

CONSTRUCTION europa

THE MAGAZINE FOR EUROPE'S CONSTRUCTION INDUSTRY

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October 2013
Volume 24 Number 8



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ICEF

International Construction
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FEATURES



EXCAVATORS 25

A large number of new excavator models have come to the market this year boasting advanced engines and hydraulics, safety improvements and hybrid designs. *Helen Wright* finds out more



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A pump has a variety of different functions on a construction site. *Sandy Guthrie* investigates some of the latest launches, and finds out how to keep them running, so that they are ready when needed



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New technology is seeking the right balance. *Lindsay Gale*, editor of *CE* sister magazine *Demolition & Recycling International*, takes an in-depth look at what is new in this sector



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With a new name and a new president, Construction Products Europe is setting out its aims for the future. *CE* talks to the new president, Jean-Marie Vaissaire, about his targets for the future

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EVENTS DIARY

2013

Europlatform
conference

October 3
Istanbul,
Turkey
www.europlatform.info

International Rental
Conference China

October 14
Beijing, China
www.khl.com/irc

BICES 2013

October 15 - 18
Beijing, China
www.e-bices.org

World Crane &
Transport Summit

October 29 - 30
Amsterdam,
The Netherlands
www.khl.com/wct

World Demolition
Summit

October 31
Amsterdam,
The Netherlands
www.demolitionsummit.com

International Tower
Cranes Conference

November 5
Berlin,
Germany
www.khl.com/itc

ICEF International
Construction Economic
Forum

November 20 - 22
Amsterdam,
The Netherlands
www.khl.com/icef

2014

Intermat Middle East

January 14 - 16
Abu Dhabi,
UAE
www.intermatme.com

World of Concrete

January 21 - 24
Las Vegas, USA
www.worldofconcrete.com

ConExpo-Con/Agg

March 4 - 8, 2014
Las Vegas, USA
www.conexpoconagg.com

Cement competition penalties in Belgium

Competition Council imposes fines of €14.7 million on producers and associations for restricting competition

Three cement producers and two associations in Belgium have been hit with penalties totalling €14.7 million for restricting access to the Belgian market to new entrants.

The fines were imposed by the Belgian Competition Council (BCC), which said that Belgian subsidiary of producer HeidelbergCement, CBR, together with the Belgian subsidiary of Italcementi, CCB, had colluded with fellow producer Holcim and the Federation of the Belgian Cement Industry (FEBELCEM), as well as the National Centre for Technical & Scientific Research for the Cement Industry (CRIC/OCCN), to restrict competition.

"These parties have concerted with each other, between May 2000 and October 2003, with a view to delaying the adoption of a licence and of standards making it possible to use ground granulated blast furnace slag (GGBFS) as a component of ready-mix concrete," the BCC said.

A FEBELCEM spokesperson said the association would investigate the BCC decision in detail. They said it was possible to launch an appeal within a month.

Holcim said its Belgian subsidiary would also consider whether to file an appeal, while CBR said it and its lawyers continued to assert that the actions of FEBELCEM and its members remained within the limits of a normal lobbying. CBR said it intended to file an appeal, adding that it was committed to strict compliance to the competition law.

However, Donal O'Riain, managing director of Orcem's parent company Ecocem Materials, welcomed the "historic decision".

"The tactic of competition discrimination in cement markets via manipulation of technical standards by the established industry leaders is widespread in Europe," O'Riain said, adding that the company planned to take legal action for compensation of several tens of millions of Euros against the cement companies concerned. **ce**

Signs of recovery for UK construction?

July's volume of construction output in the UK rose by 2.2% over the previous month, largely as a result of an increase in new work and a small rise in repair and maintenance.

Figures from the UK's Office for National Statistics (ONS) also showed that when comparing July 2013 with July 2012, construction output had increased by 2.0% thanks to a 5.8% increase in new work.

The news comes after statistics from the UK NHBC (National House-

Building Council) showed that house-building levels for July were 19% higher (13,539) than the same month last year (11,391).

Taking the rolling quarter into account (May to July 2013) the period reveals a 30% increase compared to the same period last year, with 37,738 new homes registered.

However, the UK government has been separately accused of seeming to lack the political will to tackle some major infrastructure issues head on.

UK businesses are concerned that two years of positive UK government infrastructure policy announcements will not translate into delivery on the ground, and could undermine the return to sustainable growth, according to a report released by the Confederation of British

Industry and professional services company KPMG.

The survey of 526 business leaders showed an improving UK infrastructure investment environment, but it found that two out of three firms (65%) believed that government policies would have no tangible impact, or even a negative one. **ce**

After two years of work, the largest tunnel boring machine (TBM) ever manufactured by Herrenknecht has achieved final breakthrough on the Sparvo Tunnel project in Italy. The 15.5m diameter earth pressure balance shield TBM – known as Martina – produced the shell of the 2.4km long dual-tube road tunnel, which runs between Bologna and Florence. The project is designed to reduce the traffic on the the Autostrada A1 in the future. Contractor Toto Costruzioni Generali began tunnelling in August 2011, reaching breakthrough on the first tunnel in July 2012. The TBM then turned 180° to start the second bore in December, completing the task in eight months.



BUSINESS NEWS

EIB gives approval to new investments

The European Investment Bank (EIB) has approved a string of new investments for construction projects around Europe. Loans totalling €450 million were signed to support Italian motorway operator Autostrade per l'Italia, €250 million of which will finance the upgrading of the 17km Firenze Nord-Barberino del Mugello Appenine stretch of the A1.

The remaining €200 million will support the operator's 2011 to 2016 network safety improvement programme of Italy's main motorway operator.

Meanwhile, the EIB approved a separate €300 million loan to support the modernisation of the metro operator Lille Métropole in France. The funds will help increase capacity on Lille's metro system, including the purchase of trains and the modification of the platforms at 18 stations on line 1.

In Poland, the upgrading of 92.5km of an existing electrified railway line from Warsaw to Radom is being supported by an EIB loan of €235 million to PKP Polskie Linie Kolejowe (PLK). The modernised line will allow for the introduction of trains running at a maximum speed of 160km/h for passenger trains and 120km/h for freight trains.

And a further loan of €230 million was approved to support the construction of new buildings at the VU University Campus in Amsterdam, the Netherlands. Existing buildings will be replaced, with new teaching and research faculties built alongside redevelopment of the main campus building. **ce**

Putzmeister names new CEO

Dr Gerald Karch has been named CEO of German concrete equipment manufacturer Putzmeister.

He will also sit on the board of parent Sany, which is based in China.

Karch succeeds Norbert Scheuch, who has left the company by mutual agreement after four years as CEO. Karch joined Putzmeister at the end of 2008 and was appointed to the management board in

early 2010. He previously held a series of management positions during a 14-year career at component manufacturer ZF.

Dietmar Feder, chairman of Putzmeister's supervisory board said, "I welcome Gerald Karch as the new CEO of our company.

"He has already been part of the management team during the last period of fundamental change at Putzmeister and I am convinced that he will continue the company's strategy of



Dr Gerald Karch joined Putzmeister at the end of 2008

international strength as a strong leader." **ce**

Dates and new venue for Plantworx 2015

The next Plantworx construction equipment exhibition will be held from 2 to 4 June, 2015, at Bruntingthorpe Aerodrome in Leicestershire, UK.

The inaugural event took place at Stoneleigh Park in May and attracted 11,000 visitors.

The area to be used for exhibits comprises a 1,450m runway

with a grass area for live demonstrations and digging between them. The gross area available is 333,500m² – about 45% of which is grass and 55% is hard standing.

According to Bruntingthorpe's management, the site also offers parking for more than 10,000 vehicles. **ce**

■ EUROPEAN RESHUFFLE

Holcim and Cemex have agreed a series of deals that will see both companies reorganise their European businesses. Holcim will take over Cemex assets in Western Germany in exchange for its operations in the Czech Republic and €70 million in cash. The two companies will also combine their operations in Spain, with 25% owned by Holcim and 75% by Cemex. Cemex said it expected to see a US\$20 million to US\$30 million (€15 million to €23 million) improvement in pre-tax profits from 2014 onwards. Holcim said its synergies would be around €20 million per year.

■ DREDGING TAKEOVER

Ackermans & van Haaren (AvH) and Vinci have reached an agreement for AvH to become the majority shareholder in Compagnie d'Entreprises CFE (CFE), while also enabling CFE to acquire full control over dredging and marine engineering firm DEME. CFE, in which Vinci owns a 46.84% stake, currently shares joint control of DEME with AvH. The new agreement will see AvH contributing its 50% shareholding in DEME to CFE for 12.2 million newly issued CFE shares, valued at more than €550 million. At the same time, Vinci will sell half of its stake in CFE (23.42%) to AvH. As a result of both of these transactions, CFE will become the sole shareholder of DEME, with AvH acquiring a 60.39% share in CFE.

■ COMPACT PARTNERS

JCB has announced a partnership with Kohler, which will see the manufacturer of small diesel engines supply three- and four-cylinder engines from 31kW to 55kW for the company's range of compact construction equipment. The water-cooled Kohler Direct Injection (KDI) engines, which will be branded JCB Diesel by Kohler, meet the forthcoming Tier 4 Final emissions regulations without the need for a diesel particulate filter.

■ SALES UP

Spanish contractor ACS reported first half sales of €19.1 billion, which was up 1.5% compared to last year, largely thanks to growth in international activity. The company – which owns contractor Hochtief – said international business represented 84.6% of its sales, with 39% generated in Asia Pacific, 34% in the Americas, 26% in Europe (of which 15% was generated in Spain). Net profit totalled €357 million for the first six months of the year.

■ BANKRUPTCY CONFIRMED

Danish contractor E Pihl & Søn has filed for bankruptcy, claiming that attempts to find a financial solution to secure the continued operation of the company had been in vain. One of Denmark's oldest contracting companies, it was founded in 1887 and has a presence in 15 countries. It blamed aggressive expansion, substantial claims against third parties and higher costs on projects for the decision.



Polish contractor crisis stalls big LNG project

Bankruptcy leads to Treasury pushing back completion date by six months

Poland's Treasury has been forced to push back the completion date of a major new liquefied natural gas (LNG) terminal for six months after a contractor bankruptcy and additional costs delayed the project.

The Ministry said the 5 billion m³ per year LNG Terminal in Swinoujscie on the Baltic Sea was now expected to be completed at the end of 2014.

It said the key reason for the delay was the "rising and current crisis in the construction market," as well as the bankruptcy of Polish company PGB, one of the members of the consortium building the project. The other members of the consortium are Saipem, and Technit.

Polskie LNG, the state-controlled client, said a further €67.5 million had been added to the cost of the original €714 million contract.

A wave of bankruptcies have affected Poland's construction sector, with around 300 companies going bust in 2012. On top of this, contractors complain of weak procurement controls.

In June, Spanish contractor FCC Construcción withdrew from a contract to build a ring road around the Polish town of Szczuczyn, blaming failures by the national road agency, the GDDKiA, in disclosing key information during the tender phase.

And this summer also saw six European ambassadors write to Poland's Deputy Prime Minister Janusz Piechociński expressing concern over claims that PLN10 billion (€2.35 billion) worth of construction claims were pending before Polish courts.

They said this indicated some "fundamental and systematic challenges connected with the execution of major infrastructure projects in Poland". **ce**

Europe's construction output fell in July

Construction output in Europe fell year-on-year in July, according to the latest data from Eurostat.

Seasonally-adjusted output in the Eurozone was down 1.2% compared to July 2012, while output across all member states (EU28) fell 1.1%.

The strongest year-on-year declines were

registered in Portugal (-16.3%), Bulgaria (-6.9%), Slovakia (-6.8%) and Poland (-6.4%). The highest increases were seen in Romania (14.2%), Spain (2.9%), Hungary and the UK (both 2%).

In terms of sectors, building construction output decreased 1.0% year-on-year in both the Eurozone and the EU28,

while civil engineering output dropped 2% in the Eurozone and 2.3% in the EU28.

However, growth was reported on a month-on-month basis. Comparing July with June this year, construction output increased 0.3% in the Eurozone and was also up 0.7% in the EU28.

The strongest month-on-month increases were registered in Romania (8.6%), Portugal (5.1%), Poland (5.0%) and the Czech Republic (4.9%). Decreases were observed in Sweden (-4.1%), Spain and Hungary (both -1.6%), and Slovenia (-0.5%).

Building construction output increased 1.1% in the Eurozone between June and July, and 1.3% in the EU28. Civil engineering output was down 0.2% in the Eurozone, but rose 0.5% in the EU28. **ce**

An iPad app has been launched by the Spanish Association of Equipment Manufacturers for the Construction & Mining Industries (ANMOPYC). Designed to provide information about association members and promotional

activities, the new app is available to download for free via iTunes. The app offers information on ANMOPYC as well as linking directly to the association's social network profiles on YouTube, LinkedIn, Twitter and Facebook. The app also links to the ANMOPYC blog.



KHL.COM



Market outlook is examined in video

A new video evaluating the construction market in Europe is now available on the khl.com Video Zone.

Sandy Guthrie, editor of *Construction Europe* (CE), takes a quick look at the region and assesses how the various markets are faring, as well as highlighting Europe's position from a global perspective.

The construction markets in Europe have been having a tough time during the economic crisis of the past few years, with some countries weathering the storm better than others.

Pulling together figures from a variety of sources, the video gives an idea of where the construction markets of Europe stand, and which direction they might be going in the future.

In addition to the European market outlook, a new video assessing prospects for the global construction industry this year and in 2014 is also available on the khl.com Video Zone.

Chris Sleight, editor of CE's sister publication *International Construction*, presents the video, which has a focus on key international regions and hotspots in emerging markets.

To view either video, go to www.khl.com/videozone and search for 'outlook'. The videos will also appear in the right-hand column, which shows the latest uploads.

To go straight to the CE market outlook video on your smart phone or tablet device, scan the QR code on the right.



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

MIDDLE EAST & AFRICA

The Islamic Development Bank (IDB) has approved a package of funding totalling US\$747 million (€553 million) to support development projects across the Middle East and Africa. The bank will fund a range of projects including Tunisia's Rades-C combined cycle power project, which it said would receive the largest single award at US\$200 million (€148 million). Other large awards included US\$190 million (€141 million) for a sanitation improvement project in Iran, while Burkina Faso is set to receive US\$100 million (€74 million) in funding to support the construction of new airport to serve the capital Ouagadougou.

INDIA

Cement producer Jaiprakash Associates has agreed to sell a 4.8 million tonnes a year capacity unit in Gujarat to UltraTech Cement for INR3,800 crore (€444 million). UltraTech is India's largest cement producer by capacity, and the deal will see the amount it can produce per year rise to 59 million tonnes. News of the acquisition comes after Irish producer CRH ended negotiations with Japyeer – the parent company of Jaiprakash – in October last year over a possible deal to purchase its facilities in Gujarat.

US

Private equity firm Clayton, Dubilier & Rice is to merge two of the world's biggest scaffolding and formwork businesses after simultaneously acquiring Harsco Infrastructure from Harsco and Brand Energy from First Reserve. The new combined business will have total sales of US\$3 billion (€2.2 billion) and will be run under the Brand Energy & Infrastructure Services name from its current US head office. Brand chairman and CEO Paul Wood will take charge of the combined business, with other directors coming from both companies.

SOUTH AFRICA

A three-week strike by 90,000 construction workers in South Africa has come to an end with a 12% pay deal being agreed between the South African National Union of Mineworkers (NUM) and the South African Federation of Civil Engineering Contractors (SAFCEC). Negotiating for construction workers, NUM had demanded an increase from the minimum monthly wage from ZAR4,400 (€326) to ZAR 5,500 (€407), a 25% increase. The union had previously rejected 8% and 10% pay increase offers. For its part, SAFCEC has said that any wage increases must be accompanied by an increase in productivity.

