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Volume 19 ■ Number 6 ■ November-December 2017

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DEMOLITION BITS

- USA's Georgia Dome, 70,000 capacity former home of the Atlanta Falcons football team, has been demolished [*Sporting News*]
- Arecibo observatory, Puerto Rico, saved from demolition despite Hurricane Maria damage [*Weather Underground*]
- Haifa municipality, Israel files petition asking local court to order demolition of city's ammonia tank [*Ynet news*]
- Demolition costs of former Belvedere orphanage in St John's, Canada, have doubled to C$450 million [*CBC News*]

This year's World Demolition Awards took place in front of a record attendance for the event

Erith strikes gold at industry awards

Erith Contractors enjoyed a golden hour at this year's World Demolition Awards in London, United Kindgom, organised by *Demolition & Recycling International* in co-operation with the European Demolition Association.

The United Kingdom-based company, which marked the 50th anniversary of its formation in September, took the honours in the Industrial, Contract over US$1 million and Safety/Training categories.

Its winning project in Contract of the Year, which involved a challenging task at London's Marble Arch Place, was also selected for the overall World Demolition Award as the "best of the best" according to the eight-strong judging panel.

But this year's awards – which formed part of the World Demolition Summit (WDS) and took place at the Millennium Gloucester Hotel in the UK capital – were far from a one-company show.

With more than 400 delegates present in a record WDS attendance, eight different entrants, representing four continents, shared the silverware across the remaining nine categories.

These were Priestly Demolition of Canada – which won two awards – Berg Corporation, Brandenburg and Demolition Resources (all USA); Coleman and Kocurek (both United Kingdom); Jet Demolition (South Africa) and Ginlee Construction (Singapore).

In-depth coverage of the awards and conference programme from this year's WDS starts on page 20. For the date and venue of the 2018 event please visit www.khl.com ■

Intermat to feature new themed demolition village

Next year's Intermat exhibition will feature a themed demolition and recycling village, the organiser has announced.

The show takes place in Paris from April 23 to 28 and the demolition and recycling village – organised in association with the French demolition association SNED, will be located in the centre of the Earthmoving and Demolition hub in Hall 4.

One of four dedicated areas at the construction event, it will provide an exhibition space for equipment, components and new technologies and a discussion area for subjects including waste management, safety and dust suppression.

Also new in time for the exhibition is the Intermat Construction Observatory, produced in partnership with international development agency Business France. It details market opportunities as far as 2025-30 in 12 countries across Europe, Africa and the Middle East and seven business sectors.

Intermat said the Observatory is being launched to "enable constant and regular liaison with application markets and offer both exhibitors and visitors at the show a forward-looking vision of ongoing and future construction and infrastructure projects."

Intermat takes place from April 23 to 28 and the specially themed demolition and recycling village will be located in the Earthmoving and Demolition hub in Hall 4

Piletec – a leading United Kingdom-based piling equipment supplier – is looking to meet increasing demand for multi-purpose attachments with the launch of a dedicated business. And the demolition industry – along with waste and recycling – is one of the company's targets as it diversifies. The company said its existing attachments portfolio including excavator-mounted vibrators and pile breakers will be significantly enhanced with the addition of mini crushers, shears, multi-processors, grabs, hydraulic compactors and hammers. The move is partly designed to give Piletec access to new sectors such as demolition, waste and recycling, agriculture and forestry, with the aim of becoming the £60 million (US$ 80 million) industry's leading attachments supplier from its current piling and pile cropping base within three years.

PEOPLE NEWS

■ **Franz-Josef Paus** has been elected chairman of the German Construction Equipment and Building Material Machinery Association (VDMA) for the next three years. Franz-Josef, who has been a member of the association board for 15 years and is executive director of Hermann Paus Maschinenfabrik, said he would continue to promote joint research and support the innovation potential of individual member companies and the sector as a whole. He succeeds Johann Sailer in the role and will be assisted by deputy chairs Joachim Strobel and Hermann Weckenmann.

DEMOLITION BITS

■ Hillary's Great Escape park in Perth, Australia, set for total demolition [*WA Today*]

■ Demolition of towers at Ironbridge Power Station, UK, to take three years [*Shropshire Star*]

■ After eight years, French government signs off plans to demolish two dams on Selune river in Normandy [*euractiv.com*]

EP UK Investments acquires RVA Group

Specialist decommissioning, decontamination, dismantling and demolition consultancy RVA Group has been acquired by Prague based Energetický a průmyslový holding (EPH) via its wholly owned subsidiary EP UK Investments.

The amount paid for RVA has not been disclosed.

Managing director Richard Vann founded RVA in 1992 and the company has gone on to complete more than 700 projects worldwide for major international blue chip brands.

EP UK Investments has now acquired RVA's full share capital including its wholly owned subsidiaries RVA Consulting Engineers and RVA Engineering Solutions.

However, RVA said that whilst this may represent a key strategic move for the company, operationally little will change.

Richard, who will stay in his role, said: "At the end of 2016, we commenced a 'fit for future' programme which saw the recruitment of additional key personnel and the creation of further structure within our team.

"A significant investment was also ploughed into new cloud technology throughout the business to increase the flexibility, security and continuity of our work," he added.

"It was all about preparing RVA for the next 25 years and it is great that, in line with this succession planning strategy, an ideal window of opportunity has already opened up for us.

"In practice, it's business as usual. I personally have many more goals to fulfil for the company, and I see EP UK Investment's acquisition of RVA bringing these well within reach in the near future."

EPH has a comprehensive portfolio of power and energy assets worldwide and decommissioning manager Robert Bundil said: "We have worked with RVA people on a couple of projects and know they are excellent professionals who bring high value to their clients."

You can read part of Richard Vann's opening keynote speech to the recent World Demolition Summit on page 33. ■

Global top five is aim for newly independent firm

Hyundai Construction Equipment Europe (HCEE) says its new European base is a major milestone towards becoming a top five manufacturer in the global construction equipment market.

The company – which officially opened the Tessenderlo, Belgium, facility in October – invested €30 million (US$35.3 million) in the building as part of its goal to make the global top five by 2023.

And managing director Alain Worp believes the market will have to take note of recent developments at the newly independent HCEE, which was spun off from Hyundai Heavy Industries six months ago.

"The new facility is an excellent step forward for our European division," he said.

"After becoming an independent business unit earlier this year, the rebranding of the company and the definition of our global vision, this is a clear indication that things are moving fast within Hyundai Construction Equipment.

Kong Ki-young, CEO of Hyundai Construction Equipment, at the official opening in Tessenderlo, Belgium

"It is also a clear signal to the market that we are here – and that we are here to stay in a big way. For me this is only the beginning of our successful path to the future."

Hyundai Construction Equipment CEO Kong Ki-young performed the official opening, which was attended by management from South Korea, national and regional government representatives and staff from the company's European dealer network. ■

Industry stalwart joins Envirocon

Demolition industry stalwart David Sinclair (pictured right) has been recruited by Envirocon, a USA-based corporation operating throughout the country and one of the Washington group of companies. He joins the company as technical director.

David, an internationally recognised figure in the industry with more than 50 years of demolition and dismantling experience, will assist Envirocon in all aspects of technical challenges, the development of safe methods of working, project planning and programming, estimating and training.

He is already involved with Envirocon at demolition projects at power plants in Arkansas and Georgia, and with the demolition of industrial buildings and structures in New York and Idaho.

David is past president of both the UK National Federation of Demolition Contractors and the European Demolition Association. He is also a former international director of National Demolition Association.of the USA.

DIARY DATES

2017

Excon 2017
December 12 – 16
Bengaluru, Karnataka, India
www.excon.in

2018

C&D World
February 10 – 13
Nashville, Tennessee, USA
www.cdrecycling,org

Demolition 2018
February 22 – 24
Austin, Texas, USA
www.demolitionassociation.com

24th Fachtagung Abbruch
March 2 – 3
Berlin, Germany
www.fachtagung-abbruch.de

Intermat 2018
April 23 – 28
Paris, France
paris.intermatconstruction.com

Tower Cranes North America
June 19
Miami, USA
www.khl-tcna.com

Hillhead 2018
June 26 – 28
Buxton, United Kingdom
www.hillhead.com

Intermat ASEAN
September 6 – 8
Bangkok, Thailand
www.asean.intermatconstruction.com

Concrete Asia
September 6 – 8
Bangkok, Thailand
www.concrete-asia.com

Cranes and Transport Middle East
October 10
Dubai, UAE
www.catmiddleeast.com

Bauma China
November 27 – 30
Shanghai, China
www.bauma-china.com

2019

Bauma
April 8 – 14
Munich, Germany
www.bauma.de

The manufacturing and assembly line at Stalowa Wola

LiuGong boosts its presence in Poland

LiuGong has increased its presence in Poland by moving its European regional headquarters to Warsaw, opening a parts warehouse at its factory in Stalowa Wola and starting production of Stage IV excavators and wheeled loaders at the plant.

The company has also announced its intention to add research and development capacity in Poland.

The new Warsaw office will concentrate on sales, customer support and marketing for Europe, and will be a hub for LiuGong's global customer support network. The company will still retain some functions at its Almere, Netherlands offices, which were opened in 2012.

However, the bulk of the company's increasing presence in Europe will be centred on Stalowa Wola and the factory it acquired when it bought dozer manufacturer Dressta in 2012. The company has now opened a 3,500 sq m (37,600 sq ft) warehouse on the site which houses the spare parts inventory and distribution for both the Dressta and LiuGong brands in Europe. The new facility will take over the LiuGong parts distribution activities previously carried out in Almere, centralising this function.

The spare parts facility offers 30,000 storage locations and according to Liugong the current inventory value is €8 million (US$9.5 million). The company said its investment in Stalowa Wola would improve the availability of parts in Europe. It is targeting 90 % availability by the end of the year, and wants to move on to 95% or better.

Howard Dale, Chairman of LiuGong Europe and LiuGong Dressta Machinery, said: "There is significant opportunity for growth in Europe.

"LiuGong is committed to continuously improving our products and services and growing our business in this region, so we have established the new headquarters to support these aspirations.

"This serves as a very clear signal that LiuGong is committed to this market and in a strong position to offer our customers shorter lead times and improved support with products that are designed for Europe and made in Europe." ■

Scudder fills in at Ford

United Kingdom-based contractor TE Scudder has reached a landmark stage of its demolition project at part of the Ford motor plant in Dagenham, east of London.

The company, which has been on site since September 2016, recently removed a ground floor slab from a basement using a demolition spec Cat 385 fitted with a 9 t Genesis pulveriser.

Steel from the basement was recycled and the concrete was removed to ground level where it was screened to make type one with the remainder being crushed to make 6F2.

Scudder then removed the roof of the structure using a 40 m (131 ft) high reach.

It started at ground level, taking off two bays, then then the rest of the building was demolished from basement level. In removing the basement, the company had to place 890 m (2,920 ft) of sheet piles around it to act as a cofferdam due to the high water table, while backfilling requires 140,000 cu m (4.9 million cu ft) of selected engineered fill.

Completion of the full project is scheduled for 2020. ■

How the site looked in the second phase of demolition after the roof of the structure had been removed

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http://opn.to/a/DRI_Dem_A

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Michael Koening, CEO of Lehnhoff-Hartstahl

Cut and thrust

Outside of his working life, **Michael Koenig** has won multiple fencing championships in the state of Baden-Württemburg. As CEO of Lehnhoff Hartstahl and almost a year into the role, penetrating the market with the company's fully hydraulic quickcoupler is his priority. ***D&Ri*** catches up with him.

Michael Koenig has been at Lehnhoff Hartstahl since 2007, but it was only at the start of this year that he was appointed CEO. After being named managing director in 2016, it is a second change of role in consecutive years, but then he is no stranger to high profile positions with the Germany-based attachment specialist. He was formerly its chief financial officer, a job that he describes as "like being the right hand of Mr Lehnhoff himself."

With the first anniversary of his CEO appointment looming in January, it is a fitting time to take stock on how the business has progressed so far. In fact, January will be a corporate as well as a personal milestone – it also marks two years since the acquisition of the company by the Japanese construction equipment giant Komatsu.

Like the company he represents, Michael Koenig is a product of the south-west of Germany. Something else he has in common with his employer is that the story of both of them is best told chronologically.

For both Michael and Lehnhoff, the start and end points are quite different, and the evolution that has brought them to where they are is fascinating.

Born in the Black Forest, Michael trained in industrial management and business administration, as well as doing two years' military service.

After "starting my business life" with a machining company, in the early 1990s he moved into construction and accepted an invitation to work in Poland.

A fluent Polish speaker, he was responsible for eastern Europe and remembers his time there as managing "a very integrated team. The people were very hospitable. I really appreciated being there."

Back in Germany, he spent five years with an automotive supplier as chief financial officer before joining Lehnhoff. It is an environment he is comfortable in.

"With a medium sized company, the sense of working is that you have to be flexible and you have to make quick decisions.

"That is a very important advantage. In bigger companies, you have to ask a lot of people, but I can speak with Mr Lehnhoff and we can get something decided in half an hour.

