

Bell launches wheeled loaders for waste industry





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How Crossrail will reuse its excavated material

A conference held recently at JCB's impressive headquarters in Uttoxeter

discussed how the construction industry needs to bring the management of its supply chains - from bringing raw materials from quarries to delivering building products to customers - up to the level seen in other industries.

One civil engineering project that has paid attention to its logistics operations is the Crossrail project in London. During this conference and also at the BULK09 event (a review of which is featured in this issue), Simon Phillips, construction liaison manager at Crossrail, explained how 7.3 million m³ of excavated material from the most significant civil engineering project of recent times will be moved and also what will be done with it.

"The excavated material is not waste it is a valuable resource," he said. "We are committed to finding a good home for this material. We expect we can recover about 2 million m³ as aggregate and hardcore. The intention is not necessarily to use that in the construction of Crossrail but to put it back into the market. That leaves us in the order of 5.3 million m³ that will not be wasted - we will focus on using this material beneficially."

Crossrail will see a 21 km of twin bore tunnel being constructed underneath London, going underground at Paddington in west London and surfacing in the north east at Stratford with a branch south of the Thames coming out at Woolwich. Once completed this mammoth £15.9 billion project will provide a world-class affordable railway and will include 8 new sub-surface stations. It will allow 24 trains an hour at peak through central London, each one able to carry 1500 passengers. Journey times from Heathrow to London's Docklands will be reduced substantially to 43 minutes, while capacity across the city will be increased.

Enabling works start this year, a number of which will be major works in their own right, and main construction will start next year. Tunnel boring machines will go into the ground mid-2011 and a phased train service operating from 2017. The tunnels themselves will be half as big again as those used by London's tube trains and will be dug by nine tunnel boring machines, with slurry machines used in the chalk beneath the Thames.

So what will happen with the 5.3 million m³ non-aggregate excavations? "We've reached an agreement with the RSPB for Wallasea Island in Essex and two further schemes under

development by the South Eastern Development Agency at Northfleet Embankment and Queenborough & Rushenden about creating development platforms."

Wallasea Island, a 2.5 mile square area of Essex that is some 2 metres below high water level, is going back to nature soon. The RSPB want to create a major new wildlife facility for Europe and need material to reshape the ground. "This is where we come in though we can only deliver half the material they are talking about," said Simon. "I don't think that we could have found a better location for taking material excavated for Crossrail."

Although over 200,000 m³ of material will be moved per month at peak, London's drivers need not fear about being stuck behind convoys of trucks as Crossrail will be using a range of modes to minimise the number of lorries on the roads. It will be taking 39% of material on barges using the river and 14% on rail. All the excavated material going to Wallasea Island will go on the water.

Where material will be transported on the road Crossrail intends to operate backloads to ensure there are no empty lorries. The same principle will be used for the boats on the Thames and trains.

Because Crossrail is such a large-scale project it needs to do things differently. This includes managing all of the transport centrally on a Just-In-Time (JIT) basis, with the help of consolidation logistics facilities to the east and west of London.

There's not only the problem of getting the excavated material out, one of the big issues for the overall scheme is managing the concrete aggregate supply process across its various projects. In total Crossrail will require 2 million m³ of concrete. Explaining how Crossrail will transport this, Simon commented:

"In the east the focus is on the river and rail but whatever we do there will be lorries going into the centre also. In the west the focus will be rail and the canals. The canal touches the main tunneling site in Paddington and there are a number sites where the rail and canals come together."

He concluded: "The whole excavation process is about 'de-risking' the tunneling process; we can't afford to stop tunneling and we can't afford for excavated material to build up. The canal is a good way to take pressure of rail. Using the logistics centres we will be looking to control the transport into the main London central sites - using the transport to deliver in and take waste out."

Ross Matthews - Editor

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Bell launches wheeled loader for waste & recycling industry

Heavy plant manufacturer Bell Equipment has launched a range of wheeled loaders that have been custom-designed for the waste and recycling industry.

The move follows the launch last October of Bell's new range of seven high-specification E-Series wheeled loaders, representing the company's first venture into the UK loader market.