ARGENTINA

The Inter-American Development Bank has pledged funding worth US\$1.5 billion (€1.1 billion) to support work on the country's rail network. It said a US\$1.2 billion (€888 million) credit line would be used to finance a programme to improve the country's metropolitan railroads, while a US\$300 million (€222 million) loan will be used to improve the Plaza Constitución to La Plata branch of the General Roca Railroad, in the Buenos Aires metropolitan area.

GLOBAL

Currency changes hit international costs

Rising Chinese Yuan impacts building materials costs worldwide

Cost fluctuations were the dominant factor in driving relative construction costs over the last 12 months, according to consultant EC Harris' 2013 International Construction Costs report.

The findings were based on benchmark building costs in 47 countries around the globe. EC Harris said the fall of the Japanese Yen and Australian Dollar along with the appreciation of the Chinese Yuan had a significant impact.

Simon Rawlinson, head of strategic research and insight at EC Harris, said the fall of the Yen and the appreciation of the Chinese Yuan had had a particular impact. "This not only makes Chinese imported materials to other countries more expensive, but has also contributed to China moving nearly half way up the global (cost) rankings."

On the other hand, the fall in demand for commodities in many emerging markets has seen other costs drop, particularly those for metallic building materials.

The ten most expensive countries to build in are, Hong Kong, Switzerland, Denmark, Sweden, Macau, Australia, Japan, France, Singapore and Belgium. In Hong Kong, construction costs are 1.42 to 1.68 times what they are in the UK – the benchmark. The cheapest countries are India, Indonesia, Vietnam, Morocco and Malaysia. In India, the cheapest of all, costs are just 0.29 to 0.34 what they are in the UK. **ce**

JAPAN

Further Fukushima nuclear containment planned

The Japanese government has announced a series of measures to deal with on-going contamination of groundwater at the stricken Fukushima nuclear power plant.

These include sinking frozen soil walls around the perimeter of the plant, lowering groundwater levels upstream of the facility and paving the surface

of the contaminated area with asphalt.

The Japanese government has said it will fund the most urgent measures, including the frozen soil wall. The budget for this work has been put at JPY47 billion (€348 million).

Soil freezing involves sinking boreholes into the ground and then circulating coolant through them to create

a contiguous cut-off wall. With a total length of some 1,000m and a depth of 27m, the project is thought to be the largest ever application of soil freezing.

The Fukushima plant was damaged beyond repair in a 2011 magnitude 9.0 earthquake and tsunami. The asphalt paving containment is expected to start in October. **ce**

Due for completion in 2019, the 80,000 seat Kasumigaoka National Stadium will be built on the site of Tokyo's 1964 Olympic Stadium, ahead of the 2020 Summer Games.

Construction of venues and infrastructure for the 2020 Summer Olympics in Tokyo, Japan is expected to cost US\$4.54 billion (€3.36 billion). Tokyo, which previously hosted the summer games in 1964, beat-off alternative bids from Madrid, Spain, and Istanbul, Turkey.



CANADA

Former SNC-Lavalin executive charged

Royal Canadian Mounted Police also make arrests in connection with Padma scandal

Former SNC-Lavalin executive Kevin Wallace has been charged with bribing a foreign official by the Royal Canadian Mounted Police (RCMP). The charges relate to the Padma Bridge project in Bangladesh, where SNC-Lavalin was to have acted as the client's engineer.

However, funding for the US\$2.9 billion (€2.1 billion) scheme was withdrawn by the World Bank and others following allegations of corruption by SNC-Lavalin.

Wallace, along with Zulfiquar Ali Bhuiyan, a Canadian citizen, and Abul Hasan Chowdhury of Bangladesh, have been charged under Canada's Corruption of Foreign Public Officials Act. The RCMP previously charged two former SNC Lavalin employees, Ramesh Shah and Mohammad Ismail, both based in Canada, as part of the same on-going investigation.

Wallace was released with conditions and a promise to appear in court at a later date. He left the SNC-Lavalin in December, and in June launched a case for wrongful dismissal, claiming he knew nothing of the corruption charges and had been made a scapegoat by the company. SNC-Lavalin has not made any comment.

Allegations that SNC-Lavalin bribed Bangladeshi government officials to win work on the bridge first surfaced in mid-2011. The World Bank referred its concerns over bribery on the project to the RCMP in September of that year. April this year saw SNC-Lavalin receive the biggest sanction for bribery in the World Bank's history with a 10-year ban from working on projects it funds. **ce**

US

Xtreme buys Snorkel share

Manufacturer Snorkel is to return to US ownership with a proposed deal that will see the majority of the business transferred to Las Vegas-based Xtreme Manufacturing, with Tanfield retaining a 49% share.

Xtreme is a telehandler manufacturer owned by Don Ahern, also owner of Ahern Rentals in Las Vegas.

Under the deal, loss-making Snorkel will be transferred to a new company, Snorkel International Holdings,

with Tanfield retaining a 49% share. Subject to Snorkel making profit targets within five years, Tanfield will be paid US\$50 million (€37 million). Tanfield's share would then fall to 30%, which it would have the option to sell. **ce**

The inaugural Bauma Africa exhibition in Johannesburg, South Africa, has been hailed as a success by Elaine Crewe, CEO of organiser Messe München International (MMI) South Africa, who confirmed plans for a second show in 2015. "We plan to hold the next Bauma Africa in two years' time. The first exhibition attracted 754 exhibitors from 38 countries," Crewe said. A total of 14,700 registered trade visitors from more than 110 countries attended the event. The show, which ran from 18 to 21 September, took up more than 60,000m² of exhibition space, triple the 20,000m² that MMI first expected to use when it planned the exhibition.



WORLD IN BRIEF

HONDURAS

Lafarge is to sell its cement operations in Honduras to Cementos Argos. The deal is worth €435 million and Lafarge will receive €232 million for its 53.3% stake in the company. The assets being sold comprise a 1 million tonne per year cement plant and a 300,000 tonnes per year grinding facility. This is not the first time Lafarge has divested assets to Cementos Argos. In May 2011 it sold a series of cement plants in the south-east US to the Colombian company for US\$750 million (€555 million).

INDIA

Leighton Welspun Contractors, part of the Leighton Asia, India and Offshore Group, has been named main contractor for Indian developer DLF's latest luxury project, The Camellias, in Gurgaon. The AU\$246 million (€163 million) contract will see Leighton construct nine tower blocks of between 19 and 38 floors with three continuous basement levels, totalling 431 apartments. The site will boast a built-up area of 406,000m², which Leighton will also landscape.

PANAMA

The first four 2,812 tonne gates for the new locks of the Panama Canal have arrived on the mega project's construction site. According to the Panama Canal Authority, the development is now 62% complete. Built by subcontractor Cimolai, the first four steel gates are 57.6m long, 10m wide and 30.19m high, and weigh an average of 3,100 tons (2,812 tonnes). They will be installed in the middle chamber of the new locks in the Atlantic side. Work on the US\$5.25 billion (€3.89 billion) scheme to construct a third set of locks for the canal started in 2007 and is scheduled for completion by the end of 2014.

US

A consortium comprising Shimmick Construction Company (40%), FCC (30%) and Impregilo (30%) has begun work on the Gerald Desmond Bridge at the Port of Long Beach, near Los Angeles, US. On completion, it will have the tallest span height for a cable-stayed bridge in the US. The US\$650 million (€481 million) design and build contract was awarded in July 2012. The project is expected to take four years to complete from the award date, with the bridge due for completion in mid-2016. The bridge will be a 305m span cable-stayed structure, with 61m of vertical clearance above the Port's Back Channel.

SAUDI ARABIA

Parsons Brinckerhoff and Fluor have won the contract to provide project management consulting services for the design and construction of a new rail line between the Red Sea and Persian Gulf in Saudi Arabia. The Saudi Landbridge project is a 950km double-track railway connecting Jeddah on the Red Sea – the busiest port in Saudi Arabia and a major gateway for cargo from Europe and North America – with the city of Riyadh. The new railway will connect with the existing 450km line between Riyadh and King Abdul Aziz Port at Dammam – another major commercial port in Saudi Arabia – on the Gulf coast. The state-funded project also includes a new 115km extension between Dammam and Jubail.

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HITACHI



Delaying the inevitable

A spurt in stock markets around the world in September took the European construction sector to its highest for more than two years.

Chris Sleight reports

The statement from the US Federal Reserve in mid-September that it would continue its quantitative easing (QE) stimulus programme gave stock markets around the world fresh impetus.

The European construction sector enjoyed a broad rally along with the other equities, taking the CET Index to its highest level since May 2011.

Prior to the Fed's announcement on September 18, there had been concerns that it would start to wind-down the QE programme, which currently sees it buy-up bonds and other assets at a rate of some US\$85 billion (€63 billion) per month.

However, Federal Reserve chairman Ben Bernanke said he would delay the so-called tapering of QE because unemployment in the country was still high. In addition, congress was squabbling over forthcoming budget deadlines

and mortgage rates were rising.

Although the markets will have to come to terms with the gradual turning-off of the QE tap at some point, September's news provided something of a boost. The Dow jumped back above the 15,000-point market to finish week 38 at 15,451 points, a 3.26 improvement on its position four weeks earlier.

The FTSE 100 was more subdued with a 2.20% rise, while other European indicators, the DAX and CAC40 for example, were more bullish with 3.34% and 4.23% rises respectively. Most striking of all was the 7.92%

rise for the Nikkei 225 in Japan, which also enjoyed something of a lift with the news that Tokyo had been selected to host the 2020 Summer Olympics.

Against this backdrop the European construction sector performed well. The CET Index for the whole industry was up 6.18%, and the gains were evenly spread across three sectors. Contractors' shares were up 6.13%, as measured by the CEC Index, materials producers (CEM Index) were up 6.17% and equipment manufacturers in the CEE Index saw a 6.21% gain.

Such a broad and concerted >

EQUIPMENT MANUFACTURERS

| Company | Currency | Price at start | Price at end | Change | Change (%) |
|--------------------------|----------|----------------|---------------|--------------|-------------|
| CEE Index | | 239.86 | 254.76 | 14.90 | 6.21 |
| Astec Industries | US\$ | 35.47 | 36.36 | 0.89 | 2.51 |
| Atlas Copco (A) | SEK | 179.70 | 190.70 | 11.00 | 6.12 |
| Bell Equipment | ZAR | 23.00 | 23.30 | 0.30 | 1.30 |
| Caterpillar | US\$ | 84.17 | 84.75 | 0.58 | 0.69 |
| CNH | US\$ | 48.63 | 48.44 | -0.19 | -0.39 |
| Deere | US\$ | 83.25 | 83.82 | 0.57 | 0.68 |
| Doosan Infracore | WON | 14000 | 16900 | 2900 | 20.71 |
| Haulotte Group | € | 7.07 | 8.87 | 1.80 | 25.46 |
| Hitachi CM | YEN | 1997 | 2343 | 346 | 17.33 |
| Hyundai Heavy Industries | WON | 217500 | 266000 | 48500 | 22.30 |
| Kobe Steel | YEN | 161 | 179 | 18 | 11.18 |
| Komatsu | YEN | 2245 | 2572 | 327 | 14.57 |
| Kubota | YEN | 1365 | 1555 | 190 | 13.92 |
| Manitou | € | 10.55 | 12.20 | 1.65 | 15.64 |
| Manitowoc | US\$ | 21.17 | 20.04 | -1.13 | -5.34 |
| Metso | € | 29.32 | 31.20 | 1.88 | 6.41 |
| Palfinger | € | 25.50 | 26.15 | 0.65 | 2.57 |
| Sandvik | SEK | 88.10 | 93.85 | 5.75 | 6.53 |
| Tadano | YEN | 1440 | 1460 | 20 | 1.39 |
| Terex | US\$ | 30.97 | 34.37 | 3.40 | 10.98 |
| Volvo (B) | SEK | 97.95 | 103.00 | 5.05 | 5.16 |
| Wacker Neuson | € | 10.60 | 10.57 | -0.03 | -0.28 |

Period: Week 34 - 38

CONTRACTORS

| Company | Currency | Price at start | Price at end | Change | Change (%) |
|--------------------|----------|----------------|---------------|-------------|-------------|
| CEC Index | | 138.99 | 147.51 | 8.52 | 6.13 |
| Acciona | € | 40.20 | 41.79 | 1.59 | 3.96 |
| ACS | € | 22.42 | 23.50 | 1.08 | 4.82 |
| Astaldi | € | 5.86 | 6.30 | 0.44 | 7.60 |
| Balfour Beatty | UK£ | 2.515 | 2.777 | 0.262 | 10.42 |
| Ballast Nedam | € | 11.45 | 12.10 | 0.65 | 5.68 |
| Bam Group | € | 3.70 | 3.80 | 0.10 | 2.68 |
| Bauer | € | 18.41 | 18.23 | -0.18 | -0.98 |
| Bilfinger | € | 72.88 | 75.43 | 2.55 | 3.50 |
| Bouygues | € | 23.67 | 26.95 | 3.28 | 13.86 |
| Carillion | UK£ | 2.881 | 3.170 | 0.29 | 10.03 |
| Eiffage | € | 44.04 | 40.99 | -3.05 | -6.93 |
| FCC | € | 13.95 | 14.25 | 0.30 | 2.15 |
| Ferrovial | € | 13.13 | 13.37 | 0.24 | 1.83 |
| Hochtief | € | 55.14 | 62.38 | 7.24 | 13.13 |
| Impregilo | € | 3.44 | 3.46 | 0.02 | 0.64 |
| Keller Group | UK£ | 11.100 | 10.770 | -0.330 | -2.97 |
| Kier | UK£ | 14.916 | 16.510 | 1.594 | 10.69 |
| Lemminkäinen | € | 15.02 | 15.20 | 0.18 | 1.20 |
| Morgan Sindall | UK£ | 6.835 | 7.405 | 0.570 | 8.34 |
| Mota Engil | € | 2.74 | 2.87 | 0.13 | 4.90 |
| NCC (B) | SEK | 171.70 | 191.10 | 19.40 | 11.30 |
| OHL | € | 27.43 | 28.34 | 0.91 | 3.32 |
| Peab (B) | SEK | 36.89 | 38.70 | 1.81 | 4.91 |
| Sacyr Vallehermoso | € | 2.92 | 3.45 | 0.53 | 18.28 |
| Skanska (B) | SEK | 122.30 | 126.90 | 4.60 | 3.76 |
| Strabag SE | € | 17.33 | 18.49 | 1.16 | 6.69 |
| Taylor Wimpey | UK£ | 1.046 | 1.019 | -0.027 | -2.60 |
| Tecnicas Reunidas | € | 34.23 | 35.52 | 1.29 | 3.77 |
| Trevi Group | € | 6.28 | 6.40 | 0.12 | 1.91 |
| Veidekke | NOK | 46.00 | 47.00 | 1.00 | 2.17 |
| Vinci | € | 40.28 | 43.10 | 2.82 | 7.00 |
| YIT | € | 10.83 | 10.59 | -0.24 | -2.22 |

Period: Week 34 - 38

gain has been rare over the last two years, and the surge was enough to take the sector to a two-year high.

In fact, at 183.3 points, the CET Index is within striking distance of its post-recession high of 191.16 points, set in April 2011. Another 4.5% gain or so would see it pass this high water mark.

However, it is still a long way from the all-time high of 247.65 points, set in mid-2007. It would need to see growth of another 35% of growth to achieve these giddy heights once again.

This figure illustrates that while benchmark equity indexes like the Dow have benefited from being safe havens over the last year or so, real-world shares like those in the construction industry still reflect a much less buoyant and much less profitable world than was seen in the boom years.

concerned, with the last few sets of half-year financial results coming in towards the end of August. However, one event of note concerned the takeover of Impregilo by Salini – a deal which edged closer to its conclusion with both companies' shareholders approving the merger plan.