"Demolition and recycling is becoming more and more important. The life cycle of a house is coming down to 30 or 40 years. Years ago, if you built a house it was there for generations, now it's just one generation. So it's very important to demolish old structures

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The company celebrates production of its 150,000th quickcoupler earlier this year

and build new ones. Maybe it's not a new sector but it's a sector that will have to change technology very quickly. City centres and small places have to have good working tools that are effective, don't make a lot of dust and offer a choice of attachments that make efficient work."

FUNDAMENTAL CHANGE

Technology has been something of a theme in the Lehnhoff story. Founded in 1960 as Metallbearbeitung Steinbach by Ernst Günter Lehnhoff, for six years business centred on remanufacturing drives until what the company calls a "fundamental change of programme" led to the manufacture of backhoe buckets for hydraulic excavators. The first tilting bucket came along in 1968 and with an enlarged range of attachments the company became an original equipment manufacturer for Komatsu Germany in the 1980s. By the end of the decade the company had its first Lehmatic quickcoupler, the MS03 for mini excavators. The fully hydraulic Variolock system was introduced in 2007.

"When we started dealing with producing the fully hydraulic quickcoupler, the business model changed," said Michael.

"We had to have engineers in the field and we had to have a service team. It's quite hard for a medium-sized company to have a service team covering the whole of Germany. From where we are there are big distances to Hamburg and Berlin. To establish all that needs investment in future markets, especially if you have teething problems for new brands. Arranging who will drive where takes a lot of time at the start."

In 2015, before the Komatsu acquisition was announced, the company opened a new logistics and assembly plant in its home base of Baden-Baden.

"We would have done it anyway, even without Komatsu," said Michael.

"We had to grow the business and the old place was too small. We were having problems with inventory."

A year later, Lehnhoff produced its 150,000th quickcoupler, close to 30 years after the first.

"It's quite a big number" is Michael's take.

"We have invested in a robot assisted welding line. We have tried to keep the company state of the art regarding production. In the past, the focus was producing everything ourselves."

A panaromic view of the Baden-Baden site. Lehnhoff introduced a new logistics and assembly line in 2015

STRONG HOME MARKET

Not surprisingly, the company is strong in its home country, where it has a 90% share serving the market for excavators up to 12 t.

Go above 12 t towards 40 t, however, and the figure drops to below 50%.

Perhaps here Michael can call on his experience as a regional fencing champion – he has won both foil and rapier classes in the state of Baden-Württemburg – to help him with the cut and thrust of penetrating Europe's attachments markets.

Talking to him suggests that the difference with the fully hydraulic quickcoupler is that it is as much an intellectual or philosophical argument as a selling process.

"Germany is still the main market for us. Other European markets are quite segmented. We are on the border with France and we sold some systems into French market, but we achieved nothing like success we get in Germany. French people like to buy French products. Each country has its own rules.

"At Lehnhoff, we are convinced that the fully hydraulic quickcoupler is the most important product for the future. We have probably the best in class but we have to convince our customer that it's the best. It's not enough to know it in Baden Baden. Our customers in London have to be convinced, our customers in Paris, Madrid, Rome.

So how will they be convinced?

"The main challenge is to get our market share back in the 19 to 35 t class of excavators.

"We launched the Variolock last year and the customers loved it. We have product managers in the field doing customer surveys.

"Almost every sector has a fully hydraulic system. Once the customer makes the decision, either to go with us or go with someone else, if they have gone with someone else it is difficult to get them back. But if the customer has a mechanical or hydraulic machine, we can get them.

"People don't always know what to do with fully hydraulic attachments, so if they work with attachments they need to be convinced to work with a Lehnhoff.

"It's about showing the customer the value of the attachments. It's about changing something in the building industry, about changing minds. It takes a long time. We tell customers they don't need mechanical couplers anymore, but they are still the most sold item.

"We had very good feedback from Steinexpo [the German construction equipment exhibition held in September] about the Variolock, but the overall quickcoupler strategy is not finished yet. Even though people still need to be convinced, I still think it's realistic that we can get our number one position back within three years."

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Manafort Brothers has experience of demolishing power stations on the US east coast

Power and performance in Zion plant

Indeco's attachments are playing a key role in the demolition of the nuclear power plant in Zion, Illinois. The project is being conducted by Manafort Brothers, one of the most important contractors in the United State specialising in nuclear decommissioning.

The Zion nuclear power plant is located in Illinois, USA, on the shores of Lake Michigan 64 km (39 miles) from Chicago and 68 km (42 miles) from Milwaukee. Completed in 1973, the plant started to produce electricity from its first reactor in December 1973 its second nine months later.

Indeco attachments are playing a vital role in the power plant demolition

The Zion power plant was part of the Commonwealth Edison (ComEd) network and was designed to serve the Chicago metropolitan area and the part of the state along the lake. In February 1997, following an error that led to the accidental shutoff of Reactor 1 – an incident that had no consequences affecting safety – production of electricity was suspended.

A year later, ComEd, which was to invest US$435 million to reactivate Reactor 1 and resupply Reactor 2 with new, decided to suspend activity permanently, as the investment would not have produced a sufficient return.

To accelerate conversion of the site, in August 2010 the NRC (Nuclear Regulatory Commission), allowed ComEd to transfer the licence to Energy Solutions, a specialist in decommissioning nuclear power plants and cleaning up industrial sites. By 2026, the project aims to restore the entire area to its greenfield status of 50 years previously.

Energy Solutions, through the subsidiary Zion Solutions, is responsible for all removal of the plants, demolition of the structures, and conveyance of all debris to a site it owns. Decommissioning started in 1998 with removal of the nuclear fuel from the reactors

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and securing of the uranium bars. In 2011 decontamination and demolition of the actual structures began. Including soil remediation, this 10-year project requires 200 specialist workers a year, with a total project cost estimated at $1 billion. The decommissioning plan provided that for all phases pertaining to the demolition of the reinforced concrete and steel structures, only mechanical demolition could be implemented. The use of explosives was excluded given the nature of the site and the potential risk of an uncontrolled release of contaminated dust.

PROVEN EXPERIENCE

To execute the demolition process properly and safely, the project had to be assigned to a contractor with proven experience and expertise, as the work called for dismantling structures of a certain complexity given the structural characteristics of the buildings and the different types of plants and facilities at the site. In 2014, Zion Solutions contracted the works to Manafort Brothers of New Britain, Connecticut, a company with a 100-year old history and a national reputation. It was, and remains, the only company that has performed demolition of two nuclear power plants on the east coast of the US.

Manafort Brothers started with the building where the turbines and generator were originally installed, no longer visible now that it is completely demolished, then proceeded with the interior of the two towers that housed Reactor 1 and Reactor 2, where various plants and equipment were removed. This was followed by dismantling the large building that housed the auxiliary plants situated between the two towers whose demolition started this autumn. Besides requiring the experience and the ability to operate safely, demolitions of such difficulty and complexity demand the right machinery and equipment. The long timeframe of the job site, the size and strength of the

All Indeco models got top marks for reliability and durability from the customer

Manafort's John Carville said he had not previously encountered reinforced concrete like that at the Zion plant

structures in reinforced concrete and steel, and the need to ensure a sufficient production output, involved a careful evaluation of the equipment used for the demolition. After its analysis, Manafort Brothers decided to use exclusively Indeco hammers with a pulveriser and shears, also supplied the company.

The hammers being put to work at the Zion site are two HP 25000 (in Europe HP 18000, operating weight: 11,054 kg; tool: 250 mm for 60-140 t excavators), three HP 13001 (in Europe HP 9000, operating weight: 5,000 kg; joule: 15,000; tool: 195 mm for 39-80 t excavators) and an HP 8000 (in Europe HP 5000, operating weight: 3,150 kg; joule: 8,000; tool: 160 mm for 27-50 t excavators) mounted on an excavator fitted with a long boom for demolition and, as mentioned, an ISS 30/50 shears and an IRP1250 rotating pulveriser. The attachments are often used contemporaneously, although in different areas of the site; some have been used on an ongoing basis for more than a year.

John Carville, site manager for Manafort Brothers, said: "Here in Zion, as with all demolitions of this kind, there are a whole set of problems to deal with, primarily the health and safety of our workers, the compliance with environmental regulations and the need to properly plan and execute the different stages of demolition so we can access areas not immediately reachable because they are concealed by other structures.

"For an idea of how much reinforced concrete is present at the site, let's just say that by the time we've finished the job, we'll have produced over 113,000 t of debris, all transported by train to a special site in the desert in Clive, Utah owned by Energy Solutions. And besides the concrete, we have to count the thousands of tonnes of ferrous and non-ferrous materials that come out of the demolition process."

SIZE AND SCOPE

That said, the size and scope of the demolition project does not stop with a quantitative breakdown; all the major internal and external structures in reinforced concrete are in cast concrete, varying by location from 1 to 4 m, (3 to 13 ft) with 32 to 36 mm diameter rebars and a mesh ranging from medium-thick to very thick. The biggest thicknesses to be in the structures that go down to almost 18 m (59 ft) below the ground level containing the pumping plants of the cooling water from Lake Michigan, and in the structures that held the reserve of nuclear fuel, and of course the foundations. To take them on, the machines and equipment exert an enormous effort, as John emphasises.

"I had never encountered reinforced concrete with a compressive strength of 60 to 90 MPa (8.7 to 13 Kpsi) like here in Zion. That's why the choice of the hammers and the other demolition equipment was absolutely critical. The two HP 13001 are the models we operate the most, but it's no surprise that the two HP 25000 allow us to tackle the most challenging situations. The HP 25000, besides benefiting from the Indeco technology contained in all the models of the range, has impressive power, and with its 25,000 joules it really is the only one that can be a valid alternative to blasting.

"All the models get top marks for reliability and durability when it comes to the tools in relation to the type of demolition, a clear sign that the materials used to make them match the level of the materials used for all other components of the hammer. The pulveriser and the shears are delivering excellent productivity too. The rotating pulveriser stood out for a favorable ratio between power and size."

At the Zion site the hammers were and still are subjected to a heavy duty use over a long-term period. That aspect is not common for normal demolitions, where operations generally last a year or so. In demolitions of large structures the equipment's production can be measured, but a job like Zion represents a challenge also in terms of service and technical assistance, factors that inevitably end up having a decisive impact on job completion.

Emphasising this particular aspect, John Carville added: "Our satisfaction with the Indeco hammers, the pulveriser and the shears is not only attributed to their production output, but also the service provided by Indeco North America, who has consistently given a rapid and efficient response to all our needs, almost all relating to routine maintenance. It's no wonder why we intend to order two other HP 1300s to finish up the job." ■

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As the CEO of family run crushing business Abbema, Benth Winqvist is fully aware of the importance of noise levels, based on his previous experience working on noise mapping projects for the Swedish Rail Administration. When the time came to invest in a new mobile plant, he went with the Metso Lokotrack Urban LT106.

The Lokotrack Urban LT 106 at Abbema


Viktor Andersson of Abbema, who maintains the machine

How low is your noise?

Abbema first contacted Metso three years ago, when the company purchased a Lokotrack LT105 from the supplier.

"Skanska wanted to do a crushing assignment. Our tender was accepted and we got the contract, so we quickly needed to find a suitable mobile crusher," said Benth Winqvist, the company's CEO.

"Micael Larsson at Metso helped organise immediate delivery, which meant we could complete the assignment we had committed to perform" he added.

This is how Abbema got underway with its crushing business, in addition to its other contracting services.

With crushing assignments increasing in 2016, a new crushing plant was necessary. The Urban LT106 had recently been introduced to the market, and satisfied Abbema's specific requirements for a new crusher.

The crusher offers large crushing capacity, low noise level and good dust control, which ensures minimal dust particle dispersion.

One key feature of the Urban LT106 is that it has an advanced dust suppression system. The dust is funnelled to stay inside the mobile crushing plant, and a high-pressure water spraying system absorbs dust particles from the air.

"It was not only on behalf of the nearby buildings and their inhabitants that I found these machine characteristics to be of interest. I also want my employees to work in a healthy environment," said Benth.

With a strong interest in environmental issues, Benth also performed measurements on his own, and compared a machine offered by a competitor with Metso's Urban LT106. There was a significant difference of 6 dB which – in theory means doubling the distance at certain sound pressure limit.

Abbema also signed a Life Cycle Services (LCS) agreement with Metso in conjunction with the purchase, to ensure the maintenance and performance of the equipment.

The LCS contract comprises wear parts, spare part kits and comprehensive inspections every one thousand hours. Abbema also decided to install Metso Metrics Services, the cloud-based monitoring and reporting solution for mobile crushers, to receive timely data on machine performance and ensure full control over operations.

A SAFE ENVIRONMENT

Safeguarding the environment is more important than ever before. SBMI, the Swedish Aggregates Producers Association, has already demonstrated its interest by making a video about the Urban LT106 which is available on YouTube and on Abbema's website. A sequence from the video showing the urban-friendly mobile crushing plant was shown at the SBMI's trade association, and Micael Larsson, a salesperson at Metso, says that after the SBMI meeting, he received several calls from customers who are interested in receiving more information about the crusher.

Crushing operations and their noise levels are naturally regulated.

"Each municipality handles its own environmental permits, " said Benth.

