Final/Stage IV engine technology as well as its "most innovative range of machines and services to date". It was staying tight-lipped on the exact details, but said new equipment on show would include a new generation of E-Series excavators, G-Series articulated haulers and H-Series wheeled loaders – all Tier 4 Final compliant.

In addition, Volvo CE plans to exhibit its latest ranges of backhoe loaders, motor graders and skid- and tracked-steer loaders in what it said constituted a complete renewal of the company's core product offering.

Liugong said it would present a new Tier 4 Final-compliant skid steer loader in the form of the 375B. This 865kg machine can lift to a



Kobelco plans to launch its SK55SRX mini excavator – a 5 tonne class machine – at the show



Liebherr said it would have over 20 machines from its earthmoving, material handling and construction equipment product ranges on display

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dump clearance height of 2.2m and boasts a 0.45m³ capacity bucket as standard.

Furthermore, the manufacturer will have its 842III and 888III wheeled loaders and 922D and 950E excavators on show, together with its 612H roller, two 2025H (LPG) forklifts and two dozers from its Dressta brand.

Kobelco also plans new launches at ConExpo, including its SK55SRX mini excavator – a 5 tonne class machine boasting a 27.5kW engine that meets Tier 4 Final requirements. Product information on the manufacturer's full line of excavators in the 1.3 to 82 tonne weight classes will also be available.

JCB will be at the show as well, and said it would launch a new, Tier 4-compliant rough terrain fork lift range.

Fitted with the manufacturer's new, 55kW Exomax diesel engine, the 926, 930, 940 and 950 fork lift models are said to boast improved fuel consumption and lifting capacities of between 2.6 tonnes and 4.5 tonnes, with maximum lift heights of between 3.6m and 6.7m.

And **Case Construction Equipment** has also released details of a new range of crawler

Case Construction Equipment plans to introduce a new range of crawler dozers



Bobcat plans to launch its first Tier 4 Final-compliant compact loaders – the new 500 series.

dozers it plans to launch at the show – the six-model M Series. The manufacturer added that other major new product introductions were planned for its heavy equipment line, including updates to excavators, wheeled loaders and compactors.

As far as the new dozers go – the 22 tonne class 2050M, 18 tonne class 1650M, 15 tonne class 1150M, 10 tonne class 850M and 9 tonne class 750M – Case said the range boasted fuel savings of up to 14%.

Wacker Neuson said it also planned to introduce a variety of new products at the show, including a new range of skid steer and compact tracked loaders. It said four new models would be available through its US and Canadian distributor network starting in mid-2014 – two wheeled skid steer models, the SW 24 and SW 28, and two compact track loaders, the ST 35 and ST 45.

Like others, the manufacturer said it would reveal more details of these new launches at the show.

In addition to the new compact loaders and skid steers, Wacker Neuson also plans to introduce a new mini excavator in the form of the 1 tonne class 803. It said this machine could fit through standard interior doors and was available with a dual power option – it can be changed from diesel to electric power for use indoors.

Other new machines on show from the company will include an ET 20 compact tracked excavator, examples from its latest generation of vibratory rammers and new compaction control technology known as Compatec for its DPU 6555Hec reversible plate, among others.

Doosan and its sister company **Bobcat** will also be present at the event, and Tier 4 Final launches will be a major theme of new launches for these manufacturers as well. Doosan said it would reveal its new Tier 4 Final-compliant



New equipment on show from Haulotte will include its HT67 RTJ (HT23 RTJ) telescopic boom, which features a platform working height of 20.5m



JCB will launch a new, Tier 4-compliant rough terrain fork lift range



Wacker Neuson said it also planned to introduce a variety of new products at the show

machines on the first day of the show, but said its stand would also feature a number of recently launched interim Tier 4/Stage IIIB compliant excavators and wheeled loaders, including the new DX140LCR-3 crawler excavator, the DX190W-3 wheeled excavator and the DL200-3 wheeled loader.

For its part, Bobcat plans to launch its first Tier 4 Final-compliant compact loaders – the new 500 series. The S510 and S550 skid-steer loaders have a radius lift path, while the new S530, S570 and S590 skid-steer and T590 compact tracked loader models feature a vertical lift path.

All the new machines feature a protection system that monitors, manages and shuts down the engine if needed. This technology monitors engine coolant and oil temperatures and will manage engine systems to reduce the potential of these fluids reaching a point where the machine has to be shut down. This is said to minimise potential damage to the engine, stop unnecessary engine wear and keep operators working.

Meanwhile, new equipment on show from **Haulotte** will include its HT67 RTJ (HT23 RTJ) telescopic boom, which features a platform working height of 20.5m, together with its HA130 JRT (HA41 PX-NT) articulating big boom, offering maximum outreach of 19.8m, and HA51 JRT (HA41 PX-NT) articulating boom, offering 360° continuous rotation and zero tailswing.

A range of other access equipment will also be showcased by the company including diesel and electric scissor lifts, electric vertical

Ammann will have a range of compaction machines and asphalt pavers on its stand, powered by the latest fuel efficient Tier 4 engines



GOMACO will introduce a new slipform paver in the shape of the Commander III

masts, self-propelled booms and trailer-mounted boom lifts.

Plenty of new launches are also planned for the roadbuilding sector. **Guntert & Zimmerman**, for instance, will showcase its updated TC1500 texture cure machine, together with its S600 multi-purpose concrete slipform paver and TeleEnd telescopic end section.

The manufacturer will also be demonstrating its EGON IntelliMatics system – remote monitoring technology that keeps an eye on engine functions to catch small issues before they become major problems. It said this technology had now been expanded to all aspects of machine operation, including hydraulic and electrical functions.

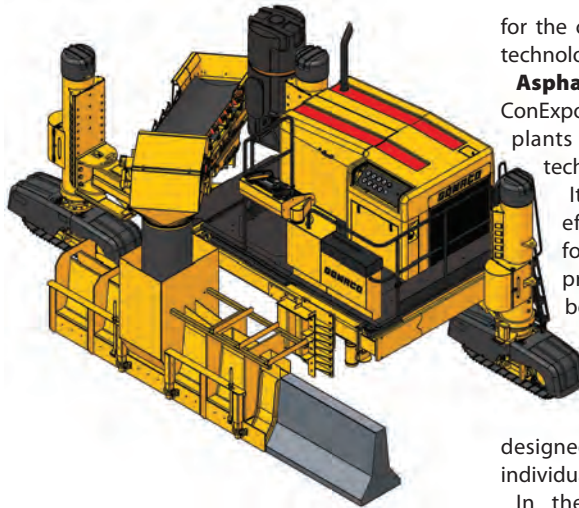
Ammann will also be displaying its newest compaction and paving equipment focused on the North American and Latin American markets, including its asphalt mixing technology. Two new trailer-mounted plant ranges will be on show – the EasyBatch 140 for batch asphalt production and the Prime 140 for continuous production.

In addition, Ammann will have compaction machines and asphalt pavers on its stand, powered by Tier 4 engines. Beside the range of heavy ride-on compaction, a compact finisher and the recently launched ARX line of light tandem rollers will also be presented

Powerscreen plans to launch three new machines at the exhibition, including its Warrior 2100 screen



Guntert & Zimmerman (G&Z) will showcase a range of new roadbuilding technology, including its S600 multi-purpose concrete slipform paver



on Ammann's booth, together with new compaction measuring technology in the form of the Ammann Compaction Expert.