In the materials sector it was a similar story, with a handful of companies posting notably strong gains – CRH, Lafarge and Titan – and a few losing ground – Cemex and Vicat.

Investors in the sector seemed to have digested plans announced in late August by Cemex and Holcim to swap some businesses in parts of Europe and combine their efforts in Spain.

Lafarge's rise meanwhile would tend to suggest approval for the company's plan to sell out of its businesses in Honduras – a deal that would net it €232 million, subject to regulatory approval.

The buyer, Columbian group Cementos Argos, is the same company Lafarge sold a series of cement plants in south-east US to in May 2011 for US\$750 million (€555 million).

MATERIALS PRODUCERS

| Company | Currency | Price at start | Price at end | Change | Change (%) |
|----------------------|----------|----------------|---------------|-------------|-------------|
| CEM Index | | 145.04 | 153.99 | 8.95 | 6.17 |
| Buzzi Unicem (Ord) | € | 11.29 | 11.78 | 0.49 | 4.34 |
| Cemex (CPO) | MXP | 15.88 | 15.17 | -0.71 | -4.47 |
| Cimpor | € | 3.10 | 3.11 | 0.01 | 0.32 |
| CRH | € | 16.29 | 17.95 | 1.66 | 10.16 |
| Heidelberg Cement | € | 54.61 | 57.97 | 3.36 | 6.15 |
| Holcim | CHF | 66.25 | 69.10 | 2.85 | 4.30 |
| Italcementi | € | 5.30 | 5.54 | 0.24 | 4.53 |
| Kone (B) | € | 62.40 | 67.55 | 5.15 | 8.25 |
| Lafarge | € | 47.40 | 52.69 | 5.29 | 11.17 |
| Saint-Gobain | € | 35.61 | 37.99 | 2.38 | 6.68 |
| Schindler (BPC) | CHF | 130.10 | 133.20 | 3.10 | 2.38 |
| Schneider Electric | € | 59.74 | 64.63 | 4.89 | 8.19 |
| Titan Group (Common) | € | 14.23 | 17.55 | 3.32 | 23.33 |
| Vicat Group (Common) | € | 51.76 | 51.63 | -0.13 | -0.25 |
| Wienerberger | € | 11.25 | 12.14 | 0.89 | 7.90 |
| Wolseley | UK£ | 33.230 | 33.730 | 0.500 | 1.50 |

Period: Week 34 - 38

BROAD GROWTH

But back with the last month's developments, and as the headline numbers suggest, weeks 34 to 38 were broadly good for the construction sector.

Balfour Beatty, Bouygues, Carillion, Hochtief, Kier, NCC and Sacyr stood out among contractors with their double-digit percentage gains, while only a handful of companies in the CEC Index – Eiffage, Keller, Taylor Wimpey and YIT – saw their stock market value fall.

It was a fairly quiet month as far as news in the sector was

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RESERVE CURRENCIES

| | Beginning of period | End of period | Change | Change (%) |
|---------------|---------------------|---------------|---------|------------|
| British Pound | 0.8554 | 0.8425 | -0.0129 | -1.51 |
| Japanese Yen | 131.96 | 133.66 | 1.69 | 1.28 |
| Swiss Franc | 1.2343 | 1.2328 | -0.002 | -0.12 |
| US Dollar | 1.3340 | 1.3513 | 0.0173 | 1.30 |

EUROPEAN CURRENCIES

| | Beginning of period | End of period | Change | Change (%) |
|------------------|---------------------|---------------|---------|------------|
| British Pound | 0.8554 | 0.8425 | -0.0129 | -1.51 |
| Bulgarian Leva | 1.9556 | 1.9561 | 0.0005 | 0.03 |
| Czech Koruna | 25.69 | 25.86 | 0.175 | 0.68 |
| Danish Krone | 7.4594 | 7.4577 | -0.0017 | -0.02 |
| Hungarian Forint | 298.93 | 298.44 | -0.49 | -0.16 |
| Norwegian Krone | 8.1256 | 7.9915 | -0.1341 | -1.65 |
| Polish Zloty | 4.2403 | 4.2253 | -0.0150 | -0.35 |
| Romanian Lei | 4.4350 | 4.4758 | 0.0408 | 0.92 |
| Swedish Krona | 8.7191 | 8.5960 | -0.1231 | -1.41 |
| Swiss Franc | 1.2343 | 1.2328 | -0.0015 | -0.12 |

Period: Week 34 - 38

The equipment sector was perhaps more volatile, with a handful of much sharper gains than seen among contractors and materials producers. Doosan, Haulotte and Hyundai were up more than 20%, and there were other double-digit gainers in the shape of Hitachi, Kobe Steel, Komatsu, Kubota, Manitou and Terex. The only fallers in the sector were CNH, Manitowoc and Wacker Neuson.

With such a strong upside, it may seem surprising the sector as a whole did not move up further. However, the problem lay with the high capitalisation companies that are the centre of gravity of the segment.

Caterpillar for example, which accounts for about 20% of the CEE, gained only 0.69%, and the next biggest player by capitalisation – Deere – moved by an almost identical 0.68%.

CURRENCIES

September was a mixed month for the Euro, with a 1.51% loss against the British Pound and a slight slip of 0.12% against the Swiss Franc. However, there was notable strengthening against the other reserve currencies.

The Euro put on 1.30% against the US Dollar to take it to just over €1 = US\$1.35, about its highest all year.

The 1.28% rise against the Yen meanwhile, took the Euro to its highest for more than two years, at €1 = JPY133.7. That can be compared to mid-2012 when the rate was as low as €1 = JPY96 – so nearly a 40% appreciation for the Euro in around 14 months.

Even if Quantitative Easing is withdrawn slowly, it will take a lot of real-world growth to replace it

The relative strength of the Euro is surprising given that the Euro area is by far the weakest economy of the three. While it struggles to climb out of recession, the US is well on the road to recovery, and Japan is benefiting from the stimulus of Abenomics.

But both these policies have a huge amount of QE at their heart, while the European Central Bank has been fairly restrained in its money printing. The downside of QE, of course, is that it devalues the currency by increasing the supply of money, and this seems to be a key factor in exchange rates at the moment.

OUTLOOK

September's stay of execution on tapering was a boost to the markets, but sooner or later investors are going to have to learn to live without QE in the US. What kind of impact this would have on the economy is debatable. The first point is that

CE BAROMETER

Improvement continues

Confidence in the European construction strengthened in September according to the results of the CE Barometer survey.

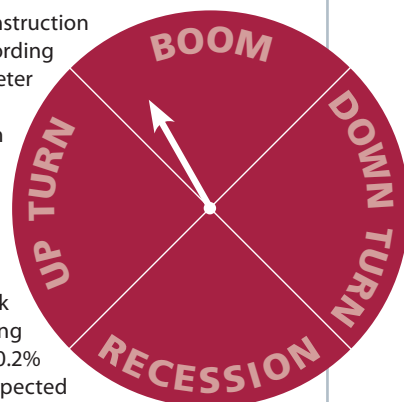
The improvement followed an encouraging up-tick in August, but overall the recovery – if it is one – still looks fragile.

One of the most noticeable improvements was the improved sentiment about the future outlook for the industry. Already strong in August with a balance of +30.2% of respondents saying they expected activity levels to increase over the next 12 months, September's survey saw that figure jump once again to a balance of +42.2%. The balance figure is the percentage of positive responses, minus the number of negative ones.

Another important indicator was the fact that 2.4% of respondents said they now found activity levels were higher than 12 months ago. Although not positive by a convincing margin, it was the second month running that this measure was in the black, after sitting in negative territory since early 2012.

Respondents also said month-on-month activity picked up in September, with a balance of +9.6% saying they were busier this month than in August.

The strengthening of all three measures of confidence helped the CE Climate – a broad measure of the state of the industry – rise further, to +18.1%, from +12.2% in August. The last time it was at these heights was mid-2011. **ce**



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

the Fed has promised a gradual withdrawal of this stimulus, and has also said it is prepared to ramp it up again if economic growth falters.

On that score, the gradual withdrawal of QE shouldn't be a huge shock to the system. On the other hand, US\$85 billion

(€63 billion) per month equates to US\$1,020 billion (€756 billion) per year – equivalent to about 6% of US GDP. In fact, this figure represents at least 1% of the global economy. It is clear that, even if QE is withdrawn slowly, it will take a lot of real-world growth to replace it. **ce**

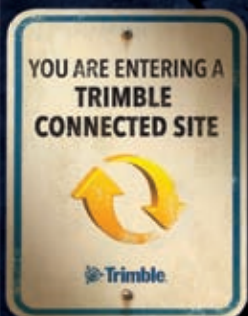
KEY INDEXES

| Index | Beginning of period | End of period | Change | Change (%) |
|-------------------|---------------------|---------------|--------|------------|
| CEE (Equipment) | 239.86 | 254.76 | 14.90 | 6.21 |
| CEM (Materials) | 145.04 | 153.99 | 8.95 | 6.17 |
| CEC (Contractors) | 138.99 | 147.51 | 8.52 | 6.13 |
| CET (Total) | 172.63 | 183.30 | 10.67 | 6.18 |
| Dow | 14964 | 15451 | 487 | 3.26 |
| FTSE 100 | 6433 | 6575 | 142 | 2.20 |
| Nikkei 225 | 13661 | 14742 | 1082 | 7.92 |
| CAC 40 | 4033 | 4204 | 171 | 4.23 |
| DAX Xetra | 8378 | 8658 | 280 | 3.34 |

Period: Week 34 - 38



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Navigating in the Gulf

There are opportunities in Qatar, but it is also good to understand the differences in contracts there, advises Paul Prescott, senior associate in Pinsent Masons' Qatar Branch

The 2022 World Cup and the Qatar National Vision 2030 have created a great opportunity for European contractors in the Gulf – it is probably sufficient to point out that an estimate of nearly €150 billion worth of projects in the capital Doha will be awarded in the run up to the World Cup.

This is good news for European contractors that are looking to do business in Qatar.

While no two projects are the same, many European contractors will encounter the standard form of contract published by the International Federation of Consulting Engineers, more commonly known by its French acronym, FIDIC.

The FIDIC standard form has been used in the Middle East since the 1970s. As most European contractors familiar with doing business in Qatar will probably know, the forms of contract that are predominantly used by major Qatari government procurers are based on FIDIC standard forms.

For the major infrastructure being procured by Qatar Railways Company, Ashghal (the Public Works Authority) and the Qatar 2022 Supreme Committee, all have adopted FIDIC or FIDIC-based contracts.

In spite of all that, the FIDIC standard form is frequently amended by particular conditions, which often impose significant,

wholesale adjustment to the standard FIDIC risk allocation, and go beyond the inclusion of project specific amendments.

In Middle Eastern FIDIC-badged contracts, amendments to the risk allocation can sometimes spread to such lengths that the contract effectively becomes bespoke.

This will often be problematic for contractors if the employer adopts a take-it-or-leave-it attitude and refuses to accept amendments to the conditions of contract if certain risks cannot be priced or programmed by contractors for specific projects.

There are a number of considerations that European contractors may wish to think about when tendering for works in Qatar.

Tender bonds, for example, are on bonds of an on demand nature and are typically 10% of the value of the contract to cover the tender period. They are required for governmental contracts under the Tenders & Bids Regulatory Law 2005.

Any tender submitted without a tender bond will be excluded by the Competent Tenders Committee, and any bid would be subsequently disqualified.

When it comes to site data and site issues, we frequently see significant risk transfer and responsibility for site data being passed to the contractor. This is sometimes the case even where

the contractor does not have design responsibility under the contract.

Contractors will have to make a decision on whether they can price and programme for the ground condition risk, even if they have not had sufficient time to verify any site data or carry out any site investigations during the tender period.

UNFORSEEN RISK

Contractors should consider whether unforeseen ground condition risk is one it can manage, or whether any amendments are required to the conditions of contract to deal with this type of risk. This may include setting out the impact it will have on their price and tender programme.

Contractors should also think what assumptions – if any – should be made to its technical and commercial bid to deal with unforeseen ground condition risk.

The Qatar Civil Code does not distinguish between penalties and liquidated damages. Quite often contracts refer to penalties instead of delay damages or liquidated damages for delay.

In order to be enforceable, liquidated damages provisions must, under the principles of Qatari law, reflect a genuine pre-estimate of loss likely to be suffered by the party which claims compensation.

The concept of decennial liability has its origins in the French Civil Code and is a ten-year strict liability guarantee which protects building owners if there is total or partial collapse, or any defects in the buildings or facilities which result in threatening their stability and strength.

As liability is strict, the building owner does not have to prove breach of contract or negligence on the part of the contractor in order to succeed in its claim. Under Qatar Law the decennial liability may still apply even if the building is not partly or totally

collapsed. Any defect which results in threatening the safety and stability of the building is enough to apply this type of liability. A defect might be a result of using defective materials, non compliance of the material used, wrong determination of the building base, or any other error in the construction of the building or the design.

While decennial liability benefits building owners, it poses a risk to certain European contractors who have not previously done business in Civil Code jurisdictions where this type of decennial liability applies. Contractors are sometimes unaware of its existence or its implications.

As there is no concept of the prevention principle or time at large under Qatar law, contractors should carefully check the grounds for making extension of time claims to the original time for completion date.

The procedure for dispute resolution is also subject to alteration, with frequent deletion of Dispute Adjudication Board provisions.

Certain government contracts select court proceedings over arbitration, or if arbitration is permitted there can be restrictions on a contractor being able to start arbitration proceedings until the works are taken over by the employer.

This may have cash-flow issues for contractors if they cannot bring a dispute at any time on claim for non-payment.

There is sometimes complacency among many European contractors working in Qatar and we put this down to over-reliance on FIDIC standard forms.

This often means contractors have been focusing too much on the technical and commercial aspects of their tenders, and not enough on the actual conditions of contract and the governing law.

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■ For more information on any legal or contractual issue, please contact Virginie Colaiuta at Pinsent Masons.

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Discussing future of public procurement

With the “modernisation exercise” on public procurement directives all but complete, FIEC assesses how successful this has been

The vote on Thursday 5 September in the Internal Market Committee of the European Parliament almost put a final full stop to the “modernisation exercise” of the EU public procurement directives, which has run since the European Commission adopted a package of legislative proposals in October 2011.

The very final stages of plenary vote by the European Parliament and endorsement by the Council are purely formal actions which are expected to occur by the end of the year. This means that the revised legislations can be published in the Official Journal of the EU in early 2014, and transposed into national law by the beginning of 2016 – that is, ten years after the deadline for transposition of the current directives.

Last month’s vote followed a political agreement which had been reached by the three European institutions – European Parliament, European Council and European Commission – at the end of June, after five months of intensive negotiations known as the trilogue.

The fact is, however, that these negotiations – which belong to informal procedures which EU institutions can use to accelerate the legislative process – are organised behind closed doors.

FIEC’s work proved extremely difficult because of this lack of transparency, as well as the overwhelming lobbying power of the public sector. This included cities, regions, public enterprises, etc, but also, of course, Member States in the Council, and MEPs in the Parliament, as they often have local mandates in parallel to their European activities. In addition, there was the high number of private sector representatives with diverging interests involved.

It has not been easy to make the voice of the construction sector heard in this cacophony and FIEC is quite disappointed about the outcomes, especially as from the very beginning, FIEC stressed that there was not sufficient experience for a revision, due to the late implementation of the current directives into national law.

CHANGES

In considering what will change and what will not, it is worth considering a few points focusing on the “classical” directive.

With contracts between entities within the public sector (article 11), the scope of “in-house” and “public-public co-operation” has been broadened considerably, so that important market shares will be awarded without transparent, competitive procedures.

Furthermore, such a public entity may undertake 20% of its activities for others, besides the controlling/awarding authorities, including private clients. Both these items provide unfair advantages to public entities, to the detriment of private enterprises.