"The administrators here in Mjölby and Västervik, where our Urban LT106 has been in operation, have been very positive. There are different rules for different times of the day as well as for the distance of the noise, but I am familiar with environmental permits and the related problems because I specifically worked with noise issues for so many years."

From health and safety perspective, ear protection is generally required from 85 dB. With the Urban LT106, the protection distance drops by up to 60%, from 23-25 m (75 to 82 ft) down to 9-11 m (29 to 36 ft).

It is important to remember, however, that process noise is highly dependent on parameters such as feed material, feed size, crusher setting and ambient temperature. Actual values may vary depending on operation conditions and other equipment used on the site.

"We have chosen to work on an ad hoc basis, which means we take contracting jobs that arise. Short notice works well for us.

"Rock materials and end-products vary depending on the client. Consequently, having a mobile plant is a necessity, and it is a major advantage if we can crush rock in densely populated areas." Benth explained.

"If everything goes according to plan, the next machine from Metso will be a secondary crushing plant. The model of greatest interest right now is Lokotrack LT220D, but it will also have to maintain a low noise level." ■

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This photo and bottom right: the EW220E has a heavy duty two-piece boom and a 10 m reach

Yesterday and today

Volvo CE recently launched three excavators mainly for city environments as it draws on its past to meet the demands of the future.

When the forerunner of the company now known as Volvo Construction Equipment (Volvo CE) started out almost more than 180 years ago, it is probably fair to say that designing products for urban environments or congested city centres was not the first item on its agenda.

In the 1930s when the Swedish company Åkerman – ultimately acquired by Volvo in 1991 – took its first steps into excavator production, it is reasonable to assume that squeezing the new machinery into a tight space was not very high up the list of unique selling points then either.

Fast forward the best part of a couple of centuries and things are rather different, even if the pioneering spirit of the 19th century remains the same. Armed with United Nations projections that by 2050 two-thirds of the world's population will live in cities – and that 60% of the land that will be classed as urban by 2030 has not yet been built – Volvo CE is planning for that time now. Its specific action is a triple excavator launch influenced at least in part by increasing urbanisation.

It is a sobering thought that, as the company said, in the 24 hours following the product announcement the world's population would have grown by 200,000 people with the same pattern repeated every day for the next 30 years.

As president of sales for Europe, the Middle East and Africa (EMEA), Carl Slotte is well placed to comment on why Volvo has taken this route.

"I have done sales and marketing from the start and I've been in the business for 22 years and enjoyed every minute of it," said Carl.

"Excavators account for a large proportion of the overall construction equipment market, and the market is growing. It makes excavators and important strategic product for us.

"Wheeled excavators are an attractive machine for contractors working in city environments. They are easy to transport, easy to manoeuvre for precise digging, and do not risk damaging paved surfaces.

"Short-swing radius machines are also ideal for city conditions where space may be limited."

SHORT SWING

The products making their bow – two at Volvo's manufacturing plant in Konz, Germany, and one with a nod to social media by live satellite link up to South Korea – are the ECR355E, the EW220E and the EWR170E.

The last of those in particular has been designed to meet growing demand for short swing wheeled excavators. It can be fitted with an automatic digging break, is equipped with an optional Boom Suspension System and can be individually configured with either standard 2.5 m (8 ft) wide axles or, to boost stability, 2.75 m wide axles and a blade. Its Attachment Management System stores the necessary settings for up to 20 different types.

For more demanding applications, the EW220E features a heavy duty two-piece boom and can reach materials at a distance of more than 10 m (32 ft) away.

Volvo said the wheeled excavator has been designed and tested to the highest standards of efficiency and reliability. The undercarriage is described as offering high clearance when driving over hard uneven ground, while the axles can be equipped with automatic or operator-controlled front axle oscillation.

Part of the E-Series excavator range, the ECR355 E is aimed at heavy infrastructure work and includes several new features to help it move in and around confined job sites, including the Human Machine Interface electronic system for operators to fine tune functions and settings through a monitor and keypad.

"Europe will be the area of strongest market share growth for wheeled and crawler excavators," said Carl Slotte.

"We have good products and very good service levels from our dealers but we want to improve further.

"Europe is 25% of world excavators but the market growth for 2015-16 was 10% for heavy wheeled excavators and 6% for heavy crawlers.

"We have to meet the challenge of carbon emissions at a time when the number of mega cities in the world is increasing."

Carl Slotte, president of sales (EMEA)

The EWR170E has been designed to meet the growing demand for short swing wheeled excavators

Erith to the fore on

WORLD DEMOLITION AWARDS2017

The World Demolition Awards at the start of November saw more than 30 shortlisted companies converge on London from all points of the compass. But it was a contractor from less than 20 miles away who took most of the honours.

Contract of the Year over US$1m and World Demolition Award 2017

WINNER **ERITH CONTRACTORS**
COUNTRY United Kingdom
PROJECT Marble Arch Place
Also shortlisted
Ceres New Zealand
Ferma Corporation (USA)
Rachel Contracting (USA)

As the World Demolition Summit migrated from North America to Great Britain, so did the main award. Canada's Priestly Demolition had lifted top prize in Miami in 2016, but this time there was little doubt that Erith Contractors would add the "best of the best" prize to the three categories they had already triumphed in. And it was for a London-based project as well.

Winning a World Demolition Award is based on more than just geography, however, and when Erith finished the project to demolish the Marble Arch Tower in London's West End, in June 2016, it had removed an Odeon cinema, 23-storey office block, a single storey basement and two-storey podium.

The equipment used – including a Comedil 180 tower crane and a 67 t high reach excavator – tells the story of the scale of the project. Specific challenges faced by Erith included the demolition of post-tension beams at the cinema, underpinning the party wall in the adjacent building, and creating a new basement.

The contract also featured high levels of engagement with the client, public and regulatory authorities, and achieved a 99% waste recycling rate equating to around 35 t of material including concrete, timber, metal and glass.

"It's difficult to imagine a more high-pressure demolition than a major site overlooking London's Hyde Park," said the judging panel.

"Erith overcame all the challenges to deliver a fantastic job."

There is no stopping Erith Contractors as Bill Moore (left) presents the Contract of the Year over US$1m award, which also won the company the overall World Demolition Award for best entry of 2017

night of celebration

Winners and highly commended award winners celebrate together on stage in London

Industrial Demolition Award

WINNER **ERITH CONTRACTORS**
COUNTRY United Kingdom
PROJECT Bristol-Myers Squibb Site Transformation Demolition
HIGHLY COMMENDED
DDM Demontage (Netherlands)
Also shortlisted
Delsan-AIM (Canada)
Raz-Max (Russia)

When David Darsey, managing director of Erith Contractors, came forward to receive the Contract of the Year under $1m award, he already knew the way to the stage. At the start of the evening, Erith put down a marker for the rest of the night with first place in the Industrial Demolition category. In what proved the most closely fought of any of the 11 main categories, the company just edged out DDM Demontage's deconstruction of two cooling towers for Shell Oil in Germany to the honour. And for the only time in the 2017 Awards the judges felt it appropriate to give a Highly Commended to the Dutch contractor.

While the Contract of the Year award had showcased Erith's expertise close to its south-east of England roots, the company's Industrial entry had a more international flavour. It took Erith to Ireland for the demolition of a bulk pharmaceutical manufacturing plant ahead of one of that country's largest ever construction projects.

The project brought with it the challenge of safely disposing of more than 650 t of hazardous chemical and pharmaceutical waste. In addition, the plant that would replace the demolished structure was simultaneously being built on-site, requiring Erith to factor in the movements of around 2,000 staff and the risk of cross-contamination.

Awards host John Inverdale (left) presents a Highly Commended to DDM Demontage in the Industrial category

Erith Contractors' managing director David Darsey (right) collects the Industrial award from National Demolition Association president Scott Knightly

Its answer was the largest top-down demolition works ever seen in Ireland, with remote-controlled Brokk machines being used to maximise safety and also to reach into restricted areas.

For the project, Erith invested €150,000 (US$177,000) in personal protective equipment, respiratory protective equipment and welfare facilities, and €25,000 ($30,000) in training.

By the end of the 131,000 man-hour project, there had been no lost time incidents and a total of 96% of non-hazardous waste had been recycled.

Judging panel member John Woodward said: "The winners clearly demonstrated an excellent approach to proactive planning that removed the hurdles on the project to give them and the client a clear run to the project finish line." ■

Safety and Training Award

WINNER **ERITH CONTRACTORS**
COUNTRY United Kingdom
Also shortlisted
AR Demolition (United Kingdom)
Coleman Group (UK)
Perfect Contracting (Australia)

The conference programme of the World Demolition Summit earlier in the day had underlined, if underlining was even necessary, that safety is the single most important issue facing the industry today. At the same time, several speakers referred to the importance of investing in the next generation of demolition engineers, so training is not far behind. Put the two together and the result was a keenly contested category, but one in which Erith proved a worthy winner and in so doing notched up a "hat-trick" of awards before the World Demolition Award put the icing on the proverbial cake.

Erith's commitment to safety and training was obvious from the investments it had made in the area in the previous 12 months. Starting from the top, it appointed two specialist directors for training and safety, health, environment and quality respectively. It then increased the in-house safety and training department from five people to more than 20. As further emphasis of the importance of safety and training to the company, its Erith Training Services division, set up in 2015, continued to thrive and delivered over 20 projects during the year.

John Woodward again: "All the entries in this category had made great strides in training their workforce to the highest possible standards but the winner had introduced groundbreaking ideas which lifted their entry to another level." ■ >23

More success for Erith, this time in Safety & Training. Awards judge Clinton Dick (lef) made the presentation

Jet Demolition is proud to have been awarded the 2017 World Demolition Award for Explosive Demolition

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Contract of the Year under US$1m

WINNER **PRIESTLY DEMOLITION**
COUNTRY Canada
PROJECT St Michael's Hospital Redevelopment
Also shortlisted
C&D Consultancy (United Kingdom)
Ceres New Zealand
Ginlee Construction (Singapore)

The other company to win in two categories was Canada's Priestly Demolition, whose successes included one of the coveted Contract of the Year categories.

The company was contracted to perform the demolition of the existing 17-storey stair tower which was land or "building" locked within the existing functioning hospital and where the only access to the work was by foot or tower crane. Priestly's demolition plan called for the use of the on-site tower crane. The obvious challenge with demolishing a stair tower is that nothing is level, so Priestly designed and fabricated a self-levelling platform to work from. This platform was installed and moved down through the floors as the project continued, helping the company to make short work of the removal.

At the 12th floor, the footprint became slightly larger where the stair tower became a link between two of the existing structures that were to remain. This portion of the stair tower was from the original construction. At this time Priestly deployed a second hammer on a Hitachi 27 to facilitate the hammering of the slab, beam, and columns portion of the link. This activity took place at the same time the Brokk 100 worked on the stair portion. Temporary shoring posts were engineered and installed to support the mini excavator and rubble load. Clean up of the rubble that was left from hammering and the block infill was done by bobcat and by manual labour.

Priestly added that on-site logistics were extremely difficult as the entire stair tower had to be removed using small equipment in a very limited foot print.

This was appreciated by the judges, who said: "Quite simply this was a great execution of a project to overcome every imaginable obstacle. And they did it safely, on time and on budget." ■

Contract of the Year under US$1m is always keenly contested. Priestly Demolition of Canada comes out on top and it's all smiles for company president Ryan Priestly (left) and awards judge Henrik Bonnesen

Recycling and Environmental Award

WINNER **PRIESTLY DEMOLITION**
COUNTRY Canada
PROJECT Former Humber Hospital, Toronto
Also shortlisted
Centro Clinico Sudoeste (Brazil)
Keltbray (United Kingdom)
Perfect Contracting (Australia)

Once again Priestly demonstrated its expertise in a hospital demolition setting, but this time in terms of the recycling and environmental aspects rather than the demolition itself.

For this project, which covered 40,000 sq m (430,000 sq ft) of interior space, Priestly mobilised equipment including two 70 t high reach excavators with concrete processors, five 50 t excavators with grapples, shears, pulverisers, bucket and hydraulic breaker and a 24 t excavator with a magnet.

One of many challenges Priestly faced was to separate and remove the exterior brick veneer from this large structure to prevent it mixing with all other concrete, and to divert these materials from landfill and meet the project's stringent waste audit requirements.

It accomplished this separation and processing by using the Volvo 700 high reach excavator with precision and without compromising the remaining structure, then stockpiled and recycled the brick separately to ensure that the concrete crushing operation would be free of any red brick on the final aggregate product.

The entire project took 13 months to complete from start to finish and peaked at 50 employees working two shifts during some phases to meet the schedule. Items recycled included steel, concrete, brick, asphalt, soil remediation, 1,264 fluorescent light tubes, 230 smoke detectors and 1,590 t of construction and demolition waste.

All concrete from the entire project was crushed using the Lippmann 4800 impact crusher to generate over 38,000 t of crushed 2 in minus recycled concrete.

Priestly also recovered an extra 850 t of steel and rebar just from the concrete processing activity.

Awards judge Jim Graham said: "The aspects of this project are a clear demonstration to all in the industry that sustainable planning and execution, along with near 100% recycling of all, non-regulated waste materials, is very achievable.