Now Bell has adapted its John Deere-built standard loader design to create a machine that specifically targets UK waste operations.

The waste-specification loaders will be fitted with belly guards, cab screen guards, solid rubber tyres, high-lift arms and high-tip buckets – all as standard.

But the other feature that makes the E-Series loaders really stand apart from the competition in terms of waste industry suitability is its state-of-the-art QuadCool system, which is fitted as standard on all Bell wheeled loaders.

QuadCool prevents dust and other airborne debris from entering the machine's cooling system, thus reducing downtime and prolonging the life of the engine and other internal components.

Carl Woollaston, sales support manager, Bell Equipment UK, explained: "QuadCool is absolutely perfect for the waste industry, particularly as the work tends to involve the shifting of lightweight materials inside large sheds, where dispersal of airborne debris can be a problem. No other cooling system is anywhere near as effective as this one."

What is QuadCool?

The QuadCool system places the wide-core radiator, transmission, axle, hydraulic and air-to-air coolers in a separate compartment to the engine. The individual mounting of wide-core radiators on Bell's loader range eliminates debris collection in between radiators, which is common in other manufacturers' machines. With the E-Series loaders, steel access panels have fine mesh screens to filter cooling air as it enters the QuadCool system. The holes in the screen are substantially smaller than the wide-core radiators, so any debris drawn in passes straight through the system, thus extending intervals between cleaning – and increasing up-time. The fins per square inch on the Bell wide-core radiators are significantly less than those of other manufacturers, which greatly reduces the chance of debris build up.

The QuadCool system is also set up to provide the best maintenance access in the industry to all radiators, with panels allowing access to both sides of each radiator for easy, quick and thorough cleaning.

Included 'as standard' in the QuadCool system is the automatic reversing fan, which automatically reverses the air flow for 30 seconds at intervals determined by the operator, depending on the site conditions. This blows any accumulated debris away from the radiators, maintaining cooling efficiency and increasing productive times by further reducing the need for cleaning.

In addition, QuadCool features a proportional fan speed, which operates independently to the engine. When compared with a more common engine-driven fan, the benefits of the Bell system include reduced noise levels, increased fuel economy due to the reduced drain on the engine, and lower operating costs.

Bell's wheeled loaders also offer extended air filter life and, more importantly, increased engine protection due to the cyclonic pre-cleaner to the engine induction line. This is fitted as standard on the entire E-Series range, spinning incoming air and automatically ejecting 98% of airborne dust particles, effectively cleaning the air before it reaches the air filter.

The cab on all Bell wheeled loaders is also pressurised, meaning that air is filtered before it enters the cab, ensuring healthy conditions for the operator.

The overall hydraulic filtration system on the Bell machines extends hydraulic oil filter intervals to 4000 hours. This element alone will have major service cost advantages when compared with the industry norm of 2000-hour service intervals for hydraulic filters.

Other features on Bell's waste-spec loaders:

Bell has ensured that any potentially vulnerable parts of the machine are fully protected from the unpredictable nature of waste and recycling materials that might be handled from day to day.

Firstly, belly guards are fitted as standard underneath the chassis to protect the engine, transmission and hydraulics.

Woollaston said: "There are any number of items that are a potential hazard to even the most hardy of waste handling machines – anything from golf clubs to broken office chairs. Such common items as umbrellas can cause huge problems, leading to increased downtime and inefficiencies. It's therefore essential that we cater for the worst-case scenario and ensure that our customers' operations are not compromised unnecessarily."

This is why Bell has fully approved solid rubber tyres on its waste-spec wheeled loaders.

The standard tyre for the UK waste industry has typically been the L5 tyre, which is a robust, pneumatic tyre. Yet, because tyres working in waste & recycling environments are so prone to punctures, it is common for operators to fill them with foam.

But Woollaston said: "These foam-filled L5s still have their downside. If a piece of sharp metal happens to take a corner off the tread, the foam can leak out. The tyre becomes useless and it's like riding a pig with three legs – not to mention the downtime and cost that can be caused by an unplanned tyre change."