On the principles of procurement (article 15), economic operators must comply with environmental, social and labour law, established by union law, national law, collective agreements or by a list of international agreements. This

is an obviously logical statement on which the Parliament’s Rapporteur strongly insisted.

With e-procurement (article 19), the new directive requires that electronic communication (e-submission) becomes the rule. However, a list of derogations remains and, moreover, the specific deadline for implementation of e-procurement, as originally proposed by the Commission, has been deleted.

While the Commission announced that the access of SMEs to public procurement markets would be rendered easier, time limits allowing entrepreneurs to respond to calls for tenders have been shortened considerably (articles 25 to 28). This is counter-productive, considering that the drawing up of good quality tenders takes time – especially for complex works contracts above the thresholds. This is likely to cause problems for SME contractors in particular.

While innovation belonged to the objectives of the Commission, the acceptance of variants remains constrained (article 43). That is, it will remain subject to the specific authorisation of the contracting authority, rather than being automatically accepted, except when the contracting authority specifically refuses them, as was requested by FIEC.

With the division into lots (article 44), the “apply or explain” principle will apply here. This means that contracting authorities will have to divide contracts into lots or explain in advance why they prefer not to. This provision belongs to those expected to promote the participation of SMEs in public procurement.

Also relating to an improvement in participation of SMEs to public procurement, self-declaration (article 57) in the form of a

“European Single Procurement Document” has to be accepted as preliminary evidence to prove the fulfilment of the selection criteria, and contracting authorities shall not require a document or certificate which they can access directly via national database in any Member State.

COMPLICATED

The wording of the award criteria (article 66) has become extremely complicated, while in reality, little has changed. The price and the most economically advantageous tender – which has become the “best price:quality ratio” – remain the two possible award criteria, together with a third criterion, the cost, which includes the life-cycle costing concept.

It is doubtful that this provision will be sufficient to turn contracting authorities away from their tendency to award contracts to the cheapest offers, to the detriment of quality.

Abnormally low tenders (ALT) are covered in article 69. The major problem of acceptance of ALTs by contracting authorities has not been addressed adequately, although this is faced by the construction sector and has been raised repeatedly in the debates by FIEC.

Provisions on ALTs have also not been made stricter. Neither mandatory identification criteria nor global mandatory rejection of ALTs is required.

As the idea of creating a strong legal framework for subcontractors has been the priority of the Parliament’s Rapporteur, the concepts of direct payment – from the client to the subcontractors – and of chain liability have been integrated in the directive (article 71). However, these two controversial provisions do in fact remain voluntary for Member States.

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The challenge facing concrete production

Looking towards safer, durable and more eco-friendly concrete, CECE member Unacea is promoting the premixing process in Italy

Concrete is the most widespread building material in the world with more than 2 billion m³ produced every year.

A mixture of aggregates, water and cement which forms the majority of building frames, concrete is achievable through different recipes and production techniques, depending on the type required.

The current European regulations on concrete production are based on the factory production control that confirms it is made in accordance with European standards, and with EU Regulation 305/2001 providing rules on the minimum percentage of the various ingredients, the minimum volume of aggregates and their diameter.

Therefore, there is thorough regulation with regard to the composition of the mixture, the selection of aggregates and the performance of the finished product. However, at the same time, there are no clear rules on the phases of production and then of the mixing of the concrete.

There is no harmonisation of the different production techniques among European countries, making it difficult to judge the pros and cons of the various types of concrete.

Industrial concrete is made through a cycle consisting of the different elements like aggregates, cement and water being placed with additives into tanks in the batching plant; mixing in the heart of the plant; transportation by the truck mixer; and distribution by pumps.

With premixing, all components are blended into a consistent and porous mixture, guaranteeing a wet and workable product.

However, in some European countries – Italy and Spain, for example – it is most common to avoid the premixing phase at the plant. Mixing takes place in the truck mixer where aggregates and water are directly combined.

The result of this dry cycle of production might be that chemical reactions are lacking which are usually triggered at the mixing plant, contributing to the production of a well moisturised and homogeneous concrete.

Furthermore, the dry concrete produced in the truck, which was conceived for the transportation

of mixed concrete, is causing more wear to the truck mixer itself, wasting fuel and creating unnecessary CO₂ pollution.

UNCOMMON

Despite the undeniable benefits in terms of product quality, the culture of premixing is still far from common in Italy. In order to support and to promote premixing, Unacea (the Italian construction equipment association and member of CECE) recently published a concrete equipment position paper.

It was presented on July 5, during a meeting of OCA (Osservatorio sul calcestruzzo e sul calcestruzzo armato) the Italian National Centre for Concrete.

Co-ordinated by the ministries in charge of infrastructure, labour and environment, as well as senior police and firemen, the Centre is an institutional body gathering all public and private stakeholders involved in the concrete industry with the purpose of developing joint rules and initiatives.

Members come from science, trade and labour unions, and environmental associations. OCA's goal is to establish an institutional communication channel which gathers data and technical information directly from the market, both to monitor the implementation of the technical rules on buildings and to provide information to all stakeholders.

During the last OCA meeting, Unacea reported that 85% of the concrete produced in Italy used the dry production method, and that the same can be seen in other Mediterranean countries too.

Paolo Salvadori, counsellor to Unacea and president of the CECE Concrete Commission, said, "It is necessary to introduce a system of incentives to encourage producers to change their production technology. Therefore, we are calling for the introduction of tax relief and

credit for companies that are equipping their plants with a mixer. Moreover, we are asking for the introduction of reward points in tender notices for companies that provide premixed concrete."

Supporting the premixing culture in the concrete production process is an important goal in all respects. In the wake of the EU plan for emission cuts, premixing would reduce the CO₂ emissions, using the concrete mixers just for the pre-mixed concrete's transportation.

From an economic point of view, the purchasing of a mixer is totally refunded, saving fuel and reducing unnecessary wear of the truck mixers.

Last but not least, the spread of the premixing method would mean the production of durable concrete and safer buildings materials.

IMPROVE SAFETY

With regard to concrete equipment, the Unacea paper contains several proposals calling on public authorities to improve the safety of operators and the legality of the system itself.

For example, Unacea proposes a reduction of the premiums of companies that make yearly checks on machines, and that employ cutting-edge safety technology; checking the wear of the machine with the legislation in force; the implementation of penalties for defaulting operators; and the extension of the compulsory training for the pumps operators to other equipment.

Finally, Unacea proposes the institution of a construction equipment registry so that the position, features, property and rate of obsolescence of those vehicles are available to the public authorities, providing more focused market surveillance, environmental protection and safeguards for workers. **ce**



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www.ucomesa.it

Unacea

www.unacea.org

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Helping to gain a competitive edge

Major international conference will be an opportunity to network and discuss key issues in the industry



Global construction's search for an increased competitive edge will be addressed at a major international conference being launched in Amsterdam, the Netherlands, this November, by KHL Group – the publisher of *Construction Europe* and its sister magazine, *International Construction*.

The conference will be bringing together key stakeholders in the global construction industry to discuss the critical role construction investment plays in economic development, and how the industry can become stronger and enable the next generation of major projects.

The International Construction Economic Forum (ICEF) is designed to give contractors

this competitive edge, through a programme of speakers and networking events covering key issues in the global industry.

The programme includes forecasts from IHS Global Insight, legal issues from Pinsent Masons, and the world of project finance as presented by HSBC, along with speeches from industry leaders and world-renowned figures.

The keynote speaker will be former Spanish Prime Minister José María Aznar, who will discuss infrastructure investment in austere times, with globalisation and the importance of Latin America among the topics.

Other speakers include leading CEOs from across the global construction industry supply chain, including Miguel Jurado

The speakers will include:

JOSÉ MARÍA AZNAR

The Spanish Prime Minister from 1996 to 2004, José María Aznar will give the keynote address at ICEF. He will speak about the challenges of globalisation and free trade, and how they relate to the international construction sector.

As well as exploring the power and purpose of globalisation, highlighting the ramifications for underdeveloped countries, Aznar will focus on building stability and encouraging development in Latin America, where Spain has many links.

At ICEF, he will explore the importance of infrastructure investment within the context of globalisation and the need for innovative finance models at a time of government austerity.

ZENG GUANG'AN

Zeng Guang'an is vice chairman and president of Guangxi LiuGong Machinery Co, overseeing all the company's operations and strategy. He also serves on the board of directors for Guangxi LiuGong Group Co.

He started his career in LiuGong Machinery



Co as an engineer in 1985. From 1992 to 1995, he was vice director of the chief engineer office in the company. He was then appointed vice president and promoted to his current role in 1999.

During his career, he has received numerous awards and honours. In 2009, he was elected as one of China's Top 10 Outstanding CEOs at the China CEO Summit Forum.

In 2010, the State Council of China awarded him the title of National Model Worker. In 2013, *International Business Daily* named him as one of Top Ten Business Men of the Year 2012.

MIGUEL JURADO FERNÁNDEZ

Miguel Jurado is general manager of FCC Construcción, a global infrastructure company headquartered in Spain, which operates under parent company Fomento de Construcciones y Contratas (FCC).

In 1988, Jurado joined FCC and held the positions of head of production, site manager and then production manager. In March 1997, he joined aqualia, FCC's water management company, where he held several top-level positions in operational management before being appointed vice president in 2005, continuing in this role until 2013.

In March 2013, he was named general manager of FCC Construcción, replacing Avelino Acero Díaz who was appointed corporate manager.

NORTY TURNER

Norty Turner, CEO of specialist rental company Riwal, will speak about the opportunities and challenges for equipment rental companies in an increasingly globalised construction market.

Before joining Riwal in 2012, Turner spent 17 years working for Hertz Equipment Rental Corporation (HERC), holding a variety of positions with increasing responsibility in sales, operations, and general management. His most recent position at HERC was that of vice president for Europe, Middle East & Africa (EMEA), based in France.

The Riwal Holding Group, established in 1968 and headquartered in The Netherlands, is an international rental specialist of aerial work platforms and power generators.

GREGORY J OWENS

Gregory J Owens, chairman and CEO, is responsible for online equipment auctioneer IronPlanet's development, refinement and execution of the company's overall business strategy and tactics.

Before joining IronPlanet, Owens served as managing director at Red Zone Capital, a Washington, DC, private equity firm focused on strong revenue growth opportunities. Previously, he was chairman and CEO of Manugistics Group, where he doubled annual revenues to US\$300 million for the supply chain management software company.





Fernández of contractor FCC Construcción, Zeng Guang'an of equipment manufacturer Liugong, and Norty Turner of rental company Rival, to name just three.

ICEF will also see the announcement of the International Construction Project of the Year Award, from a shortlist of five major schemes.

MORE EFFICIENCY

In times when money in both public and private sectors is tight, pressure is on construction clients, plus their project teams and manufacturing suppliers, to devise ever more efficient ways to deliver major projects.

For clients, it is these efficiencies that enable projects to go ahead that otherwise would be

left un-built, by reducing budgets and giving investors an acceptable rate of return.

But the key players in the construction supply chain – contractors, manufacturers, consultants, project managers – often operate on wafer-thin margins.

Therefore, world-class efficiency is critical. Survival and success means having a keen awareness of global best practice, from top-class project management to the equipment used on site. It requires detailed market knowledge in a fast-changing world, as well as the latest technological innovations.

ICEF will be an important meeting place for senior construction management from across the industry – from clients to equipment purchasing directors. **CE**

Before that, he served as global managing partner, supply chain management at Accenture, where he was a founding member of the company's supply chain group.

DAVID MILLER

David Miller is operations manager at global contractor Brookfield Multiplex. He has over 25 years' global experience covering construction and engineering projects.

In 1998, he joined Brookfield Multiplex, working on projects which included the Emirates Towers, the Taj Palace Hotel, the 50-storey residential UP Tower in Dubai, and Emaar's Dubai Marina Phase 1 complex.

Miller recently completed the prestigious and technically challenging twin 80-storey JW Marriott Marquis in Dubai – the world's tallest dedicated hotel and Marriott's flagship hotel in the Middle East – as project director. He is currently based in Doha, Qatar, on the complex Qatar National Library, which forms part of the Qatar Education City development.

VIRGINIE COLAIUTA

Virginie Colaiuta joined Pinsent Masons as a partner in 2011, having previously practised law in France. She is a member of both the New York and Paris Bars. Pinsent Masons is one of the world's largest legal firms in the construction sphere, counting over half of the world's 100 largest contractors among its clients.

SCOTT HAZELTON

Scott Hazelton is the director of the IHS Global Insight Construction & Manufacturing

Industries Practice. He developed and is responsible for the quarterly Global Construction Outlook as well as the US Construction Quarterly Briefing and the US Construction: State and Metropolitan Focus forecasts and commentary. He has also developed specific forecasting models for US renovation and infrastructure markets.

PAUL HOWARD

Paul Howard has been a consultant with Off-Highway Research since 2011. He has responsibility for quantifying and analysing several European markets, as well as conducting research further afield. In 2013, he will be analysing the emerging Mongolian market for construction machinery. Howard previously edited Off-Highway Research reports from China and India for five years.

PLUS

JULES JANSSEN

Treasurer of European International Contractors and head of Construction at Besix.

SIMON PURCHON

Business development director, mobile assets, Babcock International.

TREVOR STURMY

Head of infrastructure & PPPs, HSBC.

MURRAY POLLOK

Editor, KHL's *International Rental News*.

International Construction Awards 2013

ICEF will see the presentation of a series of prestigious awards recognising world-class achievements within the construction industry.

These will include the coveted International Construction Project of the Year award, for the delivery of an outstanding project with a construction value of US\$100 million or more, completed between January 2012 and June 30, 2013.

This winner will be chosen by a panel of expert judges, augmented by a poll conducted among readers of *International Construction*, sister publication to *Construction Europe*.

The shortlisted projects are:

- 1 Vidin-Calafat Bridge, Bulgaria/Romania (FCC).
- 2 Katupali Port, India (Larsen & Toubro)
- 3 Cognizant Technology Park, India (entered by Larsen & Toubro)
- 4 The Shard, UK (Mace Group)
- 5 JW Marriott Marquis Hotel, UAE (Brookfield Multiplex)

To vote, go to the awards section of www.icef.biz or scan the QR code to go straight to the voting page.



Other categories are:

- International Construction Project of the Year
- International Development Project of the Year
- International Environmental Project of the Year
- International Contractor of the Year
- ICEF Safety Management Award
- ICEF Construction Equipment Innovation Award
- ICEF Construction Supplier of the Year Award
- ICEF Construction Law Firm of the Year
- ICEF Project Finance Advisor of the Year

Conference details

ICEF will run from 20 to 22 November, 2013, at the Hotel Okura in Amsterdam, the Netherlands. For more information, visit www.icef.biz



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VOLVO CONSTRUCTION EQUIPMENT



A sector that is action-packed

A large number of new excavators have come to the market this year boasting advanced engines and hydraulics, safety improvements and hybrid designs. Helen Wright finds out more

So far, 2013 has been an action-packed year as far as the European excavator market is concerned, with at least 20 new machines have been unveiled by Hitachi alone, for example, including a new dash 5 range of excavators.

At the same time, Volvo has launched three new compact models as well as larger excavators tailored to specialist applications, including two ultra-reach machines for the demolition market. The company also inaugurated a new 20,660m² excavator factory in Kaluga, Russia.

Meanwhile, CNH and Kobelco have unwound their decade-long excavator joint venture, leaving Kobelco free to build up its sales and service network in Europe and elsewhere.

In addition, CNH-owned Case and sister brand New Holland also made waves with the introduction of their first Stage IV-compliant models – the 8 and 9 tonne class CX75 SR and CX80C from Case, and the E75C SR and E85C MSR from New Holland in the same weight classes.