"This process was personified by Priestly with the impressive metrics measured, and executed, and with the emphasis on safety, schedule and budget that are the real success in any project execution." ■ >24

National Federation of Demolition Contractors CEO Howard Button (left) congratulates Ryan Priestly on his company's success in Recycling & Environmental

The judges

- **Henrik Bonnesen**
Environmental Manager, Cowi, Denmark
Henrik's categories were Civils; Collaboration; Contract of the Year under $1m; Recycling & Environmental
- **Dan Costello**
President, Costello Dismantling, USA
Dan's categories were Contract of the Year under $1m; Explosive; Manufacturers' Innovation Plant & Equipment; Urban
- **Clinton Dick**
Founding Director, Liberty Industrial, Australia
Clinton's categories were Contract of the Year $1m or over; Explosive; Manufacturers' Innovation Tools & Attachments; Safety & Training
- **Patrick Frye**
Technical Director, Cardem, France
Patrick's categories were Civils; Collaboration; Industrial; Recycling & Environmental
- **Jim Graham**
Executive Vice President, Winter Environmental, USA
Jim's categories were Collaboration; Contract of the Year under $1m; Manufacturers' Innovation Plant & Equipment; Recycling & Environmental
- **Bill Moore**
Principal Consultant, Environmental Resources Management, USA
Bill's categories were Civils; Contract of the Year $1m or over; Industrial; Manufacturers' Innovation Tools & Attachments
- **William Sinclair**
President, European Demolition Association and Managing Director, Safedem, United Kingdom
William's categories were Contract of the Year $1m or over; Manufacturers' Innovation Tools & Attachments; Safety & Training; Urban
- **John Woodward**
Demolition Consultant, C&D Consultancy, United Kingdom
John's categories were Explosive; Industrial; Manufacturers' Innovation Plant & Equipment; Safety & Training; Urban.

The eight judges were divided into sub-teams of three for the categories they judged. No one can sit on the judging panel for a category in which his or her company has submitted an entry.

Urban Demolition Award

WINNER **BERG CORPORATION**
COUNTRY USA
PROJECT The Museum of The Bible, Washington DC
Also shortlisted
Erith Contractors (United Kingdom)
Liberty Industrial (Australia),
O'Keefe Demolition (UK)
Rye Demolition (UK)

The Urban Demolition category produced a first-time winner in the shape of the USA's Berg Corporation, chosen for the iconic Museum of The Bible project in the American capital which involved taking down the Washington Design Center and adjacent Hyphen building to create a useable space for the new museum.

Berg described the project as: "An intensive and massive structural and selective demolition of an aging building surrounded by active pedestrian, vehicular, subterranean and railway traffic in the heart of one of the most congested, scrutinised and important cities in the United States. The environment surrounding the project was not only politically charged but physically daunting.

"A margin for error did not exist."

No pressure there, then.

To provide the space necessary to complete the new work, Berg had to figure out a way to remove the top two floors while leaving the existing exterior walls in place and unharmed, how to remove every other subsequent floor to provide an open and inviting floor area with ample head room, and how to remove and excavate the existing basements while coordinating these efforts and in conjunction with the demolition operations above. Additionally, Berg had to separate the existing WDC building from the 15,000 sq m (162,000 sq ft) Hyphen Building added in 1981, and completely demolish the newer structure.

As soon as the interior finishes and mechanical systems were removed, Berg began to reinforce the existing structure by installing shoring towers on the lower floors and creating openings along the exterior walls so that vertical I-beams and kickers could be installed to reinforce the exterior masonry wall and columns. This support of the existing structure allowed Berg to remove the penthouse, roof and eighth and seventh floors while leaving the towering exterior walls in place.

Dan Costello: "A fantastic project exhibiting the full gamut of demolition experience, from Brokks to high booms, with great ingenuity toward the singular project focus of reinventing an old building."

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First time winner Berg Corporation enjoys its moment in the spotlight. Awards judge John Woodward (centre) presents the Urban award to Corey Woods (left) and Chris Trendell for its work on the Museum of The Bible

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WORLD DEMOLITION AWARDS2017 WINNER CONTRACT OF THE YEAR OVER US$1 MILLION

WORLD DEMOLITION AWARDS2017 WINNER SAFETY & TRAINING AWARD

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Explosive Demolition Award

WINNER **JET DEMOLITION**
COUNTRY South Africa
PROJECT Implosion of HG de Witt Building, Pretoria
Also shortlisted Cardem (France)
Safedem (United Kingdom)

As with the Urban category, Explosive Demolition ended in a result that saw a company winning for the first time on the basis of its performance in a very challenging project. Indeed, in its entry to the awards, Jet described the HG de Witt project as one of those that "literally kept you awake at night". One trusts that after the judges' decision, managing director Joe Brinkmann and his team will sleep a little easier.

The specific challenge facing Jet was an exceedingly tight site, which made it necessary to produce a centre-drop implosion action that would emphatically pull the east end of the building and thereby "ride" it to the west, while simultaneously pulling in the west end of the building.

Critical requirements for the success of this design were a strong lower "spine" of the eastern end of the building to support it during the "ride", for no kickback action of the east end to occur, and for the floors linking the east, west and central portions of the building not to separate as the centre portion dropped vertically downward.

Strengthening the spine and precluding kickback were achieved by installing two heavy steel columns three storeys high in the east end of the building. The strength and stretch of floors was bolstered by a novel implosion method using a total of 64 high-strength, high-elongation steel mining tendons from east to west across the building.

Jet said the successful implosion design and extremely detailed attention to project execution achieved the required results, with the collapse mechanism leading to the formation of a pancaked, pyramid-shaped rubble pile as required by the restrictive site.

Emphasising Jet's success at the end of a close-fought category, awards judge John Woodward said: "All the shortlisted companies submitted highly technical projects for this award which led to long discussions within the judges to find a winner. Jet showed great skill in demolishing the building within the constraints imposed upon them." ■

South African contractor Jet Demolition gets its reward for sleepless nights on the HG de Witt project. Managing director Joe Brinkmann (right) receives the Explosive category award from judge Dan Costello

Civils Demolition Award

WINNER **COLEMAN GROUP**
COUNTRY United Kingdom
PROJECT Waterloo International Terminal, London
Also shortlisted
Delsan-AIM (Canada)
Priestly Demolition (Canada)

The Civils Demolition winner also came from a three-company shortlist – but the result had more in common with Contract of the Year over $1 million in that the award went to a United Kingdom-based business for a project executed in London.

As Coleman fought off the twin Canadian challenge from Delsan-AIM and Priestly, the reasons why its role in the £600 million ($792 million) development at the station, which has a footfall of more than 200,000 passengers every day, was so vital soon became apparent.

In returning the old, disused Eurostar terminal to full operation, the complex works included strip out and structural alterations to make way for a new station capable of serving 20 new commuter trains, with a large retail area underneath the live platforms.

Working directly above the London Underground and adjacent to one of the busiest Network Rail Infrastructures in London, Coleman combined the latest in precision demolition technology with innovative temporary works design capabilities to be able to execute the works within the 15-month timeframe.

There were several key challenges throughout this project, the most notable being the temporary roof tension solution designed by Coleman Engineering Services to hold the roof of Waterloo International Terminal in place while structural concrete was replaced.

The client praised Coleman for its skill, passion and workforce management throughout the works, adopting the company's own mobile-based hazard spotting and reporting system across the site.

Awards judge Henrik Bonnesen commented: "Coleman Group removed 2,000 t of concrete from immediately above the London Underground and next to one of the busiest Network Rail infrastructures in London, with capacity for 500,000 passengers during peak times, and the project engineers attended regular internal forums which explore techniques to remove potential hazards during the design phase." ■ >28

Coleman takes the Civils Award for its work on the Waterloo International Terminal as James Howard (right) joins awards judge Patrick Frye on stage

Manufacturers' Innovation, Plant and Equipment

WINNER **KOCUREK**
COUNTRY United Kingdom
PRODUCT Mining excavator to demolition excavator conversion
Also shortlisted
Komatsu Europe (United Kingdom)
Red Rhino Mini Crushers (UK)
XL Industries (France)

The first of the two manufacturer categories went to previous winner Kocurek.

The conversion came about when Kocurek was approached by a UK contractor with the request to design and manufacture a demolition excavator derived from a standard mining excavator.

For this project, a Cat6015B was selected by the customer and delivered to Kocurek. A unique set of requirements were requested that were fundamentally different from any tracked demolition excavator previously manufactured. The Kocurek customer requested a combination of the two categories on a fully converted base machine – high reach and heavy duty.

A working range of between -19 m (-62 ft) and +70 m (229 ft) was required with varied attachment weights. The engineering team at Kocurek devised a modular system that could be interchanged onto the front of the heavily modified base machine for a variety of working conditions.

The result is a demolition machine that had undergone substantial modification to achieve the design specification. Final build specification resulted in multiple interchangeable front equipment with a working attachment range from 2,500 kg (5,511 lb) at 70 m to 12,000 kg (26,455 lb) at -19m. The initial start point of the project was a machine with firmly established roots in mining.

The end result was a multi-use demolition excavator that weighed 225 t. This machine however was easily dismantled and transported to even to the most confined city locations. Kocurek brought the machine to market in May and it was delivered directly to its maiden working site in London.

Awards judge Dan Costello said: "Apart from brilliantly addressing the visionary needs of a customer, Kocurek established a template to address the needs of the demolition industry for years to come." ■

Kocurek is a popular winner in Manufacturers' Innovation Plant and Equipment. Fred Stearn and Rebecca Kelly (right) pick up the silverware from *Demolition & Recycling International's* Lynn Collett

Manufacturers' Innovation, Tools and Attachments

WINNER **DEMOLITION RESOURCES**
COUNTRY USA
PRODUCT Modular Light Duty Baler (MLDB)
Also shortlisted Husqvarna Construction Products (Sweden), LaBounty (USA)
MB Crusher (Italy)
VTN Europe (Italy)

For a company that by its own admission never expected to win a world demolition award, Demolition Resources was pleasantly surprised. The Modular Light Duty Baler was the company's alternative to the manual execution of interior demolition projects and the potential hazards to workers on-site, particularly in high-rise buildings.

Founded by demolition professionals with more than 40 years' experience, Demolition Resources designed the product to limit the handling of potentially harmful products and make disposing of them safer, faster, and more profitable for the demolition contractor.

It is built in two parts, the baling chamber and the cylinder frame, shear and the electric/hydraulic power pack. Both are easily moved on a wheel and caster combination, which means the baler does not have to be disassembled to be moved from stockpile to stockpile once it is on the desired floor.

"Portable, lightweight, easy to set up – the Modular Light Duty Baler is a cleverly designed product designed with a focus on the needs of demolition contractors," said the judging panel. ■ >32

The first time feelgood factor spreads to Tools and Attachments winner Demolition Resources, whose Jennifer Mitchell and Mick Goodhind (right) receive the award from the National Federation of Demolition Contractors' Paul Brown with host John Inverdale looking on

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New Entrant Award

Ginlee Construction wins the first New Entrant Award. Tommy Lim (left) and Wong Hualun receive the commemorative certificate from Steve Ducker (centre), editor of *Demolition & Recycling International*

WINNER **GINLEE CONSTRUCTION**
COUNTRY Singapore
PROJECT Kong Wai Shiu Hospital

The New Entrant Award, introduced this year, involves no shortlist but instead is given to the highest scoring project, as decided by the judges, put forward by any company entering for the first time – or after an absence of at least three years – and which has not won the award in the category it has entered for.

As a result, Ginlee Construction of Singapore became the first winner for its work on the Kong Wai Shiu Hospital.

The main challenge was to demolish the internal structure of the building while retaining the façade. The presence of live buildings and nursing homes in the area also requires a more controlled demolition procedure. The team thus chose not to hack the whole structure, but used cutting and crushing for structures close to the facade to minimise noise and vibration transfer. It brought in Brokk hydraulic demolition machines that could do the job well and were light enough to meet the loading requirements of the building.

Another challenge was that there was limited space for a clear pathway to transport concrete debris away from the site.

Hence, instead of hacking the concrete into debris, the team cut the structure into panels that can be hoisted up by two 80 t mobile cranes situated around the site. The cranes also helped improve productivity, as there was reduced demolition activity such as no longer needing to pack the debris into bags for transportation.

The judges said: "We were very impressed by Ginlee's response to working in what was a certified conservation site, requiring the retention of a building façade." ■

Collaboration Award

WINNER **BRANDENBURG INDUSTRIAL SERVICE COMPANY AND OTHERS**
COUNTRY USA
PROJECT Radisson Star Plaza Hotel, Indiana
Also shortlisted
C&D Consultancy (United Kingdom)
Erith Contractors (United Kingdom)

The Collaboration Award is given for projects executed by contractors working closely with other agencies, so in that sense there have been few more appropriate winners than Brandenburg this year – the successful project included input from more than 700 staff across a dozen participants from three states.

Brandenburg was contracted to perform the demolition and asbestos abatement of the Radisson Star Plaza Hotel and Convention Center, which stood in north west Indiana for almost 50 years. The demolition of the hotel is making way for a redevelopment legacy project to honour the late billionaire Dean White's contribution to the area and to continue to make it a destination. The location of the project at US Route 30 and Interstate 65 made for a logistical challenge as it is one of the most travelled intersections in north west Indiana. The close proximity to major roadways required detailed planning and careful performance of the proper removal and disposal of around 14,000 sq m (150,000 sq ft) of roofing that had asbestos containing material.