GOMACO, meanwhile, will introduce a new slipform paver in the shape of the Commander III – a three-track machine that will be available to contractors this autumn. The Tier 4-compliant slipformer features the manufacturer's G+ control system and a new operator's platform with a pivoting control console.

The Commander III will also be available with an optional on-board camera as a new safety device to survey designated areas of the slipforming process. The company said the camera could be positioned anywhere around the paver and feeds live to the G+ display on the console.

In addition, the manufacturer will have a PS-2600 placer/spreader on show, together with a four-track GHP-2800 slipform paver, a C-450 bridge deck finisher and a new T/C-5600 texture/cure machine. The newest updates

for the company's GSI smoothness indicator technology will also be displayed.

Asphalt Drum Mixers (ADM) will use ConExpo to introduce its EX Series asphalt plants with single-drum counterflow technology.

It said these plants offered high efficiency and a compact design for contractors with low to medium production needs – they produce between 91 to 386 tonnes per hour.

In addition to the EX Series, ADM also offers its MileMaker, RoadBuilder and SPL Series. It said each of its plants could be custom designed to meet the requirements of individual sites.

In the crushing and screening sector, Powerscreen plans to launch three new machines at the exhibition – the Premiertrak 300 jaw crusher, Trakpactor 320SR impact crusher and Warrior 2100 screen.

Damian Power, **Powerscreen Global** product line director, said, "ConExpo is the perfect time to launch these exciting new Powerscreen machines to the global market. We look forward to meeting with customers and discussing the features and benefits of our extensive product portfolio."

Metso said the highlight of its booth would be a new two-in-one mobile Lokotrack model, designed to work together with its Lokotrack LT106 mobile jaw plant, which will also be on show. It said more details of the new model would be revealed during the exhibition.

Other technology on display will include Metso's HP3, part of its new generation of high-performance cone crushers, as well as its Lokotrack ST2.8 mobile screen.

Terex Finlay will also introduce two new machines for the crushing and screening



Asphalt Drum Mixers will use ConExpo to introduce its EX Series asphalt plants with single-drum counterflow technology

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Metso will showcase its Lokotrack ST2.8 mobile screen as well as a range of other products and a brand new launch that will be revealed during the exhibition

sector – the J-1170 primary mobile jaw crusher and the 684 tracked mobile inclined screen.

The J-1170 is a high built around Terex's 1,100mm by 700mm jaw crusher and is targeted at recycling, aggregate production and mining applications. The 684 screen is built for working in quarrying, mining, construction and demolition debris, topsoil, recycling, sand, gravel, coal and aggregate applications and features three 4.3m by 1.7m screening decks.

And Major Wire will be showcasing its Flex-Mat 3 – high-performance screen media that it claims is significantly increasing production in a wide range of screening operations.

Flex-Mat 3 is available in both tensioned and



RDS and Loup Electronics plan to launch their next generation onboard weighing device – the Loadex 100



Sandvik will showcase its CH550 stationary crusher

modular panels so woven wire, polyurethane and rubber users can benefit from its non-blinding and pegging capabilities, while also increasing in-spec production, according to the company.

Sandvik will also showcase new crushing and screening equipment, including its CH550 stationary crusher and its Q1451 mobile crusher and screener. It will also have other products on display, including its new 777 breaker, new RH series hammers and new DC125R drill rig.

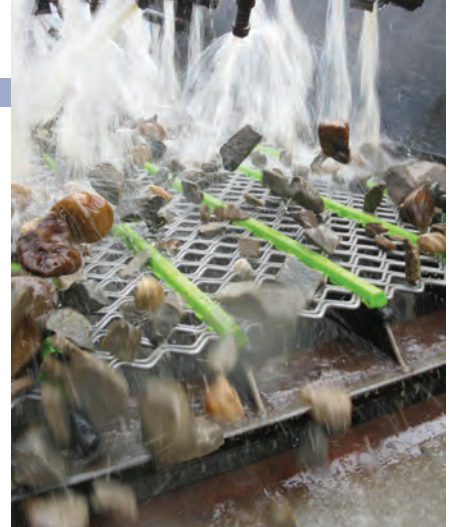
Further drilling launches are also expected



RTG Rammtechnik will have its telescopic leader rig, the RG 19, on display



Terex Finlay will also introduce two new machines – the J-1170 primary mobile jaw crusher and the 684 tracked mobile inclined screen



Major Wire will be showcasing its Flex-Mat 3 – high-performance screen media that it claims is significantly increasing production in a wide range of screening operations

at the show. In the foundations sector, Bauer Maschinen will present its BG series of rotary drilling rigs in the form of the BG 39 rig and BG 11 H – which will be introduced for the first time. Bauer said both BG rigs are equipped with the latest engine technology to fulfill Tier 4 regulations.

Bauer's affiliated companies, RTG Rammtechnik and Klemm Bohrtechnik, will also display machines at ConExpo. From RTG Rammtechnik, there will be a telescopic leader rig, the RG 19 T with its updated base carrier BS 65 RS, while Klemm will exhibit two multi-purpose anchor drills, the KR 806-3F and compact KR 707-2 with external power pack.

Bauer-Pileco, the American subsidiary of Bauer, will also present new pile driving technology in the form of the D 62-22 diesel impact hammer. Mat Mischanlagentechnik (which specialises in slurry mixing, materials handling and mechanical separation technology), will show its SCC 40 compact slurry mixing plant.

Components will also be a major part of the show. RDS and Loup Electronics plan to launch their next generation onboard weighing device, for instance – the Loadex 100. The technology can be retrofitted on both tracked and wheeled excavators.

Editorial teams from Construction Europe and the rest of KHL's magazines will of course be present at the exhibition, reporting on the late-breaking news as it happens – go to www.khl.com/user-register/?Exhib=1 to sign up to the show daily news letter, or scan the QR code with a smart phone to go straight to the page. **ce**



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Lennard van Holten at Van der Vlist said differing heavy transport regulations between countries in Europe remained a big problem for the sector



Thinking ahead

Forward planning is essential when it comes to tackling the myriad of challenges involved with transporting heavy components across Europe. Helen Wright finds out more

When it comes to specialised heavy transport, no two jobs are the same and the companies involved must take a tailor-made approach to each contract to ensure safe, cost-effective and timely delivery.

Depending on the weight and dimensions of the piece of equipment being transported, parts might have to be disassembled for the move, street furniture might need to be temporarily taken away and police escorts arranged for all or part of the journey.

Approvals from a number of authorities must also be secured before transport can start, while contractors must be prepared to change their plans and tackle unforeseen challenges such as adverse weather conditions along the way.

REGULATIONS

Lennard van Holten, business development manager at Van der Vlist, said differing heavy transport regulations between countries in Europe remained a big problem.

"In a united Europe, still each country has its

own regulations and there is no indication that there is any move to standardising regulations for heavy transport.

"Regarding France in particular, this is becoming more difficult and regularly causes problems with tight corners, roundabouts, street furniture, etc. This increases lead-times severely and raises costs enormously without improving safety or environmental footprint."

Van Holten said the Netherlands, Scandinavia and the UK were some of the countries where it takes the least effort to arrange transport for an abnormal load, with permits obtained on average between two and ten days.