STRICT EMISSIONS LAWS

The four new excavators use a range of exhaust aftertreatment systems to adhere to the strict EU Stage IV off-highway diesel exhaust emissions legislation that comes into force from the start of next year, replacing the current Stage IIIB laws and cutting the level of pollutants in exhaust gasses down to about the same level as the ambient air in many cities.

For its part, JCB claims to be alone in the industry in that it achieved the current Stage IIIB emissions requirement on its own Ecomax engines without the use of exhaust aftertreatment systems such as a diesel particulate filter (DPF) or selective catalytic reduction (SCR).

JCB is now fitting its Ecomax engine across its mid-range excavators from 11 to 22 tonnes. The company said that it was seeing fuel savings in the region of 10% compared to previous generations. It said that on a machine like the 22 tonne JS 220 tracked excavator working a 1,600-hour year, this could equate to savings of €5,200 over a three-year period, based on European diesel prices.

But while changing engine emissions legislation are having a major impact on the development of new machines, manufacturers are also focusing on a range of other factors to improve machines and push efficiency improvements forward at a very fast pace. >

Doosan's 15.3 tonne DX140LCR-3 is a model that it said meets an increasing demand for reduced radius machines





Volvo's new EC480DHR high reach demolition excavator - just one of a string of new excavators launched by the manufacturer

Hydraulic technology is a key example – and JCB has introduced upgrades here as well, with a focus on safety. The company is to fit its 2 Go hydraulic isolation system across its range of JS excavators as well as its mini and midi compact machines.

The technology is said to provide a secondary safety system. All JCB JS excavators

Excavating in Norway

Hitachi excavators are being put through their paces by two contractors in Norway. For instance, a new 30 tonne class ZX290LC-5 was assigned by contractor Farbu & Gausen to a tunnel construction project under a rail line in central Norway.

The ZX290LC-5's operator, Rune Brekstad, said he saw some significant improvements from the -3 to -5 series excavators. "The cab and working environment are excellent, especially with increased legroom in my case. There is less noise from the engine, I like the ergonomic design of the control panel and I have a better overall view of the job site from the cab," he said.

Meanwhile, Carl C Fon – another Norwegian contractor – has also invested in new -5 models, bought from local dealer Nasta. Adding to its fleet of 43 Hitachi excavators are the new ZX135US-5, ZX225USRLC-5, ZX250LC-5, ZX350LC-5, and ZX470LCH-5 models.

Carl C Fon owner Carl Christian said Nasta's aftersales performance was a key part of his decision. "We evaluate the service and maintenance costs, fuel efficiency and resale value of each Hitachi model before we decide to buy. The total cost of ownership is very important and we need to know what the situation will be after 10,000 hours. The purchase price of a Zaxis excavator is not as important as the on-going running costs and Hitachi products are strong in this respect."



A 30 tonne class Hitachi ZX290LC-5 at work on a tunnel project for contractor Farbu & Gausen

have a hydraulic isolator lever that is lowered when the operator is in the cab, to make the hydraulic circuits live and ready for use. However, with 2 Go, the operator has to make a secondary acknowledgment by pushing a switch on the main control screen.

This is said to ensure that if the servo levers are moved by accident while the operator is getting into the seat, there is no chance of the working end of the machine being operated.

Hydrema's latest excavator launches come in

the form of the new MX-series wheeled excavators, production of which started in August. There are three models – the 15 tonne class MX14, 17 tonne class MX16 and 19 tonne class MX18 – all of which are fitted with Stage IIIB-compliant engines.

Advanced hydraulics are also a feature on these models, which boast dual circuit load sensing and high pressure hydrostatic slew systems, and offer an eco-mode function as well.

Caterpillar product specialist Alexandre Favero also highlighted advanced hydraulics as a key contributor to fuel savings on the company's E-Series excavators. He said that, since the range was launched in 2011, customers reported fuel savings of around 5% and up to 10%, and up to 25% for the 336E H hybrid model.

ELECTRONIC CONTROLS

"On the E-Series, an additional electronic signal controls the oil flow therefore adjusting even more the delivery of power," said Favero. "The E-Series excavators use a back-to-back main control valve built of a single cast block. Auxiliary valves mounted on the top of the main valve are stackable. As a result, the E-Series auxiliary hydraulic lines and valve configuration can be simplified for reliability and to assist hydraulic retrofits."

He said the electronics on the hydraulic system enabled a finer adjustment of pump flow to suit the operator needs and, therefore, reduce wasted flow.

"Variable speed fans only burn when needed. The oil is warmer faster and helps reduce losses due to friction," said Favero. "The



Komatsu is the only company with a hybrid excavator in full production. The latest model is the 21.2 tonne HB215LC-1



JCB is now fitting its own Ecomax engine in its 11 to 22 tonne excavators. The power unit does not require any exhaust aftertreatment to achieve current emissions standards



Doosan has already adopted VBO for its DX340LC-3 and DX380LC-3 Stage IIIB compliant crawler excavators, where it is branded as D-Ecopower technology.

A 26% improvement in productivity and up to 12% in fuel savings is being claimed for the electronic pressure-controlled pump and closed centre hydraulic system, depending on the mode selected.

Fuel consumption was also a key focus for Doosan when it developed the new Stage IIIB-compliant, 15.3 tonne compact radius DX140LCR-3, which is said to deliver 11%

more power compared to the previous Stage IIIA compliant DX140LCR. It is also said to deliver up to a 5% increase in the productivity (m³/hour) to fuel consumption (litres/hour) ratio, depending on the operating mode >

machines also feature simpler hydraulic routes that are more direct, straighter and shorter."

Components suppliers to the industry are starting to offer off-the-shelf packages that include similar fuel-saving hydraulic elements.

Bosch Rexroth's new Virtual Bleed Off (VBO) system for example, is designed to provide just the right amount of hydraulic flow to a hydraulic circuit. Not only does this save fuel, but the company said it also makes for more comfortable operation and faster response.



Having dissolved its joint venture with CNH last year, Kobelcoc can now sell its excavators anywhere in the world

Hybrid delivery

Caterpillar's UK dealer Finning has delivered the first 336EH hybrid excavator in the UK to quarrying specialists William Thompson & Son.

The new 36 tonne machine will be put to work in the contractor's main quarry, where it is expected to save the company approximately £70,000 (€81,938) on fuel costs alone across five years.

Caterpillar claims the hybrid machine uses up to 25% less fuel compared to a standard Cat 336E, and up to 33% less fuel than the Cat 330D or 336D. Factoring in the current high costs of fuel, Finning believes that customers that invest in the Cat 336E LH could realistically expect to see a return on their investment in two years.

Alistair Murdoch from Finning said, "William Thompson & Son was initially taken aback by the additional £25,000 (€29,263) that it would pay for the machine. However, once we showed our calculations, the benefits were quickly apparent. The customer is confident that this hybrid solution will not just save them money, but also improve productivity at the quarry."

Caterpillar claims the hybrid machine uses up to 25% less fuel compared to a standard Cat 336E



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EXCAVATORS

selected and the work being undertaken.

Doosan said the overall reduction of fuel consumption was connected to the machine's improved cooling efficiency, resulting from the fitting of a new fan clutch with electrically-controlled fan speed.

Meanwhile, there is also a growing move towards augmenting traditional power sources. The most talked-about is hybrid technology, and this is an area where Komatsu has been a clear leader.

HYBRID SALES

Its first hybrid excavators were launched in 2008, and since then the company said it had sold more than 2,000 such 20 tonne class excavators, logging more than 1 million hours of work.

The latest version, the 21.2 tonne HB215LC-1, was on display at Bauma and the company said it offered 25% less fuel consumption and CO₂ emissions than a traditional excavator.

The machine achieves this by capturing energy that would otherwise be wasted in braking slewing movements of the upper structure. A generator is used to convert this energy to electricity, which is stored in a capacitor. This is available to rotate the upper structure back again or to assist the engine in other ways, as dictated by the on-board computer.

Komatsu is the only manufacturer to have an electrical hybrid excavator in production today, although other manufacturers including Doosan, Hitachi and Hyundai have



The 19 tonne class MX18 from Hydrema, part of a new Stage IIIB-compliant wheeled excavator range

exhibited prototype 20 tonne class hybrid excavators at various exhibitions over the last few years.

Liebherr also exhibited an interesting concept machine at Bauma incorporating numerous systems into a 40 tonne package. The R 9XX concept crawler features both electrical and hydraulic systems to capture and store waste energy, and Liebherr said it would make a 160kW diesel engine viable, whereas a standard power unit for a 40 tonne machine would normally be well over 200kW.

As well as capturing slew brake energy, Liebherr has devised a system to grab waste energy used to lower the boom and stick.

But there has not been a great flood of such

Liebherr's concept R9XX 40 tonne class hybrid features both electrical and hydraulic energy recovery systems



Attachment versatility

Contractor Garten- und Landschaftsbau Olaf Krause is using a Terex TW110 wheeled excavator for preparatory clearing work for a utility company in the Bielefeld district of Heepen, Germany.

Driver Michael Boehne used the 11 tonne machine with a Beha stone and recycling grab. "The TW110 can also work with sizes from 200mm for cable lines up to a 2.3m wide trench dipper. This means a formation level can be created, which serves as the basis of work for our colleagues," he said.

The machine features independent travel drive and working hydraulics, forming a closed hydraulic circuit, as well as a standard additional control circuit for work attachments.

machines into full production. Part of the reason for this may lie in the fact that global sales of excavators remain sluggish in the wake of the 2008 financial crisis.

Another issue that excavator buyers have to weigh-up is how quickly buying such a machine will pay off. Fuel consumption is lower, but the extra on-board technology inevitably means a higher purchase price.

COST BALANCE

This balance is something manufacturers are highlighting. For example, Volvo CE president Pat Olney said any machine the company produced would have to provide a strong business case for its customers.

"Our focus is on fuel efficiency and viability for the customer. We continue to research hybrids and we have a lot of experience in the group through Volvo Bus," said Olney.

He added, "When we bring something to the market, we want to make sure it is viable for our customers. We think we have some



good ideas, but we're not ready to talk about them yet."

This question of costs and benefits to the customer is what prompted Caterpillar to go down a different route in developing what it describes as a hybrid.

Although the dictionary definition of hybrid would imply a machine with a combination of energy systems on-board, Caterpillar takes a broader view and defines the hybrid technology in the excavators that it has

Increasing fleets

Case Construction Equipment reports healthy sales of its new C series, 13 tonne class CX130C excavator in the first six months of 2013.

UK contractor Tonbrie Construction bought a model from Case dealer Southern Plant to add to its fleet, which consists of six 130B excavators as well as other Case machines ranging from 3 to 8 tonnes.

Brian Hill, managing director of Tonbrie, said, "We purchased our first Case machine in 1992, and although we have tested and owned other models over the years, we consider Case products best meet our requirements in the sectors we operate within. This is why we opted for the Case CX130. We were impressed by its innovative design and fuel economy.

"We felt that, in comparison to other machines available within this category, the CX130C provided a more robust design and manufacture. It's important that our fleet is efficient, reliable and productive."

The C series boasts EU Stage IIIB-compliant engines and an intelligent hydraulic system.



UK contractor Tonbrie Construction bought a 13 tonne class CX130C from Case dealer Southern Plant to add to its fleet

developed as anything that can recover waste energy.

The company's 336E H is a 36 tonne class excavator featuring a hydraulic accumulator to capture waste energy, rather than more common electrical systems.

Caterpillar's global product manager for large excavators, Ken Gray, said, "In most places the 336E H costs about 9% more than the standard machine. The electric excavator would have to be about 30% more expensive than a standard machine."

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CONSTRUCTION



Keep on running

A pump has a variety of different functions on a construction site. Sandy Guthrie investigates some of the latest launches, and finds out how to keep them running

Choosing the pump for the job, like this from Atlas Copco, is important

Whether it is a dewatering or a slurry pump that is needed on site, it has to be the right model, operated correctly, and it should be working efficiently to get the best out of it, which means regular maintenance.

The first requirement is to choose a pump that is suitable for the job and, of course, new pump models are being introduced all the time.

For example, the WEDA 04S is the latest addition to the Atlas Copco Portable Energy line-up of small submersible pumps. This range is primarily intended for the light

construction and general equipment rental industries.

The WEDA 04S is a 0.4kW on-site sludge/trash pump which the company said had a maximum flow of 270 litres/m and a maximum head of 10.5m.

It complements the WEDA line of under 1kW single-phase drainage, sludge and residual pumps released last year.

The WEDA 04S has a cast iron vortex impeller that Atlas Copco said was able to pump dirty water and handle solids up to 25mm in size.

The company said this made the pump a practical choice for dewatering sewage in flooded building basements or on construction sites, removing rainwater from sandy or muddy ditches and excavation sites, or getting rid of unwanted water during maintenance of utility manholes.

TRIPLE SEAL

The pump is described as robust and easy to maintain thanks to its triple seal system – double mechanical shaft seals constructed from silicon carbide with an additional lip seal.

Thermal protection gives the motor additional reliability and run-dry capabilities.

Atlas Copco Portable Energy added that its low weight – at 10kg – and compact dimensions – it measures 372.5mm by 241mm

The WEDA range from Atlas Copco Portable Energy is primarily intended for light construction and general equipment rental



The Paclite Force pump can take aggregates as large as 19mm



– also meant that the WEDA 04S pump was easily portable from one dewatering task to the next. This is a key requirement for all contractors that are looking to move regularly between jobsites.

Abet Cantuba, product marketing manager pumps for Atlas Copco Portable Energy, said, “Our product range already included the WEDA 04, a 0.4kW drainage pump, but we received requests for a small pump that could also handle solids. Our answer is the WEDA 04S.”

Cantuba added, “In the future, we plan to expand our sludge/trash pump range to include larger kW power nodes which will be able to pump higher flows and handle larger sizes of solids.”

“This will be important for applications in mines and municipal sewers.”

The Atlas Copco WEDA small range pumps also comprises the WEDA 04 and WEDA 08 drainage pumps; the WEDA 04B residual pump that draws water down to 1mm; and the sand- and mud-resistant WEDA 08S sludge pump.

The CE-compliant 50Hz variant of the WEDA 04S is available now from the Atlas Copco Portable OEM Solutions factory in Bad Oeynhausen, Germany.

The CSA-UL standards approved 60Hz

version, meanwhile, will be available in early 2014.

Paclite Equipment, part of Singapore-based Uni-corp, is offering a submersible flexible shaft pump for the draining and removal of water from trenches and building sites without use of electric power, with a capacity of 72m³/h.

Ken Gorsun from Paclite said the Force pump could take aggregates as large as 19mm and offered a rugged heavy duty design.

FLEXIBLE SHAFT

Flexible shafts pumps are said to provide rotary power transmission along curved or adjustable axes.

Paclite claimed these pumps were frequently used in dewatering on sites where there was a lack of electric power.

The pumps are particularly popular for rental applications and intermittent use, it added.

Paclite quality uses abrasion resistant hoses, built up by no less than eight layers of special spun steel. This material is said to not only be corrosion resistant, but also able to withstand environmental contaminants such as aggregates, fluid and oil.

The Paclite models feature a vortex type pump with hardened steel impeller.



Xylem had to design a temporary, customised bypass solution

Swedish bypass

A new bridge will link the Kolonnvägen area of Stockholm, Sweden, to the new Arena City – which will include residential and commercial buildings, and the Mall of Scandinavia, set to be Scandinavia’s largest shopping destination – in September 2012, construction and civil engineering company, Peab, began the process of building the bridge abutment.

As 75% of Solna’s water and wastewater pipes lay directly underneath the proposed location of the abutment, these needed to be replaced with a new pipe and sewer system. To prevent any interruption of wastewater transport during construction of this new piping system, Xylem was tasked with designing a temporary, customised bypass solution.