So Bell has specified solid rubber 'cushion' tyres on its waste loaders. The tyres, although solid, have a series

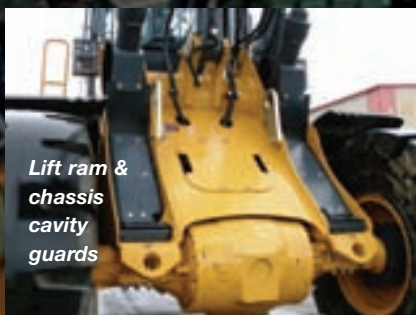
**High-tip bucket
handling wood
waste**



Solid rubber 'cushion' tyres



**Lift ram &
chassis
cavity
guards**



of perforations near to the rim, which allow a degree of 'give' and thus creates a more comfortable ride. And the performance of the tyre is unaffected even if the underlying waste causes edges to be ripped off.

The cost of the solid cushion tyres is also no more expensive than the foam-filled L5 tyres.

Other standard features specific to Bell's new waste industry wheel loaders include the high-lift arms and high-tip bucket.

Due to the waste materials often being relatively lightweight, the lorries that transport them from the waste-handling site typically require very high sides, in order to achieve efficient tare weights. This usually means that the loaders must be able to comfortably clear a loading height of about 4.5 m.

Longer arms are therefore fitted to the Bell loaders, in addition to a high-tip bucket, which, due to its custom-built configuration provides an extra 1 metre to 1.2 m of dump height compared with the standard buckets. The cradle-mounted bucket can therefore dump its load and the machine can pull away without the risk of the bucket hitting the high sides of the lorry.

Much of Bell's focus in the design of its waste-spec loaders has been on health and safety aspects, both in terms of machine damage and operator safety. Cab screen guards are therefore fitted as standard, due to the dangers of waste items rolling down the machine's arms during loading.

Bell also offers hydraulic quick-hitch buckets for maximum operational flexibility and refuse spill guards on its buckets.

Standard features on all Bell E-Series loaders

Whilst Bell has perfected a number of features for these new waste-spec loaders, customers in the waste & recycling industry will also benefit from the 'as standard' specifications that are available on all E-Series wheeled loaders.

Bell believes it offers the highest standard specification machines in the industry, making Bell wheeled loaders a serious top-end alternative to other loaders on the market.

The range of seven machines can be divided into two main categories – utility and production class loaders.

The L1204E and L1506E utility machines are most suitable for a wide range of applications, including general contracting, composting, waste & recycling, urban batching plants (concrete), urban asphalt plants and agriculture. These loaders are designed for the ultimate in operational flexibility.

The larger utility class loaders - the L1706E and L1806E – are best suited to similar operations but on a larger scale. Waste & recycling is a key area for these loaders, for example in operations including skip waste recovery, waste transfer stations, demolition waste and scrap yards.

The three production class loaders in Bell's E-Series range are the L2106E, L2606E and L2706E, which are designed for specific large-scale operational tasks. All machines in the range are fitted with the latest Tier 3 certified John Deere PowerTech engines.

Whilst all seven machines are available with high-powered Z-bar linkage, the L1204E, L1506E, L1706E and L1806E utility class machines are also available with parallel lift configuration and Quick-Attach.

All machines are available with high-lift arms.

The attention to detail that has gone into the inside of the cab is equally impressive. The cab operator is able to enjoy a luxury, heated, air-suspension seat with twin armrests. This is mounted

on a carriage together with the machine controls, providing exceptional comfort as the controls move with the seat. The control includes the innovative Quick Shift feature, which allows simple pushbutton gear changes.

All E-Series loaders include keyless start with lock-out codes for added security, where each operator has a unique numerical code to activate the machine's ignition system. This is factory fitted as standard. Plant managers or fleet owners can have an override code to enable a super-user to gain access to all machines and therefore make overall management of the fleet easier.

Also (untypically) standard is the reverse camera and reverse radar detection system, which display through the cab's highly advanced LCD system. In addition, Bell supplies, as standard, an embedded payload system on all of their machines. The payload comes with a truck counter, enabling the operator to view, on the LCD monitor, exactly how much tonnage has been loaded into a truck. This feature allows multiple monitoring over more than one truck at a time, and data can be presented as accumulated totals.