During the performance of the demolition project, a natural disaster-training event was coordinated while it was an active demolition site. This required the planning, coordination and participation from Brandenburg to perform certain demolition actions to ensure the safety of the participants that executed recovery efforts and required entry into the collapsed site.

The participants included:

- Merrillville Fire Department
- Indiana District 1 Regional USAR Task Force
- Indiana, Illinois and Ohio National Guards
- Marine Corps Chemical Biological Incident Response Force
- ZAKA International Rescue Unit
- Red Cross Lake County 911
- Indiana District 1 Incident Management Team
- Indiana District 1 Service and Support
- Northwest Indiana Information Sharing Security Alliance
- Chicago Office of Emergency Management & Communications.

The project was completed without any incidents or near misses and more than 9,500 cu m (335,000 cu ft) of construction and demolition waste was recycled, as well as scrap metal and concrete.

Thomas Neal, the battalion chief of US&R Indiana Task Force 1 said: "Brandenburg employees were excellent to work with and they enjoyed working with first responders to provide a real life scenario that can not only help training but save lives in the future."

And there was similar praise from awards judge Henrik Bonnesen, who said: "In connection with a large demolition project, Brandenburg established an actual training exercise – a live simulation – that ran around the clock for 36 hours and was meant to challenge the coordination and communication between multiple agencies in a live atmosphere." ■

Collaboration pays off for Brandenburg Industrial Service Company – Dennis McGarel (left) takes the award from Peter Lam of headline sponsor Volvo Construction Equipment

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Richard Vann addresses delegates at the World Demolition Summit: "Projects will exponentially outstrip supply if contractors' attitudes don't change," he said

WORLD CONFERENCE AND AWARDS
DEMOLITION SUMMIT 2017
LONDON, UK 2 NOVEMBER

At this year's World Demolition Summit, keynote speaker **Richard Vann** urged contractors who may be worried about a potential lack of work to think again.

It's a world of opportunities

While it's in the demolition man's DNA to bemoan the state of the business and the lack of decent tenders, or to ask where is the next job coming from, the decommissioning and demolition sector is currently being presented with a massive window of opportunity. Where demand for its services is rising, and will continue to do so for the foreseeable future.

Current indications are that projects will exponentially outstrip supply if attitudes and actions by contractors do not change.

I wonder how many people agree with me?

Globally, we are experiencing an unprecedented number of assets being retired. Why? A multitude of reasons, including increasing commercial pressures on businesses, technical innovation, ageing plant, geographical market shifts, stricter environmental protection compliance requirements, and many other – less tangible – influences.

All these factors have aligned to create a unique and exciting prospect.

So what does the demolition industry have to do to capitalise on this? One thing is for sure. It must act quickly and positively with a determination as never seen before.

Let me try to give some perspective, and facts, for just one market sector.

In the next five years, more than 120 coal-fired power stations are scheduled for closure in Europe alone. That's in addition to those already closed. The figure is growing weekly. How many European Union-based contractors are there currently with the capability and the capacity to carry out this work? Possibly 20 to 25? Who knows, but it's probably not many more than that.

So if the average power station takes two and a half years to demolish, well, you can do the maths. Now make a mental note of those figures while we add on the number of chemical, petrochemical plants, oil refineries, gas reception facilities, offshore platforms and nuclear installations that will also be decommissioned during that period, and the picture starts to become a little overwhelming.

In fact it's almost impossible to try and get a realistic handle on the total number of opportunities out there, but the situation is going to escalate.

TWO POSSIBLE OUTCOMES

So what happens next? That's the $64,000 question, and in my opinion there are two possible outcomes.

In outcome one, clients are beginning – and it is happening – to be forced to engaged with less able contractors in the hope that they will get through the process without health and safety incident, or commercial or contractual failure. This in my mind is high risk, considering the potential corporate and individual consequences of failure in any of these areas.

Or outcome two. A determined course of action by contractors to invest in their businesses, train staff, and take innovative steps to get into a position to grasp the opportunity.

There are many challenges facing companies and I am not suggesting that there is a quick fix. However, the sooner the demolition industry steps up a few gears, and takes control of its destiny, the better it will be for all of us.

I appreciate this is a world summit, however forgive me for a minute if I have a little moan at the Unitd Kingdom's contractors. While working in the international market is a little bit more difficult for those based in the UK than it is for the equivalent companies based in central Europe, it should not be allowed to >36

> "A long reach machine is a long reach machine. How it's put to work is what matters. Planning a project is what matters"

become an insurmountable barrier. In fact, European contractors are now beginning to make their presence felt in the UK, and very strongly – so why is it not happening in the opposite direction?

The demolition sector sometimes doesn't seem to seize opportunity, and tends to be slow at reacting to changing circumstances. Some of this is due perhaps to the fact that many companies remain family- or owner-operated businesses, with a "that's the way it's always been" attitude, and some is perhaps due to the fear of the unknown and a reluctance to adapt to something new.

The old and boring argument always put forward by contractors moving around heavy plant across borders, in my mind, is somewhat weak. There are many many alternatives, such as establishing strategic partnerships with foreign-based companies and setting up overseas businesses.

Plant can be purchased or hired almost anywhere. Specialised equipment can be shipped. People can get on and off aeroplanes. The scale of the projects out there justifies some innovative thinking and effort on the part of the contractors.

PRIZED ASSETS

What demolition contractors seem to forget is that their most prized assets are their expertise, knowledge and experience. Those are the jewels that they should be offering to the market.

A long reach machine is a long reach machine. How it's put to work is what matters. Planning, organising, managing a demolition project is what matters. I cannot think of any other mainstream civil engineering discipline where there aren't contractors with a multinational or global presence. Just drive through any major industrial centre anywhere in the world, and you will see the same corporate, civil contracting, engineering and professional names appearing everywhere.

They didn't look inwardly so they could remain in the comfort of their own homes, so why does the demolition industry do this?

The most surprising thing is that this situation has been allowed to arise. This tsunami of heavy industrial work could have been predicted a few years ago and still it appears that we have a supply chain that is woefully underprepared.

There are double digits of coal-fired power station closures in the UK alone, and until very recently few contractors have shown any interest in gearing up for these long-term, high-value contracts on their own doorsteps. Who is going to do this work? Surely those currently able to tackle these projects don't think that if they weren't around the demolition industry would end. If they do feel that, it would possibly be a little bit arrogant.

The changes I am talking about will happen, because market forces will make them happen.

What I am saying is why is the sector appearing to be reactive and not proactive?

Let's look at a couple of examples where the market appears to be broken.

Explosives engineers – there is a very, very limited choice available, and yet there is no evidence through the Institute of Explosives Engineers of anybody doing any training, anybody bringing anybody new into the sector to carry on those skills which – in many circumstances – will still be valid for many years to come.

Asbestos removal resources are so stretched now that a queue is beginning to form, leading to critical path constraints on major projects. A roll on effect of this will be clients being forced to delay projects, which extends their continuing holding costs, draining funds from their decommissioning budgets hence forcing them to squeeze contractors tighter and tighter, creating a downwardly accelerating spiral.

So from my perspective, if anyone is contemplating a lack of work out there, I don't see it that way. The work is there for those who are willing and able to accept it.

The demolition environment is a dynamic one, with probably more short and medium term prospects than any other civil engineering sector.

How to capitalise on this huge prize is something a lot of you guys should work on, and I suggest you don't delay. ■

About the author

RICHARD VANN is managing director of the RVA Group, which specialises in decontamination, decommissioning and demolition consultancy. This is an edited transcript of his presentation to the WDS in London on November 2. You can see the full presentation and those of other speakers on video at www.khl.com – free of charge registration to the site is required to view the content.

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A load off your

Loaders have been the focus in launch terms of compact equipment suppliers in the latter half of 2017, while the next generation of mini excavator and its possible environmental benefits are attracting interest at the highest level.

When Case Construction Equipment increased the operating capacity and upgraded emission standards on its four most technologically advanced skid steer loaders and compact tracked loaders, a combination of Tier 4 emissions compliance and lower maintenance costs was behind the decision.

Indeed, these technical updates mean that all four 90 hp compact loaders achieve Tier 4 Final compliance.

The 90 hp Compact Hi-eSCR engines, designed and manufactured by Case's partner company FPT (Fiat Powertrain Technologies), have higher combustion efficiency, enabling lower heat rejection and a reduction in the exhaust gas recirculation (EGR) rate from 25% to 10%.

New model numbers have been introduced to reflect the significant advances in operating capacity. The radial lift SR270 and vertical lift SV340 skid steer loaders replace the previous SR250 and SV300 models, and the radial lift TR340 compact track loader replaces the TR320. The vertical lift TV380 track loader also achieves lower emissions, but because its operating capacity is unchanged it retains the same model name.

The rated operating capacity rises from 1,135 kg (2,502 lb) in the SR250 to 1,225 kg (2,700 lb) in the SR270; from 1,360 kg (2,998 lb) in the SV300 to 1,545 kg (3,406 lb) in the SV340; and from 1,451 kg (3,198 lb) in the TR320 to 1,542 kg (3,400 lb) in the TR340.

All the upgrades went into production at Case's 46,000 sq m (495,000 sq ft) manufacturing plant in Wichita, Kansas, USA.

The ZX30-U5, which became the sixth compact excavator in Hitachi's line up for the Americas when launched earlier this year, weighs 3,107 to 3,275 kg (6,850 to 7,220 lb). Featuring improved bucket and arm force and based on the company's larger machines, it was launched for markets in the USA, Canada and Latin America (but not including Brazil)

DEMANDING APPLICATIONS

Loaders were also in the forefront of Bobcat's thinking when it launched a new version of the company's top-of-the-range T870 compact tracked loader featuring a new torsion suspension undercarriage. This replaces the previous T870 model with roller suspension system and the company said the high productivity of the machine together with its ability to work with powerful attachments makes it suitable for demanding applications such as demolition.

Featuring torsion axles that dampen vibration to combine the comfort of roller suspension and the stability of a solid mount undercarriage, the T870 is said to offer 10% more lift capacity than the previous model. It is available with a range of standard and optional features and in configurations to match emissions and specification requirements for all European, Middle East, Africa and Russia and CIS markets.

Customer benefits include improved comfort and ride quality with reduced vibrations and noise inside the cab; increased uptime, durability, reliability, productivity and improved debris shedding with ease of

Auto track tensioning increases uptime

by automatically ensuring the proper track tension, eliminating the need to manually adjust the loader's track tension with a grease gun and provides consistent tensioning to minimise the chance of loosening and de-tracking in tough working conditions.

Volvo CE chose the recent ICUEE (International Construction & Utility Equipment Exposition) in the USA to launch the newest additions to the H Series of compact wheeled loaders, which it said offer 5% The L20H and L25H – are designed to meet the latest emission regulations. As an update from the L20F, the new articulated loaders are powered by a Volvo D2.6M Tier 4 Final water-cooled engine with a diesel oxidation catalyst (DOC) that eliminates the need for regeneration or additives.

Volvo also has a comprehensive range of compact loader attachments designed for the compact wheel loader range and engineered to match the machine's linkage system, hydraulics and driveline.

Earlier in the year, Avant Tecno USA

The Case SV340 – one of four compact loaders in the range with newly increased capacity

mind

Bobcat's upgraded T870 tracked loader can work in demanding applications such as demolition

attended the Conexpo exhibition for the first time to show its range of loaders and attachments, including machines for demolition in tight spaces.

The North American team displayed the 200, 400, 500, 600, and 700 series loaders along with various attachments suited for professionals in demolition, construction, and other markets.

HYDRAULIC BREAKERS

In the construction and demolition market, Avant loaders use many attachments in a variety of configurations.

These include concrete mixers, soil screening buckets, vibrating plate and brick paver installation clamp for construction projects; hydraulic breakers, cutter crusher, and an asphalt grinder for demolition jobs.

The machines can also work well inside buildings. Loaders can be lifted onto the roof, go into the basement via the service lift, and generally perform construction and demolition tasks in tight spaces that would usually require manual labour.

In excavators, Doosan has launched the compact DX17Z mini-excavator, which is says is ideal for sites with limited space.

Designed for applications requiring frequent mobility, powerful performance and a comfortable working environment, the 1.7 t DX17Z is a Zero House Swing (ZHS) machine that protects the front upper structure corners within the swing circle. As a result, ZHS functionality provides 320° of free rotation while working close to any object.

It has a retractable undercarriage and an optional long dozer blade, and the company says the resulting extra stability is essential for making maximum use of the exceptional digging forces and lifting capacities available.

Incorporating the architecture of a 2 t class hydraulic system, with a combination of variable piston pumps and a gear pump, the DX17Z's hydraulic system makes the best possible use of the engine's power.

According to Doosan, fast cycle times, combined with smooth control of class-leading breakout forces, provide maximum productivity. The product's standard operating weight is 1,749 kg (3,855 lb) with a maximum digging depth of 2,249 mm (88 in).

The year of 2017 has also included Hitachi's ZX30U-5 model, which became the sixth compact excavator in the company's line up for the Americas and weighs between 3,107 and 3,275 kg (6,850 and 7,220 lb).