Erik Nordqvist, project manager for Xylem Sweden, said, “The challenge was to devise a system capable of dealing with extremely heavy flows of between 200 and 600 litres/s. To manage this, we installed four of Xylem’s powerful Godwin-brand diesel pumps – three with 150mm inlet capacity and one with 250mm inlet capacity. The bypass pumping system had to cover an area of 80m which in turn required approximately 320m of pipe.”

He said that the work involved removing extensive surface water in addition to the already heavy flow of wastewater.

“To cope with this additional surface water we incorporated three of Xylem’s Flygt 3153 pumps into the system design, pumping the water to a container equipped with larger capacity Flygt 3202 pumps. These powerful pumps then transported the wastewater 180m away,” said Nordqvist.

It took three weeks to construct the bypass pumping system. The pipe work was laid and pumps operational within one week, with pumping continuing for a period of two weeks while the new pipe and sewer system was being installed.



Subaru says that among the most important daily checks is the quality and level of engine oil



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The two dog connections are equipped with bearings to guarantee maximum product life, claimed Paclite

Force is the heavier weight class model of the two pumps produced by Paclite, and the company said that it was big enough to allow larger stones and aggregates to be dewatered.

Gorsun said it was a pump with high output and a capacity of 72m³/h. It has a cast steel impeller, a 6m flexible shaft and solid size capacity of 19mm.

The standard delivery with discharge hose is 10m and there is a 75mm fireman's quick release coupling.

Gorsun described the Force model pump as autonomous, portable and lightweight, so that it could be used in "a multitude of applications".

Meanwhile, Tsurumi's latest diesel driven pump, the 4TBA82D135 which was launched earlier this year, is one of the company's biggest models.

Designed to work in the most demanding dewatering and sewage applications, it offers a maximum flow of 2,250 litres/m and a maximum head of 18m.

Described as rugged and fuel efficient, the pump is said to be suitable for almost any application, and will be sold in Tsurumi's direct sales network in Germany, France, Spain and Sweden.

Having selected the right pump for the job in hand, it is important to keep it running so that when it is needed, it can be put to use immediately.

With this in mind, Tsurumi has also launched a life-extending kit.

This is a set of parts for Tsurumi's KTV and KTVE range of light-weight aluminium pumps. It claimed that after rigorous testing, the new pump casing, wear ring and protection plate could give a pump three times longer life.

The company added that the kit was



Downtime can be avoided by preventative maintenance, according to Subaru

Radioactive pumping solution

A Tsurumi pump is being attached to a remotely-operated vehicle (ROV) used in a radioactive waste clearing project at the specialised Areva reprocessing plant at La Hague in northern France.

The pump will help to transport radioactive sludge from special silos as part of an eight-year recovery project.

The La Hague reprocessing plant has the capacity to reprocess almost half the world's light reactor spent fuel. The plant is embarking on a major new project to recover and condition radioactive sludge resulting from the chemical process of spent fuel recycling. This sludge is contained in several silos.

The project presents a number of technical challenges. Getting to the sludge itself is among the hardest as this can only be attempted through existing openings on the top of each vessel, and these measure just 1m across.

To cope with the size restrictions and yet ensure that every corner of the silo is reached, a Tsurumi pump connected to an ROV will travel around the silo pumping sludge to a downstream treatment unit.

Once lowered into the silo, the ROV will scour the entire silo and pump out the sludge to transfer it to the next stage of the treatment process. Because of the size of each silo – the largest measures 14m long, 13m wide and 10m deep – the pump is expected to take two years to complete its part of the project.

A remote controlled mini-submarine with the blue Tsurumi pump attached is being used to remove radioactive sludge from silos at a nuclear reactor recycling plant in France



particularly aimed at tunnel construction projects where pumps worked in severe conditions to ensure that on-site water levels were safe.

Hatz is offering a new line up of clear- and

trash-water, and industrial pumps. All of these are based on the company's own air-cooled diesel engines.

Whether for construction sites, disaster relief or for industrial use, Hatz claimed to offer a broad spectrum of engine-powered pumps.

Mainly known for its tailor-made diesel engine solutions, Hatz now has pumps for all kinds of use.

It said the basis for the pump systems was the German-based company's "robust and resilient" air-cooled diesel engines, with a power range from 1.5kW up to 56kW.

The line-up ranges from small and lightweight one-cylinder engine powered trash water pumps with a capacity of 20m³/h, up to clear water pumps with a capacity of 830m³/h powered by a powerful four-cylinder diesel engine.

Depending on customer requirements, the pumps can be equipped with a trolley, closed tubular frame or base frame. Additionally, there are a variety of other standardised options available.

The C-series for construction sites is carefully designed for use in rough conditions.

Solids with a size of up to 40mm can be processed thanks to robust pump parts and a pump housing made of aluminium or grey cast.

Beside the pumps with a flow rate between 20 and 140m³/h, there is a membrane pump available which can process sludge with a solid content of up to 80%.

All pumps are driven by Hatz diesel-engines with either one or two cylinders which work reliably even under adverse conditions, it claimed.

The AP- and AQ-series are for agricultural use, and the S-series for industrial.

Hatz said the sustainability and environmental compatibility of its products was part of the company philosophy.

All B- and D-series engines are produced in the specification which meets the strict emission standards of the EPA (Environmental Protection Agency) in the US, even if the standard in the destination country is not applicable.

Hatz added that the multi-cylinder engines of the L- and M-series also met all required

emissions standards and are partially supplied with exhaust gas recirculation to reduce nitrous oxides.

From this year, the three- and four-cylinder engines will be available with diesel particulate filters (DPF).

UK firm Selwood said it was "bringing low emission engines to the high head pump market" with the introduction of its H200 pump, powered by a Stage III/Tier 4 Interim Volvo D16 engine.

The engine uses a DPF and a diesel oxidation catalyst in combination with selective catalytic reduction to conform to the current emissions regulations, which apply in Europe and the US.



Hatz's new line-up of pumps can be equipped with a trolley, closed tubular frame or base frame

The H200, with a pumping capacity of more than 950m³/hr, joins the already launched H100 and H150 units in the new high head range.

The H150 is a heavy duty automatic self priming pump designed for high head applications, with flow rates up to 460m³/h, total heads of 124m and solids handling of 38mm.

LONGER LIFE

Pam Meyer, equipment sales manager at Subaru Industrial Power Products, also considers that a longer life for pumps is important, and she pointed out that performing preventative maintenance helped prevent pump downtime.

She said that each day should start with a pump inspection. Among the most important daily checks is the quality and level of engine oil.

Oil that's contaminated can cause serious problems and decrease the life of an engine, likewise if there's an insufficient amount of it. Change the oil or add if necessary to reach the level as per manufacturer's recommendation, she said.

The fuel level should be checked as well, while Meyer recommended looking for any evidence of fuel or oil leaks. If a fluid is dripping, inspect the area for any parts that may need to be tightened or replaced.

Cleaning or possibly changing the air filter is another important practice that can prevent significant damage down the pipeline, said Meyer.

Inspecting the condition of the hoses regularly is another suggestion. In addition to daily checks, a pump requires other maintenance checks and services. Meyer said that while those don't need to be done daily, they are crucial to the pump's life and should be on a regular schedule. Generally, quality pump engines can operate up to 2,500 hours, she said.

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New rental models for Poland

Ramirent, a leading European equipment rental company with 325 customer centres in 11 countries, has just purchased 50 Atlas Copco WEDA on-site submersible pumps for its regional branch in Poland.

The order is part of a total of 400 new pumps that will replace older equipment.

Ramirent's first order of 50 Atlas Copco WEDA pumps consists of 19 WEDA 10, 19 WEDA 30 and 12 WEDA 40 pumps. Before the end of 2014, Ramirent plans to order a total of 400 new pumps, normally to be fulfilled by two suppliers, to update its regional fleet of 800 electric and petrol-driven submersible pumps.

Ramirent in Poland already uses Atlas Copco compressors and generators in its rental fleet. In 2011, the Slovakian branch placed a significant order of WEDA pumps as well. That proved a deciding factor in making the switch to WEDA pumps in Poland.

Konrad Murawko, fleet manager at Ramirent, said, "The main advantage of Atlas Copco equipment is quality. We have been using Atlas Copco pumps in other countries, so we have first hand experience of the durability and long lifetime of these pumps in harsh environments."

Murawko added that Ramirent "prefers to work with reliable and strong suppliers that do not have their own rental activities".

Each pump will be delivered with a Storz discharge coupling, built-in float switch and an additional rope to prevent customers pulling out cables when manoeuvring the pump.

Michal Goral, sales manager Poland with Atlas Copco Portable Energy, said, "Listening to your customers to understand their needs is key to building a long relationship with them. With these customisations we are able to deliver the pumping solutions that meet Ramirent's exact requirements."

Murawko added, "We value the professional support from the local and regional Atlas Copco customer centres and their willingness to co-operate with us. In the end, quality is not just about the product itself, but also about the organisation behind it."

Ramirent has ordered WEDA pumps from Atlas Copco for its Polish branch



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Power versus weight

New technology is seeking the right balance. Lindsay Gale, editor of *CE* sister magazine *Demolition & Recycling International*, looks at what is new



Volvo launched the seven model HB breaker line for compact equipment earlier this year



Doosan has added two new models to its range of breakers for use on 14 to 34 tonne excavators – the new DXB130H (pictured) and DXB190H



Sophisticated technology to improve power-to-weight ratios, reduce noise and vibrations, and to increase automation can be found on the latest breaker models, and it is clear that manufacturers are pushing to maximise the potential of these attachments.

And yet, not everyone is looking for such sophisticated technology when making a purchase.

Atlas Copco markets premium lines under its brand and a basic range under its Chicago Pneumatic brand. It has also introduced a new basic range under its Atlas Copco brand specifically targeted at the Chinese market – the C Series.

Torsten Ahr, marketing manager for Atlas Copco hydraulic attachments, said, "China is the only construction market in the world which is dominated by the basic breaker segment, and our new C-Series is the perfect complement to our existing product portfolio in this market."

The basic breakers in the C-Series are

Atlas Copco's new C Series breakers are a basic range of tools for carriers in the 4 to 50 tonne weight class

characterised by vibration dampening and a slim, compact box design.

Like other Atlas Copco hydraulic breakers, they use an energy recovery system to optimise percussion performance by increasing the blow frequency, while noise levels are also minimised by a noise-reduction system, which also reduces vibration.

Atlas Copco's product line manager for power demolition tools, Gordon Hambach, said the company had seen a difference in the strength of sales growth around the world between its premium Atlas Copco brand line and Chicago Pneumatic brand of breakers.

"We operate worldwide with these two >

brands," he said. "For the Chicago Pneumatic line, we target customers who have a sporadic use for the breaker.

"For the Atlas Copco line, we target professionals using breakers 24 hours a day."

He added, "The Europeans and North Americans tend to go more for the Atlas Copco brand hydraulic breakers, rather than the Chicago Pneumatic design.

"But elsewhere in the world, certainly we see an increasing trend on the market for the Chicago Pneumatic breakers."

Hambach insisted that the differences between the two lines did not hinge on quality.

"Both product lines follow our general quality policy, but the materials used to make the breakers differ – breakers which will be used two or three times a month are built differently to breakers that are intended for use around the clock."

PREMIUM

For its premium line, a key focus for Atlas Copco has been improving power to weight ratios.

Hambach explained that the manufacturer's aim was to allow its customers to complete the same type of job – but by using a smaller breaker.

"This means that customers can use smaller carriers, which leads to lower fuel consumption.

"They can decrease the input needed but still achieve the same results," said Hambach.

The manufacturer showcased its new SB702 breaker at the Bauma show in Munich earlier



Gordon Hambach, "Customers can use smaller carriers, which leads to lower fuel consumption"

this year. This breaker is a 700kg tool with a one-piece, solid body housing.

It features an energy recovery system, which is a key part of its power-to-weight focus that aims to provide a higher percussive performance and increased hydraulic efficiency.

Hambach added that next area of focus for Atlas Copco would be to look into maintenance.

"The optimum would be to eliminate all

maintenance, but that is not possible," he admitted.

However, he added, "We aim to reduce further the intervals between maintenance and make it much easier and faster for the operator."

Andrew Cope, vice president business for development at Chicago Pneumatic, had a slightly different take on the situation, however.

He said that Chicago Pneumatic offered the same diverse range of high quality, durable and easy-to-maintain hydraulic breakers in all regions of the world, and that the company was then able to adapt to meet the specific conditions that might prevail in different countries around the world.

His view is that the global market for hydraulic breakers has continued to recover since the start of 2010, which is something he views as encouraging.

"Since the third quarter of 2012, the market has been relatively flat, although we have experienced significant demand from Latin and North America, while sales in Scandinavia, Northern Europe, the UK, France and Germany remain positive," he added.

The drivers behind the developments in breaker technology can be seen to have been changing over this period.

Cope said, "In the past, we saw demand from professional demolition users. Today," he added, "hydraulic breakers have become commodity products.

"For instance, it is now possible for individuals to rent mini excavators with breaker attachments from their local hardware store to carry out small scale construction and gardening jobs," he said.

"For this reason, Chicago Pneumatic is focused on providing hydraulic breaker solutions, whether small scale or heavy duty, to customers in both segments."

He said this included both occasional commodity product users and traditional professional demolition users who demanded productivity, fuel efficiency and low total cost of ownership when purchasing breaker products.

POTENTIAL FOR GROWTH

Mark Talbot is Volvo Construction Equipment product marketing manager for breakers, and he also said there was potential for growth in breaker sales in developing countries.

However, he felt that competition was often fierce.

He explained that while main features on his company's breakers did not differ greatly between regions, there were some differences.

"I am not sure I would like to split it by 'basic' or any other term, because the breakers are specified to a high standard in line with local market expectations and harmonised with what the Volvo CE brand represents," he said.

"But it's smart to give customers what they want within the limits of what they can afford," he added.

"The aim is not just to supply two products >



Designed for backhoe loaders, the latest breaker models from Ramtec are the Robi BH32, BH40 and BH52

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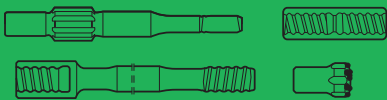
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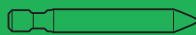
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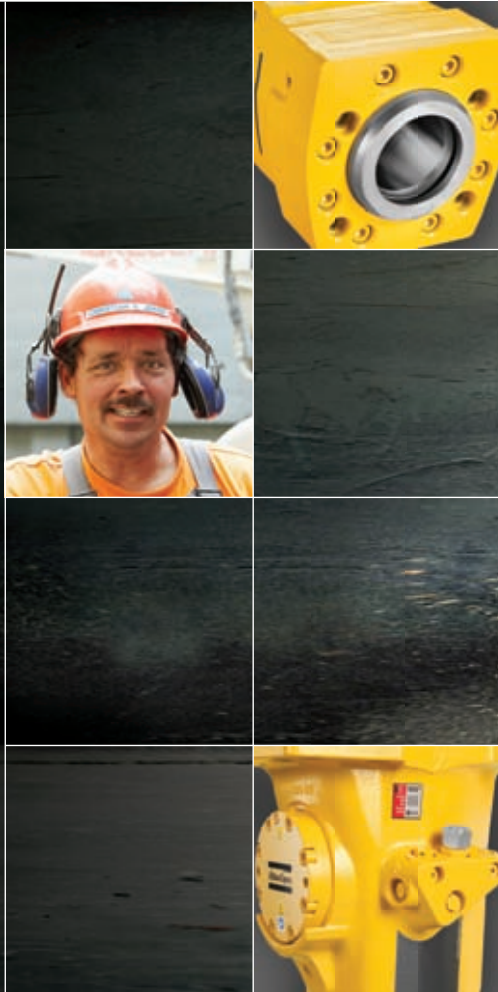
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The new SB 702 - unusually compact and easy to handle



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

Atlas Copco

that can be attached to each other [breaker and carrier] but a solution to the customer." He added, "This particular rock breaking solution is a product that is highly tuned for a specific task, and the services Volvo offer apply to this component. "Supplying the breaker is only one part of the puzzle," said Talbot.