"By far the most difficult country for permits is France where it will take at least four weeks, but most of the time much more," he said.

Aside from the price of fuel and regulatory issues, Van Holten said two other issues affecting Europe's specialised heavy transport sector was the difficulty of getting good, flexible and qualified personnel, and the problem of tackling road construction works.

"These can cause enormous detours in order

to reach the collection and delivery addresses. Also the cabotage rules are reducing the possibilities of having backloads. This raises costs and pollution from empty driving.

"There is also less demand for heavy transport to and from south and south eastern Europe, meaning our vehicles are running shorter trips around northern and eastern Europe.

"An increasingly important item is to look at all options. To deliver out of size cargo we will need to look not only to road transport but to all modalities available. We regularly arrange short and deep sea, rail or combined solutions for our customers. Together with trying to find the best combinations possible, this decreases environmental impact and creates sustainability for our sector," said Van Holten.

INCREASED OPTIONS

A number of new specialised trailers have entered the transport industry in the last 12 months as manufacturers strive to increase the options available to contractors.

Some producers have tried to reduce the cost of regulatory compliance to contractors with their latest designs.

Van der Vlist launched a new two-axle plus three-axle trailer and a new four-axle plus three-axle trailer. Joe Burton, group marketing co-ordinator at Van der Vlist UK, said, "The new trailers are lighter and more compact, with a maximum length of 16.5m. This helps reduce permit costs and helps increase the load factor."

And specialised transport manufacturer Doll introduced the eight-axle modular semi-trailer from the Panther series. It can be combined with different vehicle components, including a low bed with a bed length of 8m. The modular semi-trailer has independent wheel suspension, a low deadweight and a loading height of 850mm to 900mm.

Patrick Spitznagel, head of Doll heavy haulage, said, "By removing the three-axle



The modular Panther semi-trailer from Doll in Germany



Faymonville released the Telemax trailer featuring a steering angle of up to 60° to help increase ground clearance

dolly, the vehicle can also be used as a five-axle extendable semi-trailer with a payload of about 65 tonnes. In addition, if a six-axle semi-trailer is needed, a further axle can be placed in front of the fifth axle. In combination with the dolly even a nine-axle vehicle (three plus six axles) is possible."

Also new to the industry is an emissions-free battery-electric hydrostatically driven ESPT-H self-propelled transporter from Nicolas Industrie, part of the TII Group. The 8m long transporter has a 20 tonne payload, a dead weight of 9.5 tonnes and can be operated without a direct power supply for up to eight hours, the manufacturer said.

Each axle line can carry a maximum of 14.7 tonnes and the vehicle can be remote controlled. It is said to be capable of working in temperatures between 40°C and -10°C.

Max Trailers, part of manufacturer Faymonville, has also launched a new trailer this year – the Max 300. This three-axle Max 300 step frame trailer is designed for the transport of smaller and medium-sized plant machinery, the company said.

GROUND CLEARANCE

Meanwhile, Faymonville itself released the Telemax trailer with pendel-axles. The machine features a steering angle of up to 60° to help increase ground clearance compared to the conventional model.

Arnold Luxen, Faymonville sales director, said, "In order to minimise (for vehicles with a desired transport length up to 65m) any problems with the authorisation procedure, we now have a quadruple extending bed trailer available in our range."

The Telemax is available with rigid or hydraulically liftable and lowerable front



A chartered roll-on-roll-off barge was used during the transport.

Nurminen moves heavy drums by barge from Finland to Sweden

Specialised transport company Nurminen Logistics, based in Finland, transported two large drums from Ii in Finland to Gävle in Sweden.

The largest of the drums weighed 127 tonnes and measured 11.5m long, 6.7m tall and 6.9m wide. The second drum weighed in at 81 tonnes and measured 9m long, 6.7m tall and 6.9m wide.

Due to the weight of the drums, the cargo was transported from the factory by road to the Ii port, where it was loaded onto a chartered roll-on-roll-off barge. Once secured it was shipped to the factory port in Sweden. On arrival in Sweden, Nurminen unloaded the cargo and transported it to its installation site.



Also new to the industry is an emissions-free battery-electric hydrostatically driven ESPT-H self-propelled transporter from Nicolas Industrie

parts and rear slide out-extendable platforms. "With the slide out rear extension, we create on the last extendable part of the Telemax a significantly greater flexibility for the placement of the rotor blade and counter technical traffic and geographic constraints," Luxen added.

And trailer manufacturer Rogers launched a new 27.5m long unit. The trailer has a 54.4

tonne capacity and is suitable for hauling heavy loads, for example, transformers, rough terrain cranes or excavators.

It has three air-ride axles, 16m axle spacing and two detachable axles. Additional features include a detachable rear frame, a self-lifting gooseneck and a self-aligning beam hook connection.

There is also a Dolly Link, which increases swing clearance to 55.4m, a company spokesperson added.

Other launches came from Dutch manufacturer Nootboom, which presented a new three-axle extending step frame trailer, a four-axle step frame trailer and the new Nootboom PendleX Neck model. The PendleX Neck has a payload of 110 tonnes and, when fully extended, provides a complete loading deck.

Nootboom also introduced a new three-axle semi low-loader featuring hydraulic

Max Trailers, part of manufacturer Faymonville, launched a new trailer this year – the Max 300

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steering and a hydraulic height-adjustable load floor for loading onto the gooseneck. The trailer has a steering angle of 45° and has a Superwinch electric winch, with radio-controlled remote control.

With new records being broken all the time in terms of the size and weight of loads being transported around Europe, the specialised heavy transport sector is about thinking ahead and thinking big.

TURKEY'S LARGEST EVER

In Turkey, for instance, transport company Hareket Heavy Lifting & Project Transportation recently handled the largest load ever to travel into the country.

It transported 11 reactor and coke drum units weighing between 260 tonnes and 918 tonnes from Japan into Turkey for delivery to the Tüpraş Resid refinery upgrading project in the Gulf of İzmit. The units were loaded onto 20 axle lines of four file self-propelled Goldhofer PST/SL-E, 16 axle lines of Goldhofer THP/SL 4 file and 24 axle lines of THP/SL 2



Nooteboom introduced a new three-axle semi low-loader featuring hydraulic steering and a hydraulic height-adjustable load floor for loading onto the gooseneck

trailer. The units first travelled from Japan by ship to the port of Derince.

On arrival, they were placed into storage before being loaded once again onto a barge for the next section of the journey. For this part, the heavy loads were reloaded onto the self-propelled modular transporter (SPMT) and trailers, and moved onto the barge one

by one to the port of Tüpraş where they were driven off the barges and moved to the assembly area.

Another record was broken in Bulgaria when Unishipping International delivered the world's largest copper recycler to a production plant in the country.

The copper recycler consisted of six large wet electrostatic precipitator (WESP) units, each measuring 11.7m by 5.9m by 5.9m and weighing 15.3 tonnes. A number of small parts were also shipped in standard containers.

For the first part of the journey the units were shipped from Mumbai on flat rack containers to Constanta Port in Romania. On arrival, the units were transferred onto a river vessel and two barges before being transported along the River Danube to the Port of Lom in Bulgaria.

In Lom, the cargo was loaded onto low bed trailers and transported 230km by road to the job site in Pirdop. To avoid damage along the route, trees were cut back and several roads along the mountain crossing from North to South Bulgaria were widened.