"This new model will provide customers with an alternative in the popular 3 to 4 t size class of compact excavators," said Mark Wall, excavator product marketing manager.

Marubeni-Komatsu has launched the PW118MR-11 "tight tail" midi excavator with a powerful EU Stage IV engine, 6% less fuel consumption and an unrivalled compactness and lifting performance.

The company says the compact excavator combines power, complete control and convenient dimensions, making it an ideal choice for heavy duty lifting applications or simple excavating tasks.

"This perfect match between size and performance was a focus for Komatsu designers" says Alex Visentin, product manager for compact wheeled excavators.

"It makes the machine exceptionally versatile, with the lowest fuel consumption level in its class."

The excavator also features the latest Komtrax telematics to protect the machine against misuse, and guarantee maximum efficiency and uptime.

With operating weights ranging from 12,800 kg (28,219 lb)to 13,900 kg (30,644 lb), the PW118MR-11 is powered by a Komatsu SAA4D95LE-7 engine, EU Stage IV compliant, with a net horsepower of 72.5 kW (97.2 hp) at 2,050 rpm.

>40

EX2 project leader Ahcène Nedjimi (second from left of main group) shows the excavator to the famous visitors

International leaders view electric compact prototype

Swedish prime minister Stefan Löfven and French president Emmanuel Macron have visited the Volvo Group headquarters in Gothenburg where they saw some of the company's latest innovations – including the prototype, fully-electric EX2 compact excavator.

The government heads signed a strategic partnership between their two countries for innovation, digital transformation and green solutions at the ceremony. They also met with Martin Lundstedt, president and CEO of the Volvo Group, and viewed some of the company's latest innovations – including the EX2 all-electric compact excavator.

The EX2 is a 100% electric compact excavator prototype that delivers zero emissions, 10 times higher efficiency, 10 times lower noise levels and reduced total cost of ownership, compared to its conventional counterparts. Believed to be the world's first fully-electric compact excavator prototype, the EX2 is part of a research project and is not commercially available.

"Prime Minister Löfven and President Macron were interested in the machine's performance and how it compared to a conventional compact excavator," said Volvo CE electromobility specialist and EX2 project leader Ahcène Nedjimi.

"We discussed how it could shape the cities of tomorrow and what it could do for society. The French government plans to end sales of petrol and diesel vehicles by 2040 as part of its plans to meet the Paris climate accord targets.

"I think with the EX2, President Macron could see that Volvo CE is also working towards sustainable development. The electrification of construction equipment will produce cleaner, quieter and more efficient machines – this represents the future of our industry."

The 803 mini excavator as used at Munich's Olympic swimming hall and Monza's Ospedale San Gerardo clinic

German compact equipment supplier Wacker Neuson's work on its zero emission series is resulting in significantly more applications, particularly in interior demolition.

Emissions statement

Wacker Neuson has taken another step towards the future with its zero emission series by offering its customers the opportunity to work entirely free of emissions.

The introduction of the dual power excavator in 2014 was the catalyst in the field of alternative drive technologies. Since then, Wacker Neuson has introduced two battery rammers, the battery-operated WL20e wheel loader and the electric DT10e track dumper. The company said its goal is to offer a genuine alternative as an emission-free solution in each product group in the foreseeable future. Many different examples for successful jobsite applications as well as satisfied customers show that these machines are already proven in practice and that the field of application is even expanding significantly, in particular in interior demolition. This is how the entire range of emission-free solutions was used for extensive renovation work inside the Ospedale San Gerardo clinic in Monza, Italy, which took place while the hospital continued as normal.

"That special operating conditions would prevail in a noise and exhaust sensitive environment such as a fully running hospital is something we knew," said Daniele Piras, managing director of the building contractor Easy Service.

"None of the machines offered to us by other manufacturers could satisfy the requirements of hospital management in terms of protection against emissions, either in terms of exhaust fumes or noise. It was time for environmentally friendly technologies."

The WL20e wheeled loader, popular with companies across a range of sectors

For the renovation work in the clinic building, walls and flooring needed to be renewed floor by floor, which meant the 803 dual power mini excavator could use its strengths to the full. With the dual power option, the HPU8 external electro-hydraulic power unit can be connected to the excavator, in addition to the standard diesel engine, and thus work completely without emissions but providing the same performance.

Apart from the emission-free operation, its compact design makes demolition in internal spaces noticeably easier. Its low operating weight of around 1,000 kg (2,200 lb) is another advantage, and it helped the site to win the "Cantiere di qualità" award recognising the fulfillment of highest quality standards.

LOW-NOISE WORKING

Another example for rehabilitation and modification measures during ongoing operation is the general renovation of the Olympic swimming hall in Munich, Germany, which has been open to the public for almost 50 years now. Here, contractor Karl Bau decided to use the WL20e fully electric wheeled loader as well as the 803 mini excavator. The basic requirement of the project was also zero emission and low-noise working.

Companies from very different sectors use the WL20e. Projects have included the renovation of a school in Norway, food industry or for underground use in building tunnels. The 803 dual power has already been time-tested and proven in different application areas in interior demolition, including restoring a church.

The DT10e electric tracked dumper is a popular helper for transport work when doing demolition work indoors as it can easily drive through doorways or small passages.

It was used in this way in the renovation of a stable building in Austria, where it transported debris and construction materials from and to the work area. Three electric motors are built into its interior, two of which drive the tracks while the third is used for the work hydraulics. When it comes to power and stability, Wacker Neuson said the electrically-operated dumper is in no way inferior to the diesel-powered model. The gradeability with a loaded bucket is 20 degrees (36%). The dumper can be used for up to eight hours.

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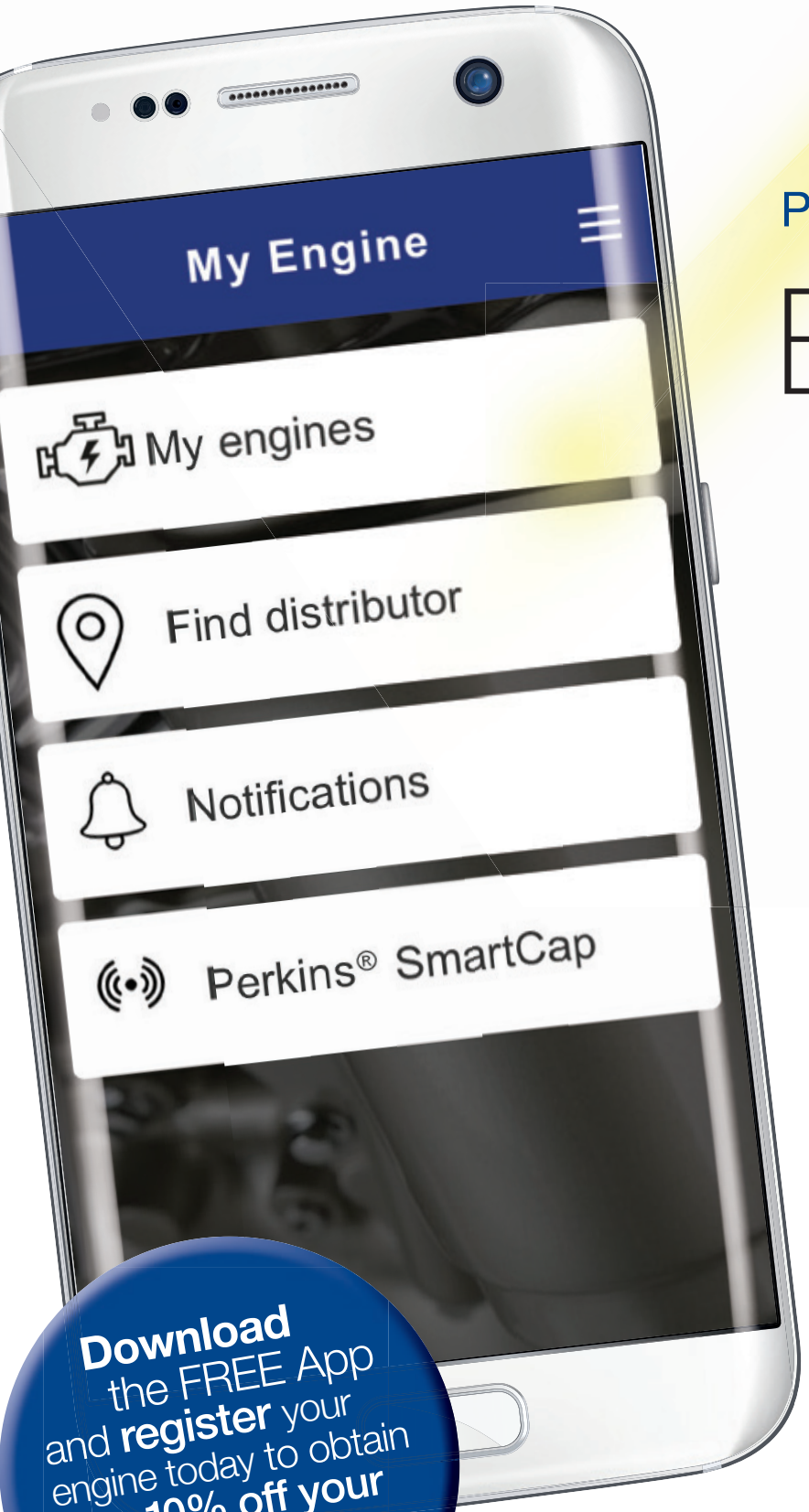

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Product focus

Concrete cutting is one of the fine arts of demolition. We catch up with recent developments from single products to redesigned portfolios

The new HBE400 from Tyrolit of Austria

Concrete cutting is often one item in a portfolio of services available from the companies who offer it. Frequently, it is linked with items such as drilling, sawing, concrete crushing or bursting, controlled or robotic demolition, and complex dismantling projects. But wherever it fits into the business plan, what links its exponents – or at least the successful ones – is the degree of precision necessary to execute an effective project.

Not surprisingly, for the people who produce the equipment to make this precision possible, the requirements of the customer, and the customer's customer, invariably translate into a near-constant campaign of product development to find the incremental gains that will ultimately make the difference.

Take for instance Tyrolit, based in Austria and one of the world's largest producers of grinding, cutting, drilling and dressing tools.

With almost a century of existence under its belt, this Swarowski Group member company now employs more than 4,000 people in 11 countries, and its various divisions make around 80,000 different products between them.

But there is still room for a new one, namely the Hydrostress HBE400 handsaw. The product – its name is short for Hand Blade Electric maximum 400 mm – was designed for universal cutting applications in construction and civil engineering and is suitable for clay brick, natural stone and other materials as well as concrete.

Tyrolit said that the saw's flush cutting function is a particular highlight that, combined with the optional accessory, enables precise cutting. The HBE400 has a low weight of 9.1 kg and is equipped with a 3.2 kW electric motor with fully integrated electronics and 230 V drive for flexible working both indoors and out. It can be used for both wet and dry applications and has an integrated dust extraction connection for clean working.

While Tyrolit focuses on its new handsaw, United Kingdom-based Corecut has gone to the other extreme with the CC110 Floor Saw, which is described as the country's largest.

The saw has a 72 in blade with a maximum cutting depth of 32 in, a 110 hp Cummins diesel enginer, charge air cooled engine, complete skid plate to protect the belt and blade shaft bearings, outboard bearing support, six-bolt blade collars with safety hub and adjustable diamond blade.

In addition, Corecut has invested in a new facility in Scotland, which was built in nine months and finished this summer. As well as creating more space than the previous headquarters, Corecut said the new building will allow for continued expansion of its specialist services.

INCREASED DRILLING SPEEDS

Hilti has looked beyong individual products and is renewing its entire core bit portfolio.

The company said it is making its SP and SPX core bit ranges even better performing and easy-to-use with the use of Hilti Equidist (EQD) technology, which delivers increased drilling speeds of up to 50% when compared with their predecessor core bits.

During the manufacturing process high-quality, industrial grade diamonds are precisely placed at an equal distance and in the best possible formation to deliver even higher drilling speeds and durability. Hilti Equidist (EQD) ensures that all the diamonds in the cutting edge are in constant contact with the base material to maximise productivity throughout its lifetime.

Because different materials require different diamond segment specifications the company has also began colour-coding its core bits for easy recognition. Those marked with a grey dot are for use on concrete, green for abrasive concrete and orange for masonry.

The new range works with the Hilti X-Change Module (X-CM), which allows users to quickly and easily re-tip core bits on the job site.

Core bits traditionally come as one single

developments on precision

unit, which means that when the diamond segment wears down, the entire unit had to be sent for re-tipping. The X-CM features a removable ring on the barrel which can be quickly and easily removed with a screwdriver before a new one is pushed, twisted and clicked into place.

With standard core bits there can also be challenges if the core bit gets stuck in the hole or base material lodged in the barrel, which increases downtime and can result in a damaged unit. With the system's geometric design means users can remove the ring and slide the core out, providing a quick and simple solution for previously costly and time-consuming situations.

The X-CM's removable ring also makes it possible for users to pack one barrel alongside different rings for different base materials, all in one small portable bag.