The user-friendly multi-function LCD monitor also provides screen displays of machine parameters, an operator check sheet, real-time fuel usage and extensive diagnostics. It represents merely the visible 'front end' of a superior and ultra-reliable solid-state electronics system. This Canbus system has vastly simplified the electrical system while significantly improving the level and quality of diagnostic information.

Neville Paynter, managing director of Bell Equipment UK, said: "Due to our on-going strategic alliance with John Deere, we've been able to pool our expertise and market knowledge to come up with a range of standard loaders that will compete with anything on the market. But it's also important to be able to provide individual solutions for individual industry sectors. The waste and recycling industry has a set of requirements which are different to, say, the quarrying or general earthmoving sectors. We believe that our new waste-spec wheeled loaders will fulfil those requirements perfectly."

Bell has become renowned for supplying bespoke versions of its standard articulated dump trucks (ADTs) for a variety of end-uses. The company is set to make no exception with its new range of wheeled loaders.

BELL

Showcase launch of MPA celebrates four major industry achievements

Four celebrations were combined into Showcase 09, the mineral products industry's premier event, which took place on 4 June in front of 550 delegates in the Queen Elizabeth II Conference Centre, London.

The event witnessed the official launch of the Mineral Products Association (MPA), the affiliation of British Precast the trade federation for the UK concrete products industry with the MPA, the 40th anniversary of the Restoration Awards and the announcement of a new Natural England Biodiversity Award.

"Whether it is aggregates, cement, concrete, asphalt, mortar, lime or silica sand, they are all essential to UK PLC," said Lynda Chase-Gardener, MPA chairman, speaking at Showcase09 where the new MPA was officially launched.

In her opening speech to the Showcase 09 event and launch of MPA, Lynda Chase-Gardener, MPA chairman, said: "We have brought together three respected bodies from a large and important sector to create a dynamic, focussed and efficient association. The mineral products we represent are, in reality, all part of the same production line. Whether it is aggregates, cement, concrete, asphalt, mortar, lime or silica sand, they are all essential to UK PLC."

"We also offer sustainable solutions. The MPA has powerful initiatives, including health and safety, carbon reduction, responsible sourcing and biodiversity. Each of these are examples where long-term success will depend on partnerships with many organisations."

British Precast signed the agreement to affiliate with the MPA, with a view to moving to an integrated corporate structure over the next twelve months. The combination of the MPA and British Precast adds up to a powerful lobbying force for both concrete and other heavy-side materials and will enable the entire concrete industry to speak with one aligned voice.

Poul Christensen, CBE, acting chairman of Natural England, and the Rt Hon Lord Smith of Finsbury, chairman of the Environment Agency, presented a special award to mark the 40th anniversary of the Restoration Awards and the Cooper-Heyman Cup

for outstanding restoration in 2009 respectively.

The one-off 40th anniversary trophy for the best Cooper-Heyman Cup winner since the Scheme began was presented to Laleham Farm. This former sand and gravel quarry in Staines, Middlesex, now part of Brett Group, was chosen because of its careful restoration to immaculate farmland where a variety of exotic vegetables such as fennel, coriander and giant spring onions are grown. Restoration involved the careful handling and replacement of topsoils across the site, which also contains wildlife corridors and a small lake attracting ducks, geese, amphibians and dragonflies.

Seven further sites were also battling it out to be the 2009 Cooper-Heyman Cup winner. Lord Smith presented this prestigious and long-standing annual award for the most outstanding restoration site to the National Memorial Arboretum. This exceptional site in Alrewas, Staffordshire, a joint entry between Lafarge Aggregates and The National Memorial Arboretum Co, is where the Armed Forces Memorial commemorating servicemen killed on duty since 1948 is located. Restoration of the Alrewas site has created a historic, peaceful place of national, international and personal significance for visitors, where the wooded parkland, lakes, ponds, riverine habitat, grassland, reedbeds and wetland also provide a broad range of habitats to support biodiversity.

Poul Christensen stated that Natural England would, at next year's Showcase, be sponsoring a new Biodiversity Award.