Police and staff from the national electricity company escorted the convoy along the route. This was because the electricity company had to shut down the high-voltage electricity for passing under those cables. The cargo was delivered to the site in Pirdop without any delay or damages, the company said.

And the world's largest wind turbine nacelle (the housing that holds the generator >

Very specialised transport

Kamag has introduced a slag pot carrier – a U-frame machine designed specifically for transporting slag in steel plants.

The Type 2802-130 is the biggest slag pot carrier ever manufactured by the company. It weighs 82 tonnes and is 11.9m long, 7.7m wide and 4.3m high. Power comes from a Caterpillar C15 diesel engine offering 403kW. The machine has a tipping angle of 130° and can be modified for the transportation of molten steel.

The Type 2802-130 can transport payloads up to 130 tonnes. The slag pot is 5.8m long and 4.35m high and has a capacity of 45m³. Its design allows it to be driven through production facility doorways.



The 2802-130 type slag pot carrier has been designed to meet the needs of modern steel plants

Trailer manufacturer Rogers launched a new 27.5m long unit with a 54.4 tonne capacity, suitable for hauling heavy loads including transformers, rough terrain cranes or excavators





Above: A 918 tonne reactor is transported from Derince Port to Tupras refinery on 20 Goldhofer axle lines

components) was recently transported by heavy lift and transport company Mammoet Wind Brande. The 6MW nacelle, weighing 275 tonnes and measuring 16.6m by 6.5m by 6.9m, was moved from Brande to Esbjerg harbour, in Denmark.

Mammoet used 30 InterCombi axle lines from Scheuerle, and two tractor units. In total, the transport measured 68m long.

Challenges along the route included 14 tonne axle load limits on bridges and a difficult harbour entrance. The journey took nine hours to complete.

WORKING CLOSELY

It is clear that companies that specialise in heavy transport work very closely with their customers to make sure jobs run smoothly. Kübler has also had recent experience with a complex specialised heavy transportation job moving components for Airbus in Germany.

It used 28 Scheuerle InterCombi axles with a PowerBooster unit for the job, creating a total transport weight of 215 tonnes, 38m long, 8.5m wide and 9.3m high.

The load had to be moved from Dresden to Hamburg in Germany. For the larger middle segment, two 14-axle Scheuerle InterCombi platform trailers were coupled as a 4-file combination side-by-side.



Above: Kübler had recent experience with a complex specialised heavy transportation job moving components for Airbus in Germany

Below: Another record was broken in Bulgaria when Unishipping International delivered the world's largest copper recycler to a production plant in the country



The PowerBooster trailer was equipped with drive axles and could be driven by a shiftable Power Pack Unit (PPU). Before beginning to climb a critical incline, the driver activates the PPU.

As soon as the transport no longer has sufficient power to negotiate the gradient, the drive starts automatically and provides sufficient thrust. On completing the climb, the additional drive automatically switches off and the speed can be increased again in accordance with the road conditions.

After moving along the River Elbe in the summer of 2013, Kübler said the transport was stopped because of heavy flooding in the region. Kübler said it took advantage of its

flexible operational strategy during the flood water phase and moved the elements from the production hall to an alternate storage location.

This ensured that all subsequent working operations at the sender's site could be carried out on schedule in spite of the floods. After a two-month break, Kübler said the water level of the Elbe stabilised again and a new start could be made.

The next phase of the journey involved travelling through Dresden Airport – passing through an opening in the perimeter fence and using the runways protected by temporary aluminium panels.

Kübler said the Dresden airport authority proved to be co-operative and helpful, and arranged the required construction measures along with handling the approval procedure with the German Federal Aviation Authority.

The convoy drove through the airport in this way and out onto public roads through another opening in the perimeter fence.

Kübler said other more routine tasks along the long route included taking down numerous overhead cables, placing no-stopping areas, and removing a range of traffic signs and crash barriers.

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The world's largest wind turbine nacelle was recently transported by heavy lift and transport company Mammoet Wind Brande

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The Cat 924K is claiming fuel savings over the previous model

There are certain features that almost all purchasers of construction equipment are looking for. Sandy Guthrie looks at some key requirements for wheeled loaders

What customers want

The makers of construction machines understand that they have to get inside the heads of customers and potential customers, because they have to know what their clients want from a machine.

Their requirements are many and varied, and there is little point in producing a machine which is unlikely to fulfil the needs of the operators.

But aside from the specifics that are required by the firms who are using the machines, there are some near universal themes.

Joel Grimes, Caterpillar's small wheeled loader senior project engineer, said there were three elements that were required by almost every customer – enhanced performance, fuel efficiency and operator comfort.

He said of the Cat K series small wheeled loaders launched in the past 12 months, "We want to be class leading in performance, we want our operators to be comfortable and the machine easy to use, and we want to be low in operating costs – those are the three metrics that we felt we must deliver."

He admitted that the term "small" here was largely a Caterpillar term – the 924K, 930K and 938K range from 13 tonnes to 16 tonnes operating weight.

The three models are all powered by Cat C6.6 ACERT engines, and are claiming fuel savings of up to 30% over the H-series machines that preceded them.

Grimes said, "Typically, with small wheeled loaders, our competitors run their engines at about 2,400rpm. What we have done in this family of loaders is we've reduced this by 25% down to 1,800rpm. So that's 600 less revs per minute, and spinning your engine slower means you're burning less fuel.

"But it can also mean you can take a hit in performance, so what we did to solve the performance side is we increased the size of our hydraulic pumps, and we increased our low engine torque, such that we can create the same hydraulic cycle speeds and hit that torque value, and spin that engine at the lower rpm."

He said that with an averaged-out work

cycle, the 938k had demonstrated about a 30% fuel efficiency gain.

"The harder you run the machines, the more you are going to experience the full 30% saving," he said. "If I lined up this machine with all its competitors and they were idling, they'd all be pretty similar, but the harder you work them the more differentiation you will see."

He felt there were three big advantages of running an engine at a slower speed.

"The first is fuel, the second is longevity – you're accumulating 600 fewer rpm on all the rotating components, the engine components, the hydraulic components, powertrain components. That's a big number.

"The last is sound. These things just sound like they're purring when they're doing this low speed working."

NEW FEATURES

At Doosan, the focus is also on improvements in productivity and fuel consumption. Marc Glesius, product manager for wheeled loaders in Europe, Middle East and Africa, said that these were achieved on the new Doosan -3 Stage IIIB wheeled loaders, and that it was down to a combination of new features.

In particular, there is a torque converter lock up (TCLU).

He said, "With the newly-designed TCLU, which is standard for all large Doosan wheeled loaders covering the new DL300-3 to DL550-3 models, fuel consumption has been reduced by up to 10%, depending on the application. >

The Doosan DL420-3 large wheeled loader has a bucket capacity of 4.0m³



WHEELED LOADERS

Volvo's updated L30G is designed for tight turns and working in restricted areas

"The new TCLU facilitates a direct connection between engine and transmission without loss of engine performance." He said that as TCLU worked from the second gear upwards, the benefits from this feature were especially prominent for load-and-carry applications.

"In addition, normal torque converter systems feature a degree of slip, but with activated TCLU there is no slip and the operator can increase the speed of the machine even on slopes up to 54%."