Product manager for Diamond Systems in northern Europe, Maximiliano Moreira said: "Following substantial and sustained investment in research, development and production in our own plants, we've established ourselves as the leader in diamond drilling innovation for more than 30 years. This vast experience has resulted in the highest quality core bits we've ever made.

"With the Equidist core bits you'll always get maximum productivity, even in the most challenging of materials like abrasive concrete with a high rebar content. We also enable customers to get out of stuck situations with the X-Change Module and the new 'quick connect' connection ends allows them to start and finish the job as quickly as possible."

Hilti said its new range works well with the X-Change Module for easy re-tipping of core bits on the job site

Diverse applications that test cutting specialists

Concrete cutting projects can come in many shapes and sizes.

Tyrolit worked with Russian customer Aktivmontage on a project (pictured) to reduce a 250 m (820 ft) hydroelectric power station chimney in the Siberia region to a height of 150 m (492 ft).

As the chimney was no longer up to standard and was also near a residential area, demolition using explosives was not possible and controlled deconstruction was the only available option.

The challenge involved in the deconstruction consisted of gaining access at the dizzying height, working in tight conditions, and once in place, cutting through reinforced concrete ranging in thickness from 20 to 50 cm (8 to 20 in). The condition of the chimney meant that it was not possible to use wall saws and it was necessary to ensure that workers neither fell nor suffered exposure at minus 25° C.

Tyrolit recommended the SK-SD hydraulic wire saw system and the diamond wire DWM***-C with a diameter of 10.2 mm (4 in) and 46 beads/m for concrete.

By contrast, for United Kingdom-based Technical Concrete Cutting (TCC), the task was to help remove a major stumbling block from the £1 billion (US$1.35 billion) Goldman Sachs office project in the City of London.

This meant moving nine Grade II listed ceramic murals created in the 1960s from the old fleet telephone exchange in Farringdon Street to the Barbican to enable demolition of the old building.

To achieve this TCC created a bespoke diamond saw to cut and release the fragile ceramic tiles from the wall.

Each mural measured 3 m x 1.8 m (10 ft x 6 ft) and consisted of 40 tiles measuring 450 mm x 300 mm (18 in x 12 in) tiles, each valued at £1,000 ($1,350) giving a total value of £360,000 (almost $500,000) for the nine murals. The murals themselves, which showed images of the modern telecommunications age of the 1960s with a different theme on each one in a semi-abstract form, were designed and made by ceramic artist Dorothy Annan. Many of her works have not been kept as buildings have been updated.

A totally vibrationless cutting method was essential so every tile was removed intact ready for their new location.

The project was completed safely, on time and on budget with no breakages to the tiles.

The increasing versatility of hydrodemolition is underlined by one company's experience of projects as different as a power station and a coal mine.

Above and below

Hydroblast is a United Kingdom-based hydrodemolition company that earlier this year was tasked with saving a transmission network in Scotland. A large part of the National Grid's electricity is collected from Scotland's power stations, so a successful outcome was crucial for the rest of the country.

Naturally, areas of the network began to break down from the weather. The steel transmission towers – a huge part of the network – were supported by concrete bases that had seen better days. The bases themselves had started to decay. If they fell, it would be extremely hazardous and the cost of sorting it out would be extortionate.

To begin with, Hydroblast had to protect the surrounding ground from damage. The remote land was extremely soft and susceptible to harm from vehicles, so Hydroblast put down lots of ground protection mats to prevent this potential damage.

One of the challenges during the task was the lack of a direct water supply on the site.

In addition, the area is famous for salmon fishing, which meant that pollution from wastewater had to be avoided.

Hydroblast brought its own tank to the site, as well as a machine called the Siltbuster, a unit that alters the pH of wastewater.

During any project, the water exerted from the hydrodemolition equipment has a pH of 7, which is neutral. However, when the water leaves the machinery and makes contact with the surface, this rises to 10 or 11, which is alkaline. Moreover, the water fills with dust and other debris. The Siltbuster HD cleans and restores any wastewater, using CO_2 to separate fine particles from large volumes of water so the water is returned to the environment without causing any damage.

Even with the tank, water supply was limited and Hydroblast chose to use a hydrodemolition robot known as the Aqua Cutter 401A Evolution. This ultra-high pressure robot was nimble and able to provide effective and accurate results. The company avoided the risk of vibrations that could cause the towers to fall by using water jets. Due to the training of the workmen and the efficiency of the hydrodemolition robot, the project was actually able to finish ahead of the given schedule, saving precious time and money.

TIGHT DEADLINE

Hydrodemolition can also be used underground. Hydroblast was recently given the job of sealing a coal mine that had ceased production. After operating for 40 years, Kellingley Colliery in the north of England was the last deep coal mine to close in Britain. It had two main shafts, both sinking to around 800 m (2,624 ft) deep. One of the shafts was for transporting men and materials, and the other was for the extraction of coal from the Beeston seam, which was done at a rate of 900 t/hr at its peak.

The area to be worked in was confined due to a generally small space, but also because of the reinforcing beams that were present. As well as this, time was important as Hydroblast needed to cut 20 holes for the capping of the shafts to be completed to a tight deadline.

At first, a different company had attempted the work with a different water jet machine, but the jet was not strong enough and did not reach far enough.

It was then that the Aqua Cutter 410A Evolution was called to the task.

Because more power was needed, Hydroblast employed a 700 hp machine, which drives a 1,000 bar pump at 260 l/min. This results in a powerful 1.9 t of breakout "reaction force". It was important for the power needed to be performed safely and accurately.

Using the Aqua Cutter 410A Evolution, the company began preparation of sealing the shaft. This was achieved by blasting the shaft walls with the high-pressure water.

Any standard drilling would damage the steel bars that were used to reinforce the concrete shaft, which could risk potential danger. Because of this, hydrodemolition was the right method for the job.

On finishing work on the shaft walls, additional concrete was added into the holes to strengthen them. All remaining buildings on the complex were to be demolished to prepare the site for future development.

Coal deposits emit methane gas, so capping the coal mine trapped these gases. But because this gas can be used to produce energy, a pipe was installed to harvest it, resulting in reduced harmful greenhouse emissions.

>46

The Aqua Cutter 410A Evolution robot in action (top photo) and the start of work at Kellingley Colliery

Demolishing the waste problem

John Irwin from waste management specialist CDEnviro looks at how the benefits offered by hydrodemolition, 40 years after it first appeared, can be enhanced by reducing waste disposal costs, and maximising the value of waste materials through the removal of pollutants and the extraction of reusable aggregate.

Hydrodemolition – the controlled removal of concrete using high-pressure water – has been around for nearly 40 years, and has become the preferred method of concrete removal and surface preparation for contractors throughout North America and Europe. That is not surprising as it offers many environmental, safety, financial and cost benefits.

However, while it offers these advantages, it results in waste material to deal with and, due to the high water content, the weight is considerably increased with a resultant impact on disposal costs. It is also difficult to find a landfill site willing and able to take it. This type of thixotropic waste can be difficult to dispose of due to its solid/liquid "semi-state" and the contaminants and reusable resources it contains, along with its viscous nature.

Wastewater from the hydrodemolition process can also be highly alkaline and polluted with a variety of sizes of concrete particles. This means it can't just be discharged onto nearby land or into drains without causing wider contamination. Run-off during the process also needs to be contained. Therefore, when the water – and any more substantial waste – need to be disposed of, they have to be taken off the site.

CLOSING THE RESOURCE LOOP

However, simply disposing of this material is difficult and wasteful. Hydrodemolition waste can contain useful, reusable materials which should be recycled and made available for resale, turning a cost into a potential profit. Washed sand and grit is suitable as a non-structural fill or secondary aggregate and has some higher-grade reuse applications such as asphalt production. It may even be possible for these products to be reused on the original site, closing the resource use loop.

Due to the varying nature of the materials in need of treatment, there's no one solution that will always be appropriate. However, several systems now available can be combined to take on any challenge and new tailored solutions can provide bespoke reception centres for this waste.

Systems can now screen and scrub material to ensure contaminants are effectively removed, using density separation processes, attrition and high pressure washing.

In some situations, a multi-stage chemical dosing and application process – with the ability to treat ultrafines and other elements that would typically cause an issue in the settlement process – are required.

Using centrifuge technology, solids and liquids can be separated in a high-speed process maximising resource recovery and the amount of recycled water.

FURTHER PROCESSING

The output from these systems is very high-quality water, with ultra-low residual solids, while still enhancing the performance of the settlement process.

Depending on the land use and activities around the concrete, it is possible this liquid waste could be more heavily contaminated.

If this is the case it can undergo further processing to remove heavy metals and hydrocarbons from the wastewater stream. This enables a wider range of more difficult – and therefore more lucrative – waste streams to be processed. The recovered water can then simply be reused to fill outgoing trucks with industry compliant recycled water.

Once processed, any stone, sand or organic material in the waste is cleaned and separated and is ready to be reused.

Reduced capacity and wear on pipes caused by fine particles, such as concrete dust, settling at the bottom of debris tanks and pipes can also be avoided. Systems can now remove this debris and minimise the volume of waste needing to be processed downstream, helping to offset disposal costs.

Processing waste and recovering as much of it as a resource as possible is also much more in line with the circular economy philosophy which aims to keep resources "in the loop" for as long as possible. This contrasts with the traditional linear approach of extract, use and dispose. While zero waste is an ambitious target, we believe it is achievable if everyone gets involved and all types of waste are properly managed.

These new solutions give greater control over waste while increasing sustainability and reducing disposal costs. By using the correct systems, resources can be extracted from the most unlikely sources, including hydrodemolition waste, creating economic and environmental benefits. This is something that shouldn't be watered down. ■

Processing waste resulting from hydrodemolition projects is in line with the circular economy philosophy

Expectation

World of Concrete 2018 takes place at the Las Vegas Convention Centre from January 23 to 26 with what is expected to be its largest event for almost 10 years. Here's what you can expect.

Described as the most important annual international event of the year for the concrete and masonry sector, WOC 2018, expects to attract 60,000 industry professionals registrants and 1,500 leading suppliers from around the world, making it the largest World of Concrete for nine years.

According to the organiser, Informa Exhibitions, this world-renowned industry event will continue to bring international buyers together with US exhibitors to expand business domestically and overseas.

For the 13th consecutive year, the US Department of Commerce has selected World of Concrete as a participant in the International Buyer Program (IBP). WOC draws significant attendance at each event, working with US Commercial Services posts from around the world. It said it welcomes international exhibitors to sell their concrete- and masonry-related products and services, as well as international attendee delegations from across the globe to network, test drive equipment and discover new products and services and benefit from a world-class education programme.

International visitors are a key part of World of Concrete

Concrete converges on the Las Vegas Convention Center

The 2018 World of Concrete education programme will include everything from interactive workshops and specialised seminars to hands-on, skill-building sessions to equip field personnel, project leaders, supervisors and owners with the latest knowledge in every facet of concrete and masonry.

New for 2018, World of Concrete competitions and exhibits will be located in the Bronze Lot, next to South Hall. In addition to the exhibitors in this new area, returning WOC Event favourites include the John Deere Operator Challenge, the Western Star Trucks Get Tough Challenge and much more.

Featured areas on the trade show floor in 2018 will include:

- **THE PRODUCER CENTER** a marketplace of materials, equipment and demonstration for concrete producers.
- **MATERIAL HANDLING** offering trucks, excavators and more for material delivery, distribution, concrete placement and earthmoving.
- **CONCRETE REPAIR AND DEMOLITION** housing a display of surface preparation equipment, scarifying, sawing equipment, concrete repair and other demolition products.
- **WORLD OF MASONRY** showcasing products, tools, information and technology for masonry professionals.

A busy Central Hall at World of Concrete 2017

building

TECHNOLOGY FOR CONSTRUCTION featuring the newest products and tools for the commercial construction industry from top information technology and systems providers.

CONCRETE SURFACES AND DECORATIVE showcasing the popularity of decorative concrete for both commercial and residential applications including concrete coatings, waterproofing products and technologies and more.

PRECAST focusing on precast products, technologies and equipment including coring machines, pipe unloaders, precast forms, above/below ground precast, concrete pipe, manhole and septic tank equipment and more.

CONCRETE MASONRY AND CONCRETE REINFORCEMENT Concrete Masonry will showcase everything for the producers of concrete masonry, including block, segmental retaining wall units, veneer, pavers and roof tiles.

CONCRETE REINFORCEMENT featuring the leaders in concrete reinforcement showcasing reinforcement bending, cutting, straightening, and fabricating machinery. There will be plenty of action outside.

Selected list of exhibitors at World of Concrete 2018

- Anmopyc
- Atlas Copco
- Avant
- BMH Systems
- Brokk
- Cemco
- Chicago Pneumatic
- CSDA
- Enerpac
- Evonik
- E-Z Drill
- Hatz Diesel
- Hilti
- Kubota
- Liebherr
- MB Crusher
- Montabert & Geith
- Rebar Machine
- Rebar Support
- Sandvik
- Terex
- Wacker Neuson
- Wirtgen

For a full list of exhibitors go to:
www.worldofconcrete.com

Brown and Mason calls for power of Rammer

A leading company in power station demolition is using a Rammer 5011 hydraulic hammer as part of the deconstruction of Kingsnorth facility in the south of England.