This collaboration between Natural England and the MPA to recognise achievement in Biodiversity builds on the Biodiversity Action Plan launched at last year's Showcase by the Association. Introducing this trophy will buttress the other biodiversity initiatives that the MPA is already involved in, such as the Nature After Minerals (NAM) project, run in conjunction with the RSPB and Natural England; QPA Northern Ireland's involvement in the 'Our Nature with Aggregates' strategy; and, at European level, the Countdown 2010 scheme.

Poul Christensen's biodiversity announcement tied in with the overall theme of Showcase 09, which was 'Essential Materials – Sustainable Solutions from Production to Consumption'. Showcase 09 was hosted by Channel 4 broadcaster Krishnan Guru-Murthy with Kate



The Armed Forces Memorial commemorating servicemen killed on duty since 1948 at The National Memorial Arboretum

Humble, BBC Springwatch presenter and Vice-president of the RSPB, and spotlighted MPA's overall sustainability performance across the aggregates, quarry products, cement and concrete sectors in a topical, informative and captivating mix of filmed pieces, on-stage presentations, announcements and interviews.



The one-off 40th anniversary trophy for the best Cooper-Heyman Cup winner since the Scheme began was presented to Laleham Farm



Safe hands back Quarry Safety campaign

Some of the Premier League's top goalkeepers have thrown their safe hands behind a campaign to stop children and teenagers being hurt in the UK's quarries, as part of MPA's annual Stay Safe campaign. It follows a survey of quarry managers, which found that over half of Britain's quarries (58%) had experienced trespassers in their quarries in the last 12 months. The 2009 survey based on responses covering 260 sites found that whilst teenage trespass was of most concern to quarry managers, it was adults who were the worst offenders.



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Strong launch for Futuresource, Europe's new sustainability event

"We are delighted with our first Futuresource," said Steve Lee, chief executive of the Chartered Institution of Wastes Management (CIWM), which organised the show with and the Environmental Services Association (ESA). "The move to London has been a great success and it allowed us to secure the participation of HRH The Duke of Edinburgh, who described the show as 'big and impressive'."

"The new venue also helped attract key politicians such as Environment Secretary Hilary Benn MP, Mayor of London Boris Johnson and Shadow Environment Secretary Nick Herbert MP, all of whom made major policy announcements at the show."

Also at the event, Rosie Boycott, former editor of the Daily Express and chair of the London Food Board, praised the efforts of the waste and recycling industry in communicating the benefits of recycling.

Representatives from WRAP, Defra, CIWM, Environment Agency and many other visitors came to listen to the committed environmentalist discussing 'dispelling common myths' in dealing with journalists during a specially arranged session at the Communications Hub hosted by Sauce Consultancy.

Steve Lee director general of show organiser the Chartered Institution of Wastes Management said: "It really is encouraging to hear such a well respected journalist speaking positively about the industry".

Planning is already well underway for Futuresource 2010, which will take place on 15th-17th June 2010 at ExCeL London. Further information can be found at www.futuresourceuk.com

 www.hub-4.com/whatson



CEMEX partners with RSPB

CEMEX has entered into a two year partnership with the Royal Society for the Protection of Birds (RSPB) to accelerate the development of its biodiversity strategy.

The new partnership involves the appointment of an RSPB advisor who will be dedicated to CEMEX, and support the company in its development of a national biodiversity strategy, and provide specialist advice and assistance with restoration plans for the company's many quarries.

National Skills Academy for Materials, Production & Supply to address negative affect of skills gap reported by 82% of sector businesses



At the end of June Lord Young joined senior industry figures at the official launch of the National Skills Academy for Materials, Production & Supply (NSAMPS). Minister at the newly created Department for Business, Innovation & Skills, Lord Young joined with senior representatives

and employers from the process and manufacturing sector, which includes the Extractive and Mineral Processing industry, for the official launch, in London, of the National Skills Academy for Materials, Production & Supply (NSAMPS).

The introduction of the new Academy, which is being launched to provide a gateway to quality-assured, industry-relevant skills training programmes and solutions, comes at a time when research¹ has revealed that 68% of the largest employer organisations in the process & manufacturing sector are suffering from skills shortages. More significantly, 82% of companies across the footprint have confirmed that these skills gaps are having a negative effect on their business.