He said another key feature was that the SCR (selective catalytic reduction) engine



The Wacker Neuson WL 55 is the largest in its wheeled loader range



technology ensured Doosan wheeled loaders did not need either exhaust gas recirculation (EGR) or diesel particulate filters (DPF), both of which he said increased fuel consumption and increased machine downtime.

Launched a year ago, the new generation DL420-3 large wheeled loader from Doosan has a bucket capacity of 4.0m³, and is intended to meet a wide range of material-handling needs from loading and transporting granular material such as sand and gravel, to industrial, mining and quarrying applications.

The DL420-3 wheeled loader is powered by the 13-litre Scania DC13 SCR 6-cylinder diesel engine. It is said to combine high engine power output and SCR technology with a new ZF transmission and several other features to minimise fuel consumption. Doosan said SCR technology reduced fuel consumption by about 10% compared to similar size machines with EGR technology. It said resale was also better as it was easy to reset to Tier 2 engines for use in emerging markets.

Coping with windy conditions

A Hyundai HL 760 wheeled loader supplied by Hyundai dealer Taylor & Braithwaite in Cumbria, UK, was chosen by civil engineers Waitings Drainage, also based in Cumbria – one of 16 contractors working on the Fallago Rig Windfarm project, located on an isolated and windy plateau on the Lammermuir hills in Berwickshire on the Scottish Borders.

Fallago Rig comprises 48 turbines with an installed capacity of 144MW. Construction of the main works was undertaken over a 16-month period.

As winter maintenance and access support services contractor, it was Waitings' job to ensure permanent safe access, 24 hours a day, seven days a week.

Waitings director Adrian Ash said, "The project was intense and we had to have a machine that was 100% reliable – and the Taylor & Braithwaite Hyundai 760 wheeled loader was unbelievably effective. The machine was modified with heavy-duty snow chains and fitted with a high capacity shovel – this machine single-handedly kept this site operational."

Another modification, as an added safety feature to the Hyundai wheeled loader, was a GPS system. The roads were mapped out on the system and allowed operators to follow the GPS in complete white outs.



The Hyundai HL 760 at Fallago Rig

HIGH PRODUCTION

At Caterpillar, Grimes said the K series small wheeled loaders were designed for customers in a high production environment – "sand and wash plants, gravel plants, and most specifically small concrete plants".

He said, "We've designed it for a sand and gravel environment. The bucket has additional wear plates, both on the sides and on the bottom. That is because of the abrasive nature of those materials – they tend to wear out those areas prematurely on buckets, so we're looking to resolve that."

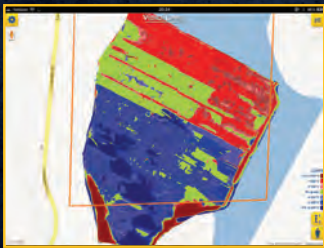
The K series uses a hydrostatic drive train system. Grimes said, "There's lots of advantages of hystat. What this machine will allow the customer to do is to adjust the torque of the tyres down, so that they don't break free and start spinning on the sand and gravel, and get cut up and worn out prematurely."

Volvo said that its updated L30G and L35G wheeled loaders – launched last year – were designed for tight turns and working in restricted areas, but claimed they offered breakout and lifting forces normally expected from larger machines. Both models were said to feature fuel efficient Volvo engines that met the emissions requirements of Tier 4 Final and Stage IIIB regulations.

The G-Series' Volvo Care Cab is said to offer >



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low levels of noise and vibration. Volvo added that the ergonomic controls were intuitively located.

For tough job sites, the L30G and L35G's portal axles protect the propeller shaft and axles against damage from rocks and other obstacles. This feature, which is exclusive to Volvo, is designed to provide operators with peace of mind and the assurance that their machines' drivetrain was protected against the rigours of rugged terrain.

The company said that when a job required maximum traction, Volvo's differential locks could be engaged via a switch in the cab to ensure that 100% power was distributed to each of the wheels, reducing tyre slippage on soft ground or slippery surfaces.

The Wacker Neuson wheeled loader series includes eight types of machines with a shovel capacity from 0.2 to 0.95m³.

The newest model, the WL 20 compact wheeled loader, is said to be suitable for use in confined spaces. With a height of 2.19m and a width of 1.08m, it can also be easily used in buildings.

Wacker Neuson said that a sophisticated articulated swivel joint allowed the machine to maintain contact with the ground with all four wheels, even in the event of uneven ground conditions. As the front and rear ends can oscillate independently of each other, the wheels always have maximum traction.

With an operating weight of 2 tonnes, the loader achieves a tipping load of 1.24 tonnes.

The Avant 750 is a compact four-wheel drive loader



The shovel capacity with a standard bucket is 0.2m³.

The smallest Wacker Neuson wheeled loader, it is available with a driver's canopy which can be folded down with just a few hand movements, claimed the company. The machine then only has a height of 1.88m.

ROUGH TERRAIN CAPABILITY

Avant Tecno said its Avant 750 was a versatile machine for construction sites. The compact four-wheel drive loader claims excellent rough terrain capabilities and the company said

it could easily handle loose material, brick pallets, timber and dumpy bags on sites where other conventional material handlers were too large.

Besides being a wheeled loader, the Avant 750 is described as a multi-purpose tool carrier with a range of over 100 attachments.

Weighing 1.9 tonnes, it is said to be easy to transport by trailer from site to site. It has a tipping load of 1.4 tonnes and is capable of lifting 2.1 tonnes.

German-based manufacturer Paus said a special feature of its vehicles was the fact that very rarely is a machine supplied off-the-shelf. It said its employees worked closely with their customers, learning a lot about the conditions of use and the resulting requirements for the machines.

Paus said that customers appreciated "the flexibility that major manufacturers simply don't offer".

Construction machines sales manager Wolfgang Immel said, "The key challenge today is the application of the new low-emission engines."

"For years Paus has been relying on Deutz units, which have an excellent reputation worldwide thanks to their robust construction and ease of maintenance."

Paus loaders are equipped with the latest >

Case flying high in Austria

A Case machine has been helping out at one of Europe's major skiing events, the Ski Flying World Cup which recently took place in Bad Mitterndorf, Austria.

To prepare access roads and parking areas, a 15 tonne Case 721F wheeled loader supported the team of six Steyr tractors. The machine was provided by the Case dealer SDK Kjærsgaard from Denmark.

Markus Meyer, business director of CNH Industrial Construction for Germany, Austria and Switzerland, said, "We have chosen the 721F due to its strong performance and ideal shovel-size to support our colleagues from Steyr agriculture in the preparations of the Ski Flying World Cup."

"In addition, our engagement enhances our growing strength in Austria. At the end of 2013 we opened a new Case store close to Vienna to increase our business in this important market substantially."

The Case 721F at work in Bad Mitterndorf



Paus machines are "rarely supplied off-the-shelf"



Hitachi's first ZW220-5 in Europe went to Norway

generation of Deutz engines, and comply with Stage IIIB. It said this was achieved without a particle filter system, and AdBlue is not required. Paus said the latest engines were seeing reduced fuel consumption compared to Stage IIIA engines.

At the same time as these developments, Paus is investing in the latest hydrostatic drive technologies. It has also been working with universities who are supporting Paus engineers in researching on energy savings. It said all loaders had undergone a makeover brought about by this significant modification.