This year, would prove to be a busy one for Volvo for hydraulic breakers, he said.

"February included the introduction of Volvo CE's hydraulic breaker range for utility machines – mainly for Europe.

This includes four breaker models for compact excavators, two models for skid steer loaders and a breaker for backhoe loaders."

Looking into the future, Talbot predicted that the next step in terms of breaker technology could include a focus on power and speed.

"Maybe technology will raise the bar and develop the speed controls that exist today, which could see one breaker model becoming suitable for a wider range of applications.

"Or maybe the key is to go minimalistic – meaning fewer parts, lower breaker weight and more power to widen the carrier's working range and, therefore, help to improve overall efficiency.

"My guess is both, actually, but mostly the latter," he said.

WEIGHT OPTIONS

Meanwhile, over at Doosan, its product manager for heavy attachments, Quentin d'Hérouël, said that a major focus for his company was making sure that a complete range of weight options were available to its customers.

"The new models fill in the gaps in the weight categories so that customers have a true choice when it comes to balancing the energy of a breaker and the weight of its carrier," he said.

"The 940kg DXB100H has been designed for carriers from 11 to 17 tonnes, while the 1,620kg DXB170H is for carriers weighing between 18 and 28 tonnes, so we created the 1,090kg DXB130H to match the machines from 15 to 22 tonnes better," he explained.

This decision has resulted in the DXB range now consisting of five different models, with the upper end covered by the 1,818kg DXB190H for 22 to 30 tonne carriers, and the 2,450kg DXB260H for 27 to 34 tonne machines.

For FRD Europe's marketing and sales manager Mark Lisman, economic conditions have proved mixed for the company's breaker products.

The 2,600kg RX38 hydraulic breaker from Chicago Pneumatic is for use with 29 to 46 tonne carriers

He said, "The European market is still struggling as a result of the economic downturn of recent years, but outside this region we see considerable opportunities in various regions of the world, such as Latin America.

"We also tailor our products for certain of these regions where there is a demand for a product with less features at a lower cost," he added.

Earlier this year, Chicago Pneumatic launched five breakers in its RX range of heavy breakers that are suitable for

Caterpillar has expanded its E Series Hammer line with the addition of the new H75Es and H95Es (pictured), designed for backhoe loaders and small excavators



Keeping it simple

Montabert breakers are currently available in North America under the Tramac trade name, but 2014 will see this arrangement come to an end and Montabert will become the brand name around the world.

The company, which is a subsidiary of Doosan, also said that although it has traditionally focused on developing its breaker range, the future will see other products added to its breakers and crushing/screening bucket product offering.

Montabert used Bauma in April to introduce a new 730kg medium breaker that is intended for use with carriers from 8 to 18 tonnes. It offers what the company claimed was an exceptional power to weight ratio – indeed, the company said that it offered the same power level as its 1,000kg model.

It features a new design, with fewer parts and without tierods, and is claimed to be very robust, with blank fire protection, steel cast housing shield, large tool with a diameter of 106mm and an optional Easylube greasing station fully protected by the housing.



medium and heavy industrial demolition, building renovation, road construction, rock excavation and mining applications.

The models are the 1,800kg RX26 for carriers from 20 to 33 tonnes, the 2,200kg RX30 for 25 to 40 tonne carriers, the 2,600kg RX38 for 29 to 46 tonne carriers, the 3,000kg RX46 for 35 to 55 tonne carriers, and the 4,200kg RX 54 for 45 to 70 tonne carriers.

All five feature the company's PowerControl Plus combined stroke length and start-up mode switching valve that the operator can change in the field without opening the hydraulic circuit.

This allows the operator to adjust the operational mode of the breaker to the application.

Ramtec has introduced three new breakers under the Robi brand name. Designed for backhoe loaders, the new models are the BH32, BH40 and BH52.

Rotar is another to launch a new full line of breakers. Called the RHB Series, these are suitable for use on carriers from 1 to 70 tonnes.

Claimed to be among the quietest on the market, they feature a design that minimises the number of components that it uses to just two moving parts.

HYBRID TECHNOLOGY

The new breakers are built as standard on hybrid technology with a power booster.

A central lubrication system is available as an option on models from the RHB 140 upwards, with optional power control that allows the breaker performance to be set according to the application also available from the RHB 260 model upwards.

Sandvik has introduced four new Rammer branded breakers this year in the shape of three new small range units and the 5011 in the large range.

The new small breakers are the 255, 355 and 455 that plug a gap in the company's line up and are intended for carriers from 1.2 to 5.2 tonnes.

They are ideal for the rental sector, according to the company, and feature the constant blow energy operating principle to maximise productivity and profitability.

The 5011 model fits between the 4099 and 7013, and is for use with carriers from 43 to 80 tonnes.

The new breaker has been designed around the features first seen on the smaller 3288 and 4099 breakers.

Many of these launches illustrate the need for more power in a smaller package, and that is something that applies to premium and no-frills products alike.

Volvo meanwhile has added a seven-model HB range of breakers for compact equipment from 1 to 10 tonnes ranging in weight from 129kg to 577kg.

Promove presented its new XP101 Bauma



Rammer's new 5011 large hammer has been joined by the new 255, 355 and 455 small models for carriers from 1.2 to 5.2 tonnes

The company said they had been tailored for use with Volvo's quick couplers on the company's backhoes, skid steers and compact excavators.

A cushion damper reduces noise and vibration through the machine for greater comfort and safety, as well as reducing the risk of damage to the boom and arm.



The operator can adapt the breaker frequency to suit the application using dual-speed control. Anti-blank firing prevents the breaker from striking once material has been completely penetrated.

Promove presented its new XP101 breaker at April's Bauma show in Munich, Germany.

The company claimed that this 92kg tool boasted 35% more power than its predecessor, with the same hydraulic requirements. **ce**



Jet engine test site demolished

UK contractor Brown & Mason is using a 4,750 Rammer 5011 breaker during the demolition of the National Gas Turbine Establishment (NGTE) in Farnborough, Hampshire, which for 50 years was at the forefront of aircraft jet engine development.

The strength of its airhouse, with heavily reinforced concrete walls up to 6m thick allowed it to be used to test Concorde's engines at 3,200km/hour. V-bomber, Harrier and Tornado engines were also tested on the site, as was every gas turbine installed in Royal Navy Warships. The facility closed in 2000 and is now being cleared to make way for a new business park.

Covering an area of approximately 45ha, the NGTE facility will produce around 1 million tonnes of arisings – including half a million tonnes of concrete – during the 12 month project duration.

The majority of that concrete will be broken out by the Rammer hammer, which is mounted on a demolition specification Komatsu PC450 excavator. The steel will be removed from the site for recycling and reuse while the half million tonnes of concrete will be crushed, processed and retained on site for use in the construction of the new business park.

Brown & Mason's new Rammer 5011 hydraulic hammer is one of the first of its kind in the UK. The new model benefits from a new operating principle that allows the 5011 to be purpose-matched to individual applications and materials using a simple working mode selector located on the breaker. Brown & Mason is using a high energy mode to provide a lower blow frequency for optimum breaking power in the site's heavily reinforced concrete.

Brown & Mason's Nick Brown said, "We have tried other brands of hydraulic hammer but Rammer is the only one tough and powerful enough to withstand the type of contracts in which we're involved. All of our equipment has to be exceptionally robust, durable and reliable. On a programme like this, we can't afford breakdowns and delays. That is why we stuck with the Rammer brand."



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KEYNOTE SPEAKER

José María Aznar

Former Prime Minister of Spain

Mr Aznar will explore the importance of infrastructure investment within the context of globalisation and the need for innovative finance models at a time of government austerity. He will also focus on building stability and encouraging development in Latin America, where Spain has many links.

OTHER SPEAKERS INCLUDE

Virginie Colaiuta

Partner, Pinsent Masons

Miguel Jurado Fernández

General Manager of FCC Construcción

Scott Hazelton

Director, IHS Global Insight Construction and Manufacturing Industries Practice

Paul Howard

Consultant, Off-Highway Research

Jules Janssen

Treasurer of European International Contractors and head of Construction at Besix

Gregory J. Owens

Chairman and Chief Executive Officer, IronPlanet

Simon Purchon

Business development director, Mobile Assets, Babcock International

Trevor Sturmy

Head of infrastructure & PPPs, HSBC

Norty Turner

CEO of specialist rental company Riwal

Zeng Guang'an

Vice Chairman & President of Guangxi LiuGong Machinery Co., Ltd.

PROGRAMME

WEDNESDAY 20TH NOVEMBER

EVENING:

Welcome & drinks reception

THURSDAY 21ST NOVEMBER

MORNING:

International construction issues & keynote address

AFTERNOON:

Managing complex international projects

EVENING:

Gala dinner & ICEF awards ceremony

FRIDAY 22ND NOVEMBER

MORNING:

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Vision of unity

With a new name and a new president, Construction Products Europe is setting out its aims for the future

Construction Products Europe, the association which represents Europe's construction products manufacturers, has a vision in which the construction industry is more united, and the association plans to work more strategically with all parts of the construction process – from architects to contractors, and ultimately owners – so that it can develop a proactive strategy together.

Formerly called the CEPMC, Construction Products Europe made the name change on the same day that its new president took over.

The new president, Jean-Marie Vaissaire, said the association was on a new path, thanks to the previous president, and that it now wanted to target several main areas of action.

The first of these is a relaunch of the industry. "This," he said, "would be created by significantly increasing the renovation rates of buildings, and also by the delivery of new efficient homes where they are needed.

"We must also focus on developing both the industry's competitiveness and sustainability through the delivery of efficient construction solutions.

"Finally, we aim to support the EU institutions in creating a reliable EU policy framework that supports the long-term investment needs of our industry."

He added that in addition to this new strategy, the visual identity of the association had been revamped to support more effectively the new work it was undertaking.

Most of Vaissaire's experience has been in gypsum and insulation businesses across Western European countries, starting out in a British group, BPB, and then Saint-Gobain. In 2012 he became director general of Saint Gobain Glassolutions and has also been president of AIMCC (the French construction product association) since 2009.

There are many long-term motivating factors for the EU to focus on in construction. "First of all, the sector generates almost 10% of GDP and provides 20 million jobs in Europe. This is a huge chunk of the economy that is struggling and needs support"

He said that solutions for higher energy efficiency in new and existing buildings that were key for the transformation of the EU's energy system were already in place.

"Actions from the industry are essential to reach the 2050 greenhouse gas emission targets by the EU.

"Overall, there is a strong commitment to innovation in daily business practice and a willingness to participate in EU research programmes and industry platforms. What

we therefore need to see now is investment from the EU to capitalise on what is occurring within the construction sector.

He said that as the construction sector has been going through hard times for several years, this led to an ever greater need of support from the European institutions.

He pointed out that in July 2012, the European Commission's DG Enterprise presented the basis of a strategy aiming to relaunch the competitiveness in the construction industry for 2020.

"This strategy has created high expectations in our industry," said Vaissaire.

"Another big topic for our sector is the question of how to assess the sustainability of a building. Our industry is increasingly dedicating itself to the development of sustainability in construction, but the question of what a sustainable building is continues to trigger discussions."

He said it was very important to take into consideration the whole life cycle of the building to determine what was efficient and what was not, so that parts of a building don't become counterproductive to the building as a whole. "This is more complicated than one would think," he said.

ECONOMIC VALUE

The strategy to achieve the association's vision of a more united construction industry needs to create economic value, enhance resource efficiency, and contribute to social well-being, said Vaissaire.

"The challenge is finding a balance between all these requirements, while maintaining and even reviving the economic health of our industry. Taking all this into account, there is no denying that this is a challenging period for the construction sector."

EU institutions will have a part to play. Vaissaire said, "At our last workshop in June, our message for the industry was clear – an EU policy framework that is coherent, reliable, predictable, stimulating.

"This means that we must ensure coherence and integration between all European construction policies to foster growth and promote efficiency"

He said this should create a reliable framework that would guarantee a fair and open market for all competing players.

"It is important that policies are also predictable," he said. "As a cyclical industry, the construction industry requires long-term investment and, therefore, long-term strategy and regulatory predictability."



Vaissaire, "Challenge is finding a balance"

He added, "By making sure that the industrial landscape is as stimulating as possible, European players would be in a better position when facing competition from outside the region."

Bearing this in mind, what the association would specifically like to see more from EU institutions was investment, and therefore regulatory incentives to drive growth.

"We also need to see innovative solutions to aid the construction industry. For example, not all solutions are found at European level – there are many good examples of solutions at local, regional and national levels, and these need to be co-ordinated to have a more positive influence on the rest of Europe."

Vaissaire said everyone was aware European conditions for the construction market were very fragile at the moment, adding that there would be slow progress in the industry.

He pointed out that the European Construction Product Index had remained low for the first half of 2013, with some national markets showing signs of recovery.

"Overall we may have to accept that construction activity is likely to be weaker during 2013 than in 2012. Nevertheless, we should take a little comfort from the fact that there is a slight improvement in economic sentiment in Europe. This news should force us as an industry to work together and find solutions – of which there are many.

"We should take heed from countries where construction is still strong, and work together using our networks in Brussels as a focal point."

Vaissaire's presidency will last for two years, and over this time he said he wanted to see Construction Products Europe at the heart of the construction sector.

"The relaunch of the association started 13 months ago and we have already come a long way in regards to reorganisation. We now want to build on our structure and actively communicate on policy framework."

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Turning up the heat

Bomag is pushing to increase competition in the road building sector with a string of new launches. Helen Wright visited the factory



Bomag president Jörg Unger, "We want to position Bomag's road building segment for the future"



Manufacturing at Bomag's 12,600m² new drum manufacturing facility in Boppard started in June

Despite experiencing weaker market conditions this year, Bomag made the biggest single investment in his history during 2013 in the form of its new 12,600m² drum manufacturing facility at its headquarters in Boppard, Germany, which cost €22.5 million to build.

Manufacturing at the new drum factory started in June. Meanwhile, Bomag also finished its new logistics facility this year – a state-of-the-art warehouse which stocks 45,000 items, deals with 500 to 700 orders a day, and is said to boast 96% parts availability.

On top of this, the company has also launched a string of new products for the road building sector since the start of 2013, including a wealth of new launches at the Bauma exhibition in Munich, Germany, which took place in April.

Most recently, it introduced the 1m width BM1000 milling machine at its 2013 Asphalt Days customer event in the first week of September – the latest in a line of new milling machines.

The BM1000 is a 257kW, Tier 4 Final/Stage IV-compliant machine that it claims is not only the most powerful in its class, but is also said to boast lower noise and vibration.

The BM1000 features the company's BM515



Bomag launched the BF600-2 and BF700-2 asphalt pavers at its Asphalt Days customer event in September

tool holder system for easy maintenance and is available with a seat for the operator, in contrast to competitive models where the operator must stand.

In addition to the BM1000, Bomag also launched two new, Tier 4 Final/Stage IV-compliant asphalt pavers at its customer event – the BF600-2 and BF700-2. These are 17 to 20 tonne class machines that are available with either wheels or tracks.

SCREED HEATING

A key feature is the Magmalife screed heating system. The heating elements are cast in an aluminium block which is said to make them robust and durable and also reduce heat-up times to 20 to 30 minutes. Bomag says this represents a saving of up to 25% compared to competitor machines.

The company also showcased examples from its new dash 5 Series of articulated tandem rollers. The 10 to 11 tonne class BW 161 ADO, BW 161 AD-5 and BW 190 models were in action. They are machines which offer

The advantages of low noise

Bob Weeden, operations manager at UK-based O'Rourke Contracting, was among the visitors to Bomag's Asphalt Days customer event in September.