Joining the Minister for the nationwide unveiling of The Academy was Geoff Russell, chief executive of the Learning Skills Council (LSC), David Szymanski, managing director of Hanson Building Products, Tony Burke, assistant general manager of UNITE the UNION and Terry Watts, Chief Executive of Proskills UK.

CMS shows new identity on new website

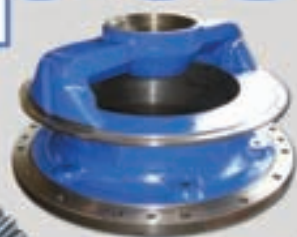


Celebrating its 20th Year of trading during May Crusher Manganese Steels took the opportunity to re-brand with a new corporate image. The company believes that new logo is visually simple yet strong, incorporating a striking blue that will be used to identify all CMS Cepcor aftermarket parts. According to CMS its existing logo and corporate image was a basic collective and often confusing mix and match of pre merger logos. The new identity can be seen on the company's new website, www.cmscepcor.com that went live in June. The site details aftermarket product and services offered for Crushing, Screening & Asphalt Plant along with current used Crusher & Screen stocks.

 www.hub-4.com/directory/1761

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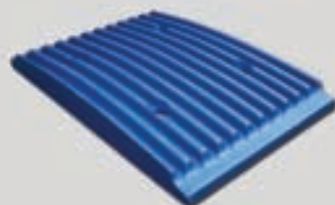
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New headquarters building provides further expansion for Wright Engineering.



Wright Engineering is expanding their Carlton-in-Lindrick site with the construction of a new headquarters building. The project will combine the development of increased office and reception space with massively enhanced workshop capabilities in order to facilitate an ever expanding customer base, creating further capacity for production.

The 20,000 sq ft project has been designed to incorporate cutting edge production techniques and state-of-the-art facilities to accommodate advanced design and engineering projects into the future.

Earmarked for completion in 2010 with some of the new production facilities operational later this year, the new building will complement and enhance the extensive existing production facilities presently operational on the site.

Wright Engineering has built an enviable reputation over recent years and is recognized by many blue chip companies as one source for the design, manufacture, and installation and commissioning of innovative materials

handling solutions for all purposes, from concept stage to installation.

The new headquarters building is viewed as a significant strategic step forward for the business and will help develop and expand a roster of high profile national and international clients.

Stewart Wright – MD commented, *“The investment is integral to developing our expanding order book and will generate further employment to compliment an ever increasing workforce. The future looks very positive and this project is the key to our expansion plans over the medium term.”*

In the meantime, normal production will be maintained at existing levels and will not be affected by the construction works.



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SPREADING

Blackpool illumination

BULK09, held at the Hilton Blackpool Hotel in April, provided delegates with thought leadership and an insight into innovation in key areas of bulk materials handling

Over 70 delegates enjoyed a mixture of informative and technical papers at Bulk09, held in Blackpool in April. It proved to be a successful and well attended event considering the current economic climate and the networking and socialising, which is always an important part of the seminar, was as good as ever. Once again there was a strong international flavour to the event reflecting the MHEA's global activities of MHEA members companies. The ties with academia came through with papers from Glasgow University, The Wolfson Centre, Newcastle University Australia and Delft University of the Netherlands.



Simon Philips, construction logistics manager Crossrail focused on the issues with handling the excavated material, from the Crossrail project now underway in London.

Simon Philips, construction logistics manager of Crossrail opened the Bulk09 event and then presented a paper on the Crossrail project now underway in London. Simon's paper concentrated on the logistics of building a new Railway across central London focusing on the issues with handling the excavated material,

over 200,000m³ per month at peak times by road, rail and ship.

Conveying issues

An interesting approach to monitoring conveyor belt idlers was the subject of Dr Gabriel Lodewijk's lecture. The advances in wireless technology and reduction in cost has brought the theory closer to reality. The system would work by monitoring the temperature of the idler and notifying a central hub of the need for attention. Another aspect of belt conveying was covered by Greg Bierie, who explained new concepts that can be employed when designing new installations to avoid material spillage and dust control. Dr Stefan Hinterholzer from Sandvik Mining Germany introduced the concept of Formed Rollers, these offer through their design much improved life compared to conventional types.