Hitachi has launched the ZW220-5 wheeled loader, and the first to be delivered in Europe went to Norwegian company Farbu & Gausen, which specialises in road and railway

Bell chimes in UK

An order from the Walters Group, one of the UK's biggest civil engineering and hire companies, included wheeled loaders from Bell Equipment UK in the first deal between the two companies.

The Walters Group was introduced to Bell after acquiring Görrel Equipment Solutions – a longstanding Bell customer – in 2011.

The order was to replace existing machines on a long-term quarrying contract in Shrewsbury, where Walters Group is tasked with shifting 1 million tonnes of hard stone every year.

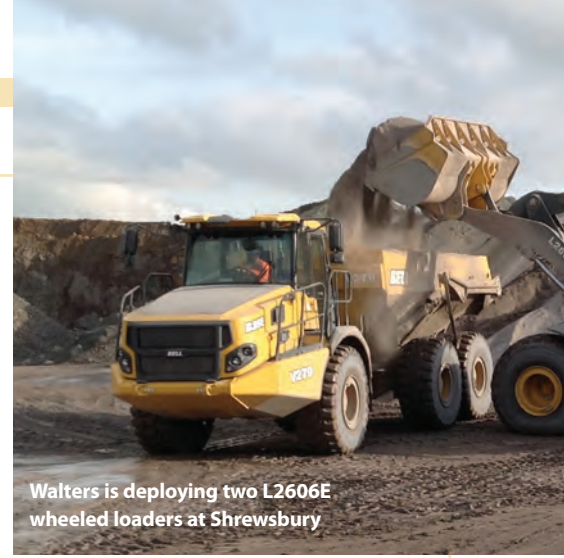
The timing coincided with the launch of Bell's new E-series, and the order included six machines in total. Alongside three B25E articulated dump trucks, Walters is deploying two L2606E wheeled loaders at Shrewsbury. The sixth model, a L1506E loader, is being used at other sites on waste management applications.

After watching the loaders in action, Bell recommended that the buckets on the L2606Es be replaced with a different design profile that better suited the on-site conditions.

construction projects, and electricity contracts on a national basis.

The new machine is at work in a limestone quarry close to its base at Kjerkneshvågen, located along the Trondheimsfjord on the Inderøy peninsula.

The new Hitachi ZW220-5 wheeled loader is used to load trucks for the delivery of the finished materials, 90% of which are produced



Walters is deploying two L2606E wheeled loaders at Shrewsbury

for the company's private road and general construction contracts.

Two wheeled loaders launched last year by Atlas Weyhausen are equipped with a hydraulic start-stop system. The AR 85e wheeled loader and the AR 60e are powered by Deutz TCD 3.6 and TD 2.9 engines, which generate 80kW and 49kW respectively at 2,200rpm.

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switches off the engines at zero load. When load is applied again, the hydraulics immediately restart the engine. This avoids lengthy idling periods which are typically experienced with compact construction equipment, and it reduces fuel consumption, according to Deutz.

It added that skilful optimisation and system integration of the diesel engine and the equipment's own hydraulic system produced hybrid diesel-hydraulic drive solutions, allowing construction equipment to achieve considerable improvements in performance and fuel consumption.

This year will no doubt see more improvements to wheeled loaders from all manufacturers. At Caterpillar, Joel Grimes said the K series was "extremely friendly to bringing on new features".

He said that with electronically-controlled hydraulics and hydrostatic drive train system – he claimed this was the first and only machine to be able to say that – Cat was able to develop features to suit specific customer needs. For example, a fine mode control was created.

Operators can use a push and hold slider to choose fast (for buckets), medium (for pallet forks and so on) or slow (for longer pallet forks or maybe extended material handling arm).

"Here's the best part," said Grimes. "Because our machine is electronically controlled, with the next software release to the product, we're able to update our entire worldwide fleet with that feature because that software feature brought it online."

"With the latest addition, we're bringing on what we're calling hystat operator modes, and what this is going to do is to allow our customer to choose between three settings.

"We've chosen to make ours fluid like a smooth roll out and a smooth directional shift because it's electronically controlled, but what we found was customers who were running a conventional hystat and who got accustomed to that aggressive change in direction and roll out style, wanted it.

"And we're going to let them have it. So they can choose a hystat mode which will make our machine behave like a conventional, mechanically-controlled hystat."

He added that Cat was also bringing out a mode that it is calling torque converter mode.

"A torque converter machine will almost freewheel, so if you get off the gas it will roll out until friction stops it. Because our electronically-controlled hystat can do that if we choose torque converter mode, we get this real extended smooth roll out characteristic, just like a torque converter machine."

The last setting is ice mode for snowy conditions when operators are working in slippery underfoot conditions.

"The brilliant thing about the DNA of these machines is that once we release it, we can tell our existing customers about the feature, the software they'll need to work with the dealer to have installed, and they'll get that feature even if they bought that machine a year and a half ago," said Grimes.

ce



Cat is about to introduce hystat operator modes with three settings

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Making a splash in Sweden

Water-powered drills from Wassara and dewatering pumps from Grindex are working together on a complex rail project in Stockholm, Sweden. Helen Wright reports from the site

A 6km commuter rail tunnel is being built beneath central Stockholm, Sweden – a €1.7 billion development dubbed the Citybanan project.

Since the project involves tunnelling under the historic heart of the capital in challenging ground conditions, authorities stipulated that environmentally-sensitive construction techniques must be used.

To limit interference from vibrations and noise, no tunnel boring machines could be deployed along the route. In addition, instead of conventional air-powered drilling, which could pressurise the rock formations and put surrounding buildings and infrastructure at risk, contractors must use water powered down-the-hole drills (DTH), and these were supplied by manufacturer Wassara, across the project.

However, subsidence is a big issue in central Stockholm as the foundations of many buildings sit just above the water table. The ground beneath Stockholm consists mostly of solid bedrock, but in some places the rock is deeper and covered by a layer of clay.

These areas can be particularly sensitive to groundwater fluctuations.

Contractors, therefore, have to keep careful track of water levels, and dewatering pumps from Grindex are being used together with the Wassara drills to remove waste water.

NATIONAL HERITAGE

Close to the existing Stockholm South railway station and line, the new commuter rail tunnel will be driven beneath an existing park and also beneath a building that is listed as a National Heritage site.

This shallow, 331m part of the tunnel is being built using the cut and cover method, which involves driving retaining wall foundations then excavating the tunnel and casting the base slab before the roof of the tunnel is put in place. When completed, the building will actually stand on the tunnel's roof.

Contractor Bilfinger Spezialtiefbau is using Wassara DTH drills and jet grouting hammers to support foundations work. Dewatering pumps from Grindex are also on site to keep water levels in balance.



Wassara DTH water-powered drills and Grindex dewatering pumps are being used across the Citybanan project in Stockholm, Sweden

Wassara drills are powered by high pressure water (up to 180bar), and use up to 300 l/min. No power is lost through the drill string during operation, and when leaving the hammer, the pressure is also reduced to ambient pressure as it is an open system.

Christina Salmonson, area manager at Bilfinger Spezialtiefbau, said, "With the Wassara drills, there is no sediment and dust thrown into the air compared to the air-powered drills, and instead the cuttings are flushed out in the water, which we pump away for treatment. But we are working in clay so it gets messy – it is always wet and now we are down to sea level."