Mounted on a Komatsu PC490LC hydraulic excavator, the 4,750 kg (10,742 lb) hammer is responsible for breaking out the heavily reinforced concrete plinths that supported the power station's massive boilers. The work is being carried out by specialist contractor Brown and Mason.

Kingsnorth Power Station was a dual-fired coal and oil fired power station in Kent with a generating capacity of 2,000 mW.

It closed in 2012 as a result of the European Union's Large Combustion Plant Directive (LCPD), which requires stations not equipped with flue gas desulphurisation to close after 20,000 hours of operation.

Demolition of the former power station commenced in 2014, with Brown and Mason anticipating a four-year deconstruction programme that commenced with an extensive asbestos strip.

As a company specialising in power station and heavy industrial demolition, Brown and Mason places very specific demands upon its equipment fleet.

"Demolition specification excavators exist, but nothing can prepare a machine for this environment," said the company's site manager Matthew Gillon.

Site manager Matthew Gillon said the variable blow rate of the Rammer 5011 is playing a pivotal role in the Kingsnorth project

"Power station demolition is like the ultimate acid test for construction equipment. If a machine can survive this, then it can survive anything."

The company opted for the Rammer 5011, supplied by sole United Kingdom importer Murray Plant.

"We have used a Rammer G100 for a number of years and that has proved to be extremely reliable and highly productive," said Matthew.

"When we needed to get a new machine, we had no hesitation in buying the direct replacement for that model, and we have not been disappointed.

"The Rammer 5011 is every bit as powerful but it is quieter, and the addition of automatic lubrication is a huge benefit in an application in which dust is a constant presence."

Kingsnorth's boilers are manufactured from incredibly thick steel and each sits on concrete that is over 1,500 mm (59 in) thick and heavily reinforced.

But the variable blow rate of the Rammer 5011 removes each concrete plinth in roughly half a day.

"The Rammer hammer is playing a pivotal role on this contract," Matthew added.

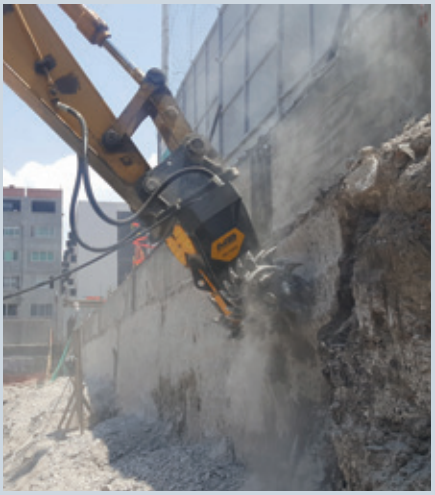
"To access the boilers, each plinth needs to be broken out. Without the power of the hammer, our progress through the main boiler house would be slowed."

With another year to run on the contract, Brown and Mason is already gearing up for yet more power station demolition works.

It recently won the contract to complete demolition of Oxfordshire's Didcot A and initial work is already underway at Longannet in Scotland.

BooBoo Plant Hire has added its eighth DustBoss DB60 mobile dust suppression unit to its rental fleet, which includes 14 Motofogs, confirming Inmalo as a leading United Kingdom supplier of portable dust suppression solutions for the demolition market.

The new DustBoss's first outing immediately put it to the test on London's Isle of Dogs, close to the Docklands financial sector. The large-scale demolition project is being handled by the Erith Group, which is keen to ensure it has the best and widest coverage available to ensure minimal impact for nearby residents and the environment. The system uses a high-powered fan to drive air through a ring of high-pressure water jets, creating a tunnelled water vapour mist.



The MB-R800 is one of three models in the range and works with excavators from 10 to 22 t

Down Mexico way with MB

An MB Crusher MB-R800 drum cutter has been specified by Mexican company Pilotec following the demolition of factory to make room for a new shopping mall.

After demolition, the basement of the new building was excavated and diaphragm walls – or underground bulkheads – were built of reinforced concrete to stop the earth next to the excavated area collapsing.

With the diaphragm walls completed, Pilotec was left with a problem – how to eliminate all the excess inert material left on the wall.

At this point the MB-R800 drum cutter came into play. Mounted on a 20 t Cat excavator, the drum cutter removed the excess part of the wall in as little as two weeks. So it was not necessary to construct a revetment wall, as is often the case on such sites. No further costs were incurred and the construction of the new shopping mall was completed within the delivery data requested by the client.

There are three models in the MB-R range: the smallest, the MB-R700, works with excavators from 6 to 13 t; the MB-R800, used the Mexican construction site, weighs 1 t and adapts to excavators from 10 to 22 t; and the largest of the series, the MB-R900, for excavators from 19 to 35 t.

T link allows plant to be monitored remotely

Perfox banks on Brokk remotes

Spanish demolition contractor Perfox is using six Brokk machines on a project to take down a structure in the capital Madrid's financial district and break up more than 1,000 cu m (35,000 cu ft) of concrete in the process.

The demolition is part of the redevelopment of the city's Cuatro Torres (Four Towers) complex, which contains some of Europe's tallest skyscrapers.

Construction of a fifth tower is scheduled to be finished in two years' time.

The six remote controlled machines comprise a Brokk 500, two 180s, two 160s and a Brokk 90. They are being used along with two large excavators because the building has a number of limited access spaces.

"We are very happy with Brokk," said Perfox general director Ramiro Núñez.

"We have been working together for more than 12 years, we currently have eight Brokk machines, and we will be expanding our fleet soon," he added.

"The Brokk 500 is a small monster, and it's working in a place where we simply could not bring any other excavator."

The Brokk 500 is "a small monster" according to Spanish demolition contractor Perfox

Finlay helps Cheshire stay ahead of game

A demolition company is powering ahead to meet increasing demand with the help of new plant featuring the latest in telematic monitoring.

Cheshire Demolition, which has its headquarters in Macclesfield in the north of England, has taken delivery of a Terex Finlay J-1170 jaw crusher from Finlay Central – part of the Finlay Group of companies.

The jaw crusher joins a fleet of Terex Finlay machines at the company, including a Terex Finlay 883 screener and a Terex Finlay J-1160.

Cheshire Demolition has specified the T-Link Telematic System as an additional feature for its latest acquisition.

This enables the plant to be monitored remotely off site as required, and the technology allows operators to review the performance of their machine in areas including fuel consumption, belt speed and tonnage for optimum performance. Working at the company's reclamation yard, the Terex Finlay J-1170 is processing aggregates brought to the site from demolition jobs and the waste transfer station.

Neil Trueman, a director at Cheshire Demolition, said: "As a company we've seen rapid growth in the last five years, so we've bought in another Terex Finlay J-1170 to help us keep up with that demand.

"Between 2,000 and 3,000 t of material come to our yard in Macclesfield every week so it's important for us to have the machinery that can help us stay ahead of the game," he continued

Finlay Central sales director Neil Partington has worked with Cheshire Demolition for six years and has specified all the Terex Finlay machines the company has bought in that time.

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Garic said it will fit i-Site as standard on all relevant new products and refurbishments

Garic system 'industry first'

Garic, the United Kingdom-based specialist welfare and site set up products provider, has launched what it calls a demolition industry first.

The product, called i-Site is a remote equipment monitoring system that is said to reduce both the cost and environmental impact of site servicing.

Designed specifically for monitoring fluids such as fuel, waste and water, it has been tested by a range of companies nationwide over the past six months.

Sensors fitted to site equipment eliminate the need for contractors to try to estimate when a generator will run out of fuel, when fresh water supplies will be needed or the soil tank needs emptying. The system, which can be managed from any location via a mobile device app or secure web portal, will be fitted as standard to all new relevant Garic products and as part of its ongoing refurbishment programme to existing products.

Garic developed the system in conjunction with east of England-based information technology company i-Level as part of its innovation strategy to improve the efficiency of on-site servicing and to keep unnecessary stoppages to a minimum.

The sensors transmit real-time data via a mobile phone connection to Garic's computer servers which clients can view at any given time from any location. ■

Doppstadt Rhino runs day and night

German environmental business Doppstadt has launched the DW 308 Rhino shredder, which shreds numerous materials including construction and demolition waste.

Doppstadt said the new single-shaft shredder can process more than 40 t/hr of waste. Built in robust steel, it is said to be less susceptible to failures and have longer maintenance intervals. While the previous model had a DC motor with rectifier, the present models are provided with a maintenance-free AC drive with state-of-the-art control.

The new DW 308 Rhino is also provided with the QuickChange System for a quick and easy change from S-tooth to XL-tooth or from M-tooth to L-tooth.

Henning Strunz, managing director of Doppstadt Systemtechnik, said: "The new DW 308 Rhino is the largest single-shaft shredder in our product range.

"It combines the best technologies in a robust and durable machine frame for easy operation and efficient solution of the most difficult tasks achieving highest throughput capacities and a high degree of variability.

"Therefore it is a worthy successor of our well tried and tested and extremely robust DW 3080 E2 Mammut, which it replaces." ■

Doppstadt said its new shredder can process more than 40 t/hr of waste

Caterpillar said the new machines provide increased operating efficiency and reduce maintenance costs

Caterpillar wheels out Next Generation excavators

Caterpillar has introduced three Next Generation 20 t size class excavators.

The products are the 320, 320 GC and 323 and the company said their introduction will increase operating efficiency, lower fuel and maintenance costs and improve operator comfort compared to previous models.

The 320 and 323 are both equipped with integrated Cat Connect Technlogy, which increases operating efficiency by up to 45% over traditional operations.

Cat engines provide duty-matched power ratings from 121 to 162 hp (90 to 121 kW) for the three new excavators, which consume 20 to 25% less fuel than the previous corresponding models.

New Smart mode operation automaticaly matches engine and hydraulic power to the conditions, optimising both fuel consumption and performance. Engine speed is automatically lowered when there is no hydraulic demand to further reduce fuel usage.

Cat added that the excavators do more work at lower cost reduce maintenance costs by up to 15% compared to the previous series.

As the International Media Partner of the European Demolition Association (EDA), *Demolition & Recycling International* brings you the latest association news each issue in a dedicated part of the magazine.

EDA convention to feature more decontamination

The European Demolition Association (EDA) has announced its 2018 annual convention will focus on demolition and decontamination.

The event, which takes place in Vienna, Austria, from June 7 to 9, is open to contractors, manufacturers and associations who are interested in demolition and decontamination issues.

According to the EDA, demolition is becoming increasingly linked with decontamination and recycling, and this will be reflected in the programme for the event.

As well as conference sessions, networking and a round table discussion, there will be a gala dinner for all participants and a leisure programme including a day trip to the sights of the Austrian capital. The announcement follows the news that the 2017 DDR Forum & Expo, held in Brussels, Belgium, has been selected by tourist agency visit.brussels for an Ambassadors award in recognition of its promotion and support of the city as an international MICE (Meetings, Incentives, Conventions and Exhibitions) tourism destination.

The EDA is one of 12 recipients who will be presented with an award at an exclusive gala dinner with an audience of academics, doctors, European Commissioners, deans of universities, chairmen and board members of international associations based in Brussels, scientists, hospital directors and other destination partners. ■

More details of the 2018 Convention are available from the EDA

The Danish company Realcon has become the latest organisation to join the European Demolition Association (EDA).

The company offers environmentally friendly demolition and remediation in the east of the country, carrying out projects for both the private and public sectors and using the most modern and equipment machinery.

Fleet numbers give food for thought

Less than half of demolition companies in Europe have a fleet utilisation rate of at least 60% – according to figures published in the Eu and only one in four is as high as at least 80% – according to figures published in the European Demolition Industry Report for 2017 produced by the European Demolition Assocation (EDA).

The report, which gives figures supplied by contractors across the continent for 2016, said that almost half of companies viewed their fleet utilisation as "intermediate", or between 40 and 60%. For the remaining quarter, it was either low or very low.

In another question, on how contractors view themselves as businesses within their countries, half described themselves as small, 40% as medium, while only 10% called themselves large.

The report includes detailed information about the trends of the demolition industry in 2015-16, forecasts and specific information about: company and activity, volume of business, evolution of the demolition activities, investment in demolition machinery, equipment and consumables, evolution of the workforce and business prospects.

All this information about the demolition sector is analysed at an European level and country-by-country. The language used in the report is English and the national language of each country.

In addition, 2017 report includes for each country, a comparative graph with the information collected in previous editions to show the trends in the demolition industry for each topic since 2015.

The information analysed in these reports is collected directly from demolition contractors all over Europe with a methodology established by the statistics working group of EDA, leaded by Andreas Pocha, general manager of the Deutscher Abbruchverband (DA), the national demolition association for Germany.

Copies of the report are available from the EDA by going to the association website at www.europeandemolition.org/ ■

About the EDA

EDA
EUROPEAN DEMOLITION ASSOCIATION

The European Demolition Association (EDA) was founded in 1978 and is the European platform for national demolition associations, demolition contractors and suppliers. It organises annual events to bring together the demolition industry from all over Europe. The most important one is the Annual Convention, a meeting that includes technical presentations about key topics as well as optional leisure activities. The EDA represents thousands of companies through its national associations and direct memberships.

■ For more details, please visit:
www.europeandemolition.org

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