The session was chaired by Dr David Mills who also gave the plenary lecture on 'The Possibilities and Capabilities of Pneumatic Conveying Systems'. The three papers in the session

proved to most enlightening with Professor Mike Bradley's paper on Pneumatic Conveying: 'Is It For Me?' being and entertaining and informative session on how to decide whether to buy a Pneumatic system and, once decided, how to buy one that works. Dr Don McGlinchey from Glasgow Caledonian University spoke on trouble shooting pneumatic system, which did not perform as expected.

The Environment

A session followed focussing on environmental issues in specific industries such as rubber linings in rod and ball mills, online monitoring of combustions performance on coal fired boilers and reduced unburned carbon through fuel pipe balance - some heavy weight topics that have a direct effect on the environment. Session chairman, Dr Stefan Hinterholzer, introduced papers from Industry, which despite the current economic climate had ongoing opportunities.

Andy Archer's paper on 'Materials Handling Issues in New Build Power Stations' highlighted the expectations of power generators when considering the Materials Handling Equipment, Andy stated that whilst materials handling systems are a small part if a new build they are a vital component and suppliers must be prepared to meet exact criteria. Brian Reeves from the Port of Tyne presented a paper on the current re-development of the port, highlighting coal importation facilities. Phil Garner's paper on 'Clean Coal and Carbon Capture' described the three distinct elements to process: capture, transport and storage. There are several proposed schemes short listed in the UK offering real opportunities.

Handling secondary fuels

Frank Boyles of Saxlund International delivering a presentation on the 'Handling of Secondary Fuels' explained through the use of photographs the different systems available to handle these materials utilising such systems as the Tubefeeder and the Push Floor System. As an alternative Sinisa Jaksic from Jeffrey Rader explained the factors influencing the choice of a pneumatic conveyor to handle secondary fuels. In the final presentation of the section Ivan Skidmore from Bulk Material Solutions, Construction and Operations Support Group RWE Power International talked about utilising PFA (Pulverised Fuel Ash) better in the Brickmaking and Ceramics Industries.

Screening Feeding & Weighing

The final session was opened by Adrian Brown from Fritz & Macziol who gave a very interesting paper on improving efficiency and reducing cost of your inbound and outbound logistics by utilising automated loading and dispatch systems. Darren Frost from Stock Redler spoke on the subject of in-motion weighing, the presentation looked at the systems available and the different application areas. 'Dose It!' Was in the title of Richard Farnish's paper on weighing systems for continuous feeding, specifying, selecting and troubleshooting. The conclusion of the paper was to get the basic things right, confirm accuracy, evaluate characteristics and consider the propensity to segregate and review handling and loading techniques. The final paper for 2009 was given by Ron Hurst from Mobotec USA on the subject of Material Separation in Pulveriser Mills. The system involves magnetic separation, hard to grind materials are removed as are hazardous trace metals. Unwashed coal can perform like washed coal and can be further refined to reduce SO₂, HG, Nox and particle emissions. Brian Mackenzie, vice President and chairman of Bulk09 congratulated the session chairman and speakers for their time and effort in presenting their papers. Brian commented on the superb atmosphere the event generated and hoped all the delegates



Steve Clewley, current President of MHEA, speaking about the need to belong to a trade association in these difficult times.

had had an informative and enjoyable experience at Bulk09. Steve Clewley, current President of MHEA closed Bulk09 by speaking about the need to belong to a trade association in these difficult times and on how MHEA can offer help and support to its members through events such as Bulk09.

Copies of papers and the seminar book are available from Peter Webster MHEA Secretary. Tel: 01353 666298, Fax: 07006 072 242 or E-mail: pw@mhea.co.uk



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Evowash sand plant

Recycling success for Severn Trent Water

Severn Trent Water has made significant progress in its drive to reduce waste to landfill volumes and increase recycling through the introduction of a processing plant.