He said, "I am particularly impressed with the turning radius and the noise levels on the new milling machine [BM 1000], which for my company is very important.

"We do a lot of surfacing work at night, so noise emissions are very important. We win a lot of public sector work in the UK and are currently performing surfacing work at Terminal two in Heathrow Airport, London, for instance, and a lot of our contracts are very time sensitive.

"So if you can get a machine that runs below certain decibel limits, potentially you could run it all night and save a lot of time on a contract."



Bob Weeden, "Potentially you could run it all night and save time on a contract"



Bomag's new BM1000 is a 257kW, Tier 4 Final/ Stage IV-compliant milling machine

three different compaction systems – double vibration, oscillation and Asphalt Manager 2 (AM2).

Double vibration has two amplitudes for compacting thick or thin layers, while the oscillation system produces less vibration but still achieves efficient compaction and is said to be better suited for use on bridges and working close to buildings.

The AM2 system combines measuring technology and compaction control, automatically controlling the machine to avoid unnecessary passes.

All these new launches are part of Bomag's effort to turn up the heat on its competition in Germany and abroad, according to company president Jörg Unger.

He said, "We are pushing to become a true full-line road building equipment manufacturer with products covering asphalt production through the Marini brand, which like Bomag is owned by Fayat, as well as our own road construction, road maintenance, and finally road reclamation and recycling equipment.

"It will be a tough fight, but Bomag wants to be a strong number two in the road building market. Since we started producing milling machines, in the last 24 months we have won a nearly 30% market share.

"Our customers have told us that the competition has had the monopoly on price, and they have also reported that they



The BF 900 C finisher was introduced at Bauma

A year full of fresh launches

Weaker market conditions this year compared to 2012 has not prevented Bomag from introducing new equipment this year as it pushes to position itself for future increases in demand.

The 1000mm class BM1000 milling machine and BF600-2 and BF700-2 pavers were introduced during its Asphalt Days customer event in September, when Bomag also showcased examples from its new -5 Series rollers.

The -5 Series were officially launched in April at the Bauma show in Munich, Germany, together with Bomag's new BPR reversible vibratory plates and three new tamper models – BVT 65, BT 65 and BT 60.

Another new paver was also brought to the market this year, in the form of the BF 900 C finisher, which was introduced at Bauma and can pave widths of up to 13m.

In addition, the company launched the new MPH 600 soil stabiliser with its Flex Mix Technology at Bauma. The company said the "infinitely adjustable" rotor allowed mix results to be changed and adjusted to local conditions.

find the lack of an alternative hard," Unger explained.

Head of marketing Jonathan Stringham agreed, "A monopolistic market is not to a customer's benefit. The competition dropped its prices by around 40% since the introduction of the BM500 milling machine in 2011, and we feel that we are increasing the competitiveness of technologically advanced equipment like this."

However, Unger was keen to highlight the fact that Bomag was not interested in entering a price war. "We have a lot of respect for the German competition," he said. "It is also not important to us from which competitor the market share comes, but that we get the market share."

INVESTMENTS

Unger said the company had limited expectations for demand this year, but instead of standing still, it had made the decision to invest in the company to position itself for the future.

In February, for instance, Bomag parent company Fayat acquired Terex's Cedarapids-branded pavers and material transfer machines in North America, and its CMI-branded reclaimers/stabiliser product lines, which are all manufactured in Oklahoma City, US.

In addition, it bought Terex's entire road building equipment operations in Brazil,



The 10 to 11 tonne class BW 161 ADO, BW 161 AD-5 and BW 190 models from Bomag's new -5 Series were in action during the Asphalt Days

which are located in Porto Alegre and manufacture mainly asphalt plants and pavers.

"The financial year 2013, which for us ends in September, has been weaker than 2012," Unger said. "Both Bomag and Fayat's expectations for the market were limited, and we forecast a small decrease in turnover this year for Bomag to €560 million.

"But we have invested a lot during the year – we want to position Bomag's road building segment for the future. There is also palpable optimism for the market in 2014, and we do think there will be more momentum next year," he said.

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Birthday investments

Cifa has marked its 85th birthday and the fifth anniversary of its acquisition by Zoomlion with the opening of new facilities in Italy.

Chris Sleight was there

Concrete equipment manufacturer Cifa has had a colourful history, having been founded in 1928 by Carlo Ausenda, and it has seen several changes of ownership.

The most bizarrely of these was when it was bought by a group of its own suppliers in 1999.

The most recent chapter saw its acquisition by a group of investors led by Zoomlion, one of China's largest equipment makers, in September 2008. It was the first major overseas acquisition by a Chinese manufacturer in the construction equipment industry, although others have followed since.

Speaking at the celebrations to mark Cifa's dual birthday – 85 years since it was founded and five years since the Zoomlion acquisition – Cifa CEO Davide Cipolla was keen to emphasise

the investment that has gone into the company's headquarters in Senago, near Milan, Italy, following the deal.

He said, "Today, we officially show and open the Senago headquarters and production building renovations, the new Cifa-Zoomlion Testing European Centre (TEC) – an R&D centre and field test area for the group, the start-up of new production lines with lean production technology, the new Cifa design centre, new products and technologies, and the opening of a new showroom and multimedia area."

All this investment will have a benefit to customers according to sales director for Europe, Middle East & North Africa, Daniel Metivier, who highlighted the introduction of lean processes throughout the organisation.



Zoomlion chairman Zhan Chunxin and Cifa CEO Davide Cipolla cut the ribbon on Cifa's renovated headquarters complex in Senago

"We will be able to fulfil orders in a better time and the quality will be more consistent. We want to continue to innovate but also achieve and maintain the quality you would expect from a German or Japanese manufacturer," he said.

Cifa's history of innovation includes, over the last few years, the introduction of carbon fibre boom sections on four of its truck-mounted concrete pumps. In an industry where steel is used exclusively for load-bearing components, this was a radical departure. It is also interesting to note that Cifa manufactures its own carbon fibre components, rather than outsourcing the work.

"We think we have reached the limit with steel. There are other composite materials we are looking at – not just carbon fibre," said Cipolla.

The use of carbon fibre reduces the gross vehicle weight, which is an important consideration in developed countries where there are strict limits on truck weights and axle loads.

Metivier said, "We always have the longest boom that can be fitted on any given truck chassis. We also have weight to spare for additional accessories."

The Carbotech range

A Cifa K45H Carbotech truck-mounted pump. The carbon fibre boom sections are differentiated by their silver colour

comprises four models with 39m, 45m, 62m and 80m booms, mounted on three-, four-, five- and seven-axle chassis, respectively. Of the 80m reach K80H, Metivier said, "That is the longest boom available in Europe."

Parent company Zoomlion has also reaped the benefits of the use of carbon fibre. In November last year, it used this technology to build the world's first 100m-plus concrete placing boom, with engineers from both Cifa and Zoomlion working on the project.

GLOBALISATION

And according to Cipolla, Zoomlion's investment in Cifa is continuing to play a part in the globalisation of both companies, with a strategy to offer both brands with different levels of technology on-board around the world. It is one part of the company's aim to fine-tune machines to different customer preferences.

"It is impossible to serve the world from one plant. There are local requirements and machines can be expensive to transport. You must have a local presence, not only with production, but also R&D," said Cipolla.

He concluded by saying, "The concrete sector is very strange, with high peaks and deep lows. We invest during the down times to be ready when the market comes back."

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A glimpse of the future

The end of August saw Volvo provide an insight into its on-going R&D and the rationale that lies behind it, according to Lindsay Gale

The meat of what Volvo Construction Equipment termed its Innovation Day at its Eskilstuna, Sweden, facility was the announcement of the six-engine range that will start to be introduced in 2014 to meet Tier 4 Final/Stage IV engine emission legislation in the US and Europe.

Exhaust after-treatment is the key to meeting these stringent regulations, with the new engines featuring selective catalytic reduction, a diesel

particulate filter and external exhaust gas recirculation driven by either a variable geometry or wastegated turbocharger.

According to the company, the new engines have undergone bench and multi-application field testing, and have proved to reduce nitrogen oxide emissions by 80% to just 0.4g/kWh.

The new range of engine is also said to offer a 5% increase in fuel efficiency and a 5% reduction in CO₂ emissions over



The Volvo 300 is the fifth concept design developed by the company, in this case a radical mini excavator

their Stage IIIB equivalents. The test programme involved more than 25,000 running hours in articulated haulers, wheeled loaders and excavators in a range of environmental conditions, from sub-zero temperatures to extreme heat and at high altitude.

In addition to its latest engine range, Volvo also outlined the developments it has been examining where drivelines are concerned. Continuously Variable Transmissions (CVTs) have been used with success in the agricultural equipment sector for

a number of years, and Volvo has been examining this technology with a view to helping wheeled loaders move 50% more material using the same amount of fuel as today.

And Volvo is also carrying out R&D on the use of hybrid drive systems. In both cases, there are no immediate plans for Volvo to introduce any equipment that feature these driveline solutions – it is more a situation of Volvo being ready for possible future customer-led demands.

More a concept that a real production design, Volvo's fifth radical equipment design was also shown for the first time.

As yet without a name, the Volvo 300 concept design for a mini-excavator makes use of established technologies as well as a number of theoretical elements that are either under development or are still to be developed.

It also took its concept designs further by unveiling what it calls The Plan, which was a video showing various of its concept designs (particularly its future ADT and excavator concepts) operating on an autonomous site "somewhere in the world" with no operators behind the wheel and all machine operations controlled from a central location.



The L35D compact loading shovel was introduced in Eskilstuna and was joined by the smaller L30D

Making an impression in Hungary

Contractor Versendko Mining tested a 4.2m³ capacity LiuGong 877III wheeled loader for use on its limestone quarry in Baranya County, Pécs, Hungary – the first piece of Chinese construction equipment the company had tried.

Wheeled loader operator Csaba Balatinacz praised the productivity of the machine, saying, "First, it is very easy to operate and it has a powerful engine with an easy transmission. That power is very useful for driving into and lifting the rock.

"This is particularly useful when the rock is wet because it becomes much heavier for the same load space – only the other day the warning gauge showed 9.95 tonne of wet load had been lifted but the machine didn't show any signs of a struggle. And yes, the machine is all standard specification."

Zoltan Csako, owner of Versendko Mining, decided to buy the loader. "The LiuGong machine has proved to be a typical earthmoving machine with no more and no less problems than its competitors," he said. "The decision to buy LiuGong was, of course, the competitive price. But it also came down to after-sales service."



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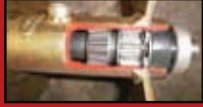
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Deep seated development

Heating and cooling are among the new additions to the seat offering from KAB

Seats with a heater function and ventilation system are among the advances from KAB Seating, part of the US-based Commercial Vehicle Group.

The company said that operators would feel the benefit of KAB HV seats which are designed to combat extremes of temperature. It said the heater system warmed up the joints to prevent muscle ache in cold weather, while the air cooling system worked to overcome the unpleasant effects of overheating such as sweating and skin irritation.

The air cooling system has been developed in co-operation with a Japanese technology company, and features a dual fan and a venting membrane that circulates the air and directs it to where it is needed.

KAB has a range of seats with air and mechanical suspension which it said were suitable for a wide variety of construction machines. For the 600 series – its large-size, low-frequency, heavy-duty air and mechanical series – it has the 600 C, a four-point harness version. The 600 B is a

three-point seat belt version, and the 600 P is a pod seat version to carry machine joystick controls. KAB said the 600 Series was a long stroke suspension design specifically for high load applications, both in terms of supported operator mass and application profile intensity. Its wide format is said to ensure good lateral stability and low free play

The 800 series of mid-size, air and mechanical suspension seats have the longest suspension stroke in the KAB Seating range, and comes with the K4 high back seat upper, and the K1 mid back.

EXTREME CONDITIONS

The 500 series is engineered for extreme conditions with double damper and four-point seatbelt options. Pods can be fitted to the suspension completely integrating the seat into the customer's vehicle.

The Compact Series is used in applications where headroom is limited. Available as a suspension module or with integrated upper, it is typically used in compact construction machinery



The KAB Air 65/K4B is suitable for many types of construction vehicle

among other machines. Air and mechanical seats are available.

KAB said its new Sentinel seat built on the developments made in the compact seat range to bring a wider variety of upper options to the KAB compact equipment product portfolio. Designed to carry over the flexibility of its larger format products, the Sentinel improves customer choice in this sector, it said.

It said that the added support and structural capability of the Sentinel seat actively reduced risk of injury when compared to the industry standard seat.

As well as the heating and cooling technology, it has KAB Kool – the application of a special fabric coating that actively draws heat away from the body surface if the subject begins to overheat. It also returns any stored heat back to the subject if the surface temperature subsequently drops. KAB said the net effect was to manage the surface temperature of the seat more effectively, giving a more comfortable environment for the operator.

SAFETY

Among other developments, there is the KSS inflatabelt. This is an alternative approach to pretensioning as a method to retain the occupant into the seat in the event of a crash or roll over event.

It uses a high volume cold gas inflator that inflates an airbag folded into the sash section of the three-point belt to a diameter of 125mm, pinning the occupant to the seat and preventing excessive movement from the intended seated position. Developed for the automotive industry, it is already in use on some US vehicles. **ce**

Testing KAB seats at its factory in Northampton, UK





New safer and more precise control systems are part of the X-Series design



The launch of the X-Series cranes in Berlin, Germany.

Hiab's new X-series loader cranes boast new safety features and almost double the extension speed of their predecessors. *Laura Hatton reports*

X-rated speed kings



Hiab president Axel Leijonhufvud

Hiab's new series of cranes are said to be almost twice as fast as the previous model, while lifting capacity has also been increased.

Hiab, part of Cargotec, launched the new generation of loader cranes in Berlin, Germany, as part of the celebrations to mark its 70th birthday.

The new X Series comprises four new models – the X-CLX 178, the X-DUO 178, the X-HIDUO 188 and the X-HIPRO 192 – while a key feature of all of them is the fast boom extension system. In fact Hiab says its new cranes are almost twice as fast as the predecessor, the XS 166.

The company also says the X Series has increased lifting capacity and improved precision handling compared to previous models.

The cranes are described as mid-range models, with lifting capacities ranging from 146kNm to 178kNm and a maximum outreach of 19.4m.

Hiab president Axel Leijonhufvud said, "This new generation is a big jump for us. It

is not just an upgraded version. The whole crane is new, from cylinders to steel structures. Also, we have taken so much customer input into it – we have spent so much time with them.

"We have not been very visible over the past few years, but we are trying to take things forward. This is not the only big release we will make, there will be more."

Leif Törnblom, Hiab product manager for mid-range cranes, said, "Our customers work in very different sectors, with different demands on the cranes. However, regardless of the sector, crane operators want speed, precision and lifting capacity. We have therefore focused on improving these factors even more."

USER-FRIENDLY

Other improvements include a safer and more user-friendly stabiliser system, which features a new sensor and joystick type remote. Hiab has also reduced the number of bolts needed to mount the cranes to a truck chassis.

Leijonhufvud said, "I would say that what we are trying to do here is help our customers make more money. The new cranes are faster, safer, and they are more precise. That is the key for us. We spent a lot of time on the interface of the crane to make it easier to use. The control systems, the joysticks etc are more logical so it is simple to use and therefore safer."

And the launch of the new cranes is part of a wider initiative by Hiab to be more visible to its customers. The company's senior vice president and global head of sales and markets, Carl Gustaf Göransson, said, "Our nature is to be low profile, but we need to step up to get people to understand that this new generation of cranes is a big difference. It's not just a different colour or a label, this is a new crane series."

He said, "What we plan to do is push our brand and make us visible. The product offering of the X Series is a part of this. We will also focus on our distribution as well."



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