That is where the Grindex dewatering pumps come in. "We are currently handling about 2 million litres of water a week," Salmonson said. "The project will require around 2,000 holes to be drilled for pile driving operations. We are always measuring the ground water level, and the Grindex dewatering pumps are working hard to remove excess water."

When the works are complete, the new tunnel and the existing main line track will be fully covered. Construction of this section started in January 2010 and is scheduled for completion in 2014.

ce

Citybanan project at a glance

The Citybanan (city line) project under central Stockholm, Sweden, aims to relieve a long-standing commuter rail bottleneck in and out of the city.

The project, which began in 2009 and is scheduled for completion in 2017, runs between Tomtebodan and Stockholm South and involves construction of two new stations – City and Odenplan – as well as a 1.4km rail bridge at Årsta and a 300m immersed tunnel under the waters of Riddarfjärden between the city's central islands of Riddarholmen and Södermalm.

Citybanan is being built by Swedish Transport Administration in co-operation with the City of Stockholm, Stockholm County Council and Stockholm Transport.

Six contractors were awarded work along various stages of the project – Peab, Bilfinger, Strabag, NCC as well as Züblin and Pihl, which formed a joint venture to complete the immersed Söderström tunnel. However, this is now being completed solely by Züblin after Pihl filed for bankruptcy in 2013.

The two approaching tracks to Stockholm Central Station are overloaded with freight and commuter trains



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Targeting efficiency improvements

Two new excavators introduced with reduced operating costs at the heart of their design



Kobelco Construction Machinery Europe has launched two new 21 class excavator models – SK210LC-9 and SK210NLC-9.

The two machines represent a standard and narrow track version.

Equipped with a Stage IIIB-compliant Hino JO5E-T5J turbocharged diesel engines, they have an automatic idle stop feature for reduced fuel consumption.

Kobelco said energy efficiency was also enhanced through three operating work modes – heavy, standard and the newly added eco-mode. The manufacturer said

testing in eco mode indicated a 17.3% improvement in the amount of soil moved per litre of fuel, compared to the previous SK200-8 model.

In standard mode, it said testing showed a 5% improvement, while heavy mode produced a 4.7% improvement.

Vibration is another area that has seen improvement – Kobelco said the new excavators produce 50% less vibration compared to previous models thanks to new spring and oil suspension technology.

In addition, Kobelco said daily and routine service intervals had been extended to minimise

downtime on the new models. The hydraulic oil service interval is now 5,000 hours, while the hydraulic filter service interval is 1,000 hours, according to the company.

A rear view camera is also fitted as standard to enhance operating visibility. The manufacturer said more models would follow. **ce**

Testing in Eco mode indicated a 17.3% improvement in the amount of soil moved per litre of fuel, compared to the previous model

Large generator demand

Atlas Copco has developed a new 1MW generator to meet customer demand for large generators – the QAC flx.

Available in three model variants, the QAC flx generator can be customised to suit a variety of situations such as high altitudes or extreme

Available in three model variants, the manufacturer said the generator could be customised to suit a variety of situations such as high altitudes or extreme weather conditions

weather conditions, according to the manufacturer.

The QAC flx are containerised units that are said to be well-suited for either prime power or critical standby power in the rental, mining, oil and gas, industrial and construction industries.

The QAC 1000 flx is driven by a Cummins QST30G5 engine to meet EU Stage II diesel exhaust emission standards.

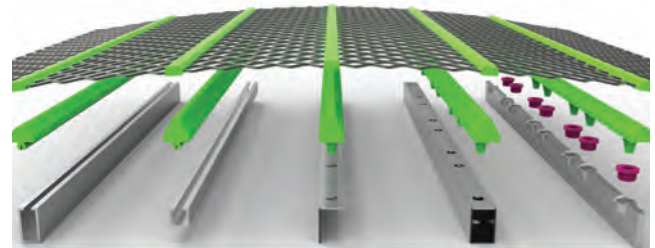
The third variant, the 60Hz QAC 1200 flx has been designed to US

Screening conversion from Major Wire

Major Wire Industries has introduced new adaptors for modular screening decks that it claims allow producers to convert flat screen decks to a crowned deck.

The manufacturer said its new Crown Bar Adaptors were designed for both pin- and grooved-type screen decks and aimed at allowing producers to use its Flex-Mat 3 screen media for the job without being limited by the screen deck.

It said producers could expect to increase their open area by 100% or more by converting modular decks to a crowned tensioned deck of Flex-Mat 3.



Major Wire claims producers could expect to increase their open area by 100% or more by converting modular decks to a crowned tensioned deck of Flex-Mat 3



and Canadian specifications and complies with US Tier 2 emission standards.

Atlas Copco said the new models had been engineered for 500-hour service intervals. It said they featured a spill-proof frame and low noise level (85dBA at 1m).

A controller option is also available – the Qc4002 controller is said to enable a user to create a Power Management System to parallel two or more generator sets, for instance. **ce**

Upgraded models meet strict emissions legislation and add other new technologies

Launch of Stage IV motor graders

John Deere has updated its G Series motor graders with new engines that meet current EU Stage IV/US Tier 4 Final off-highway diesel exhaust emissions legislation.

In addition to the new engines, the company also added a range of other new technology to the machines.

Mike Ackerman, product marketing manager for motor graders at John Deere Construction & Forestry, said, "Updating the G-Series engines



The G-Series boasts 12 models – pictured is the 672GP

to Tier 4 Final allotted us the opportunity to talk with customers in more detail about what they liked and didn't like with the G-Series design.

"They wanted an emissions solution with no compromises, better all-around lighting, a more modern radio, an improved rear view camera

with a dedicated monitor, and a few upgraded cab features. We delivered on these with these new G-Series motor graders."

The G-Series boasts 12 models. The manufacturer said its open-architecture design also let customers employ their favourite brand of grade-control system to integrate to the machines. **ce**

Increasing control

Axiomatic technologies has released a new control system that original equipment manufacturers (OEMs) can use within their off-highway machines.

The AX030120 module translates engine sensor information such as vehicle speed, exhaust and emissions into CAN messages for the engine control system.

The device features 10 signal inputs and a wide range of signal options, including digital. It is also said to boast rugged packaging and can be updated with software modifications to meet specific OEM requirements.

The AX030120 module translates engine sensor information into CAN messages for the engine control system.



Wheeled dozer launch

Caterpillar has introduced a new wheeled dozer in the form of the 834K, which is available with different blade types ranging in capacity from 7.9 to 22.2m³.

The 370kW Caterpillar C18 engine used in the 834K is available in three configurations to tailor the machine for any

region of the world – US Tier 4 Final/EU Stage IV, Tier 3 equivalent and Tier 2 equivalent.

Fuel-saving enhancements for the 834K include engine-idle-shutdown and engine-idle kick-down systems. The manufacturer said the delayed-engine-shutdown system protects the engine from hot shut-downs.

The 50 tonne class 834K also features Caterpillar's Vital Information Management System (VIMS 3G), which features a large touch-screen interface to keep operators informed of machine operating parameters. The system, with data-logging capability, features an Ethernet connection module and an integrated Cat Product Link telematics system, which transmits data to a secure web-based application (VisionLink) for use by equipment managers. **ce**



The 834K is available with different blade types ranging in capacity from 7.9 to 22.2m³

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Keep on rolling

Low levels of vibration and noise were recorded during the testing of an Atlas Copco roller

An Atlas Copco LP6500 Duplex Roller was tested by independent technical inspection organisation TÜV Nord and compared with two similar duplex roller models from other manufacturers.

Atlas Copco said the test provided confirmation that the LP6500 had lower vibrations in

the handle and lower machine noise than the other machines tested.

In addition, in the noise emission test, the LP6500 showed a sound pressure level of 87.9dB(A), which the manufacturer said was more than 4dB(A) lower than one of the competing machines, and



Atlas Copco said the upright handle on the LP6500 reduced vibration and has a throttle lever that allows stepless speed control for good manoeuvrability

7dB(A) lower than the other.

Atlas Copco said the upright handle on the LP6500 reduced vibration and had a throttle lever that allowed stepless speed control for good manoeuvrability. Hydraulic transmission eliminates the need for chains or gears, and enables a compact design with smooth sides, high curb clearance and no overhang.

Powered by a 6.8kW engine, the fully hydraulic LP6500 is also equipped with a controlled cooling fan that the manufacturer said helped reduce the risk of unplanned stops.

To simplify maintenance, there is an hour meter and an oil alert as standard.

A rigid protection frame, with a single lifting point for easy transportation, is said by the manufacturer to lessen the risk of impact damage.

The large water tank is also said to reduce the number of refill stops and serve as protection for the cooling fan. **ce**

Compact drilling

Dando has launched a new cable percussion rig for borehole drilling – the Dando 1000 MK2. Designed for operation in tight and hard-to-reach areas, the rig features a collapsible mast derrick and can drill to depths of 46m, using 102mm casing and tooling.

Targeted at the geotechnical sector, the adjustable height of the mast derrick is said to allow the rig to adapt to the job in hand. It can also drill to shallower depths using larger diameter casing and tools.

Targeted at the geotechnical sector, the adjustable height of the mast derrick is said to allow the rig to adapt to the job in hand



Durability focus

Cortec Corporation has launched a new concrete additive that it claims protects and extends the durability of concrete.

MCI-2005 NS is a long-term corrosion protection inhibitor that the manufacturer claims doubles the time to initiation of corrosion and reduces the corrosion rate up to five times

over the life of the structure, without changing the set time of concrete mixes. It is also said to reduce the effects of shrinkage and cracking.

Cortec said corroding rebar in deteriorating concrete can be the cause of financial losses, costly repairs, and injuries.

It said the additive migrates through concrete and protects metals such as carbon and galvanized steel.

The company added that MCI-2005 NS was recommended for all reinforced, precast, pre-stressed, post-tensioned, or marine concrete structures as well as steel-reinforced concrete bridges, highways and streets exposed to corrosive environments, among other applications. **ce**

Cortec said corroding rebar in deteriorating concrete can be the cause of financial losses, costly repairs, and injuries



Reducing waste during piling

UK contractor claims to have developed system that produces no waste

Bare chassis launch

Caterpillar has launched bare chassis versions of its 725C and 730C articulated dump trucks (ADTs).

It said this expanded the versatility of the ADTs by allowing the machines to accommodate virtually any specialty equipment system.

Application-specific bodies could include coal and rubbish bodies, water tanks and spray systems, hook-lift systems and container transport systems, to name just a handful.

Caterpillar said its dealers could work with customers to design bare-chassis models to accommodate bespoke rear-mounted equipment systems.

Caterpillar said its dealers could work with customers to design bare-chassis models to accommodate bespoke rear-mounted equipment systems

Contractor Balfour Beatty Ground Engineering has launched what it claims is the UK's first driven precast pile cutting system which has the potential to reduce piling waste to zero.

The new system works by cutting precast concrete piles above the ground with diamond tipped blades and then using the trimmed section of the pile as the lead part of the next pile.

The technology was developed, piloted and extensively tested by Balfour Beatty Ground Engineering together with Finnish manufacturer Junttan, which supplied the mechanical cutter that has been fitted to two piling rigs to date.

Malcolm O'Sullivan, managing director, Balfour Beatty Ground Engineering, said, "We are totally committed to driving down waste and improving the efficiency of our service and this new technique for precast pile

cutting is a highly effective way to do this.

"I am delighted at the help that our key suppliers Junttan have been able to provide, working closely with our innovations team to ensure we can provide a leading service to our customers which meets their sustainability objectives while delivering value for money."

Balfour said the system met all requirements for compressive strength and could also cut piles to within 100mm of ground level, enhancing access to a site.

The contractor said that, even before the introduction of the new system, it had been able to reduce its precast piling waste from 1.6m per pile down to 0.8m per pile.

It said the new system would allow it to reduce this even further, with significant cost and sustainability benefits for its customers.

It cited a recent project to build



The technology was developed, piloted and extensively tested by Balfour Beatty Ground Engineering together with Finnish manufacturer Junttan

a supermarket in Scotland, which requiring the use of 4,500 piles and claimed its cutting system saved up to 3,600m of pile waste that would otherwise have been produced.

ce

3D construction layout

Topcon has launched what it claims is the world's first 3D positioning system designed specifically for construction layout applications – the LN-100.

The device is said to allow project data to flow from the design to the field, reducing the learning curve in performing construction layout tasks.

LN-100 integrates with Topcon's Magnet suite of software solutions. Magnet Field Layout and Office Layout are specifically

designed and configured to meet the needs of construction layout and BIM applications.

Eduardo Falcon, Topcon Positioning group executive vice president, said, "All that's required to begin operation is to place the LN-100 anywhere on a project site – on a tripod, column or on the ground – and press one button. The unit self-levels and an operator just has to turn on the wireless controller and get to work."



With the wireless controller, an operator can call up simple point layout or CAD drawings anywhere on a site

With the wireless controller, an operator can call up simple point layout or CAD drawings anywhere on a site.

"Display the design point or line that needs to be staked out, touch it, and the LN-100 laser immediately points to the exact location," Falcon said.

The LN-100 can also lock onto a prism and guide an operator to the next design points. Its operating range allows it to cover a 200m diameter area.

ce





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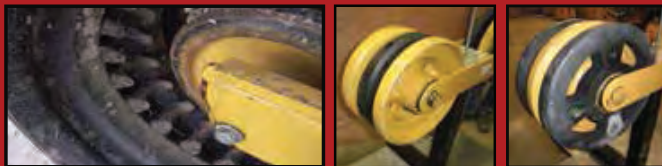
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- International Cranes and Specialized Transport*
- International Rental News*

E-NEWSLETTERS

- World Construction** e-newsletter
- Access International* e-newsletter
- Access, Lift & Handlers* e-newsletter
- Construction Latin America* e-newsletter
- Demolition & Recycling International* e-newsletter
- International Rental News* e-newsletter
- International Construction China* e-newsletter
- World Crane Week* e-newsletter

2 ORGANISATION TYPE

- Contractor
- Sub-Contractor
- Consulting Engineer
- Design & Build Contractor
- National/Regional/Local Government
- Equipment Hire/Rental/leasing
- Mining/Quarrying/Aggregate Production
- Manufacturer/Distributor/Agent
- Other

3 YOUR DETAILS

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