Plant from CDE Ireland provided to Severn Trent Water on a rental contract by Biffa is processing a variety of waste materials. Since it has been introduced Severn Trent Water have seen a significant reduction in waste to landfill volumes. "We are now sending 50% less waste to landfill than was previously the case" explains Nick Williams, Digester Fleet Manager with Severn Trent Water.

"We are recovering a range of materials from the waste which are subsequently used in construction projects and energy generation initiatives within the company."

Generating energy from waste is very much top of the agenda at Severn Trent currently with CEO, Tony Wray, keen to increase the proportion of electricity that the company can generate for its own use. Tony has a goal of generating 30% of the company's electricity needs internally within five years. This is a significant increase from the figure of 17% recently announced for 2008, but according to Tony imminent legislative changes now mean that this sort of 'blue-sky' thinking is necessary from all water companies.

In an interview with the Sunday Times in January 2009, Tony highlighted the fact that water companies will be among those that will be included in the EU's carbon trading scheme, under which they will have to pay for emissions.

Addressing this issue Tony comments: *"We're going to get captured in the next phase of the carbon trading scheme, so the efficiency with which we can manage our energy consumption is very important."*

The plant from CDE is located at the Minworth Sewage Treatment Works site operated by Severn Trent Water in Sutton Coldfield on the outskirts of Birmingham. Severn Trent rents the plant from Biffa which also manages the day to day operation of the processing plant that processes a variety of waste materials including wet well waste, gully waste, inlet works grit and sewer blockage waste. The plant also processes reed bed material as part of Severn Trent Water's Reed Bed Refurbishment Program.

The capability of the plant to cope with a variety of feed materials was key at the specification stage, as explained by Nick Williams. *"We had previously purchased a modified version of one of CDE's sand plants and had a good*

experience with the system. The most important thing from my perspective was ensuring that the system we chose was tried and tested and proven in this type of application. Over the last three years we have seen first hand that the CDE system works."

New venture

The venture into this industry is a relatively recent one for CDE, which has traditionally supplied processing systems to the quarrying, mining and recycling industries. Over the last three years its business in the municipal water treatment sector has grown significantly and this recently led to the establishment of a CDEnviro business unit within the company, specifically charged with further developing business in this sector. The CDEnviro business unit also takes responsibility for the further development and improvement of the product offering currently available from CDE to the sector.

"Our initial venture into this industry some three years ago involved the development of a trailer mounted system designed to process waste from wet wells and digesters" explains Matt Bunting, CDEnviro's newly appointed commercial manager.

One of the company's first customers for this system was Biffa and it was through exposure to the system as it was applied at the Minworth site that Nick Williams was convinced that the system not only offered a means of reducing waste to landfill costs, but also recovering materials for future use.

"The Dmax trailer unit was used by Biffa for over two years as part of our company wide digester cleaning program and proved very successful" says Nick Williams. Having seen the trailer unit in action and delivering results, Nick was keen to explore whether CDE could offer an extension to the system, which would facilitate the processing of a broader range of material. *"The trailer unit was very effective at removing water from the waste and classifying material but we were limited by the restriction on feed material of 8 mm and below"* he explains. ►

Having spent considerable time at the Minworth site with Nick Williams and discussing the new plant requirements, CDE proposed a plant extension.

This would utilise the Dmax trailer unit for processing the minus 8 mm material but would also provide a processing system to be introduced prior to the Dmax unit to accommodate the plus 8 mm material. *"Given that this was seen as a new approach to the handling of this waste, there was a 'wait and see' approach at the outset"* says Nick.

"We were granted a license to process 50 tons per day of material through the new CDE system as a pilot scheme and it has been very successful."

The process begins with the feed material being delivered to a hopper via telehandler, where it is then conveyed to a ProGrade C series dewatering screen with screen mats set to an 8 mm aperture.

Throughout the CDE system a focus on what they call 'transfer point technology' ensures spillage is minimised which not only improves plant efficiency but also has a significant effect on reducing on-site health and safety concerns.

Once at the primary dewatering stage all of the plus 8 mm material is removed and stockpiled while the minus 8 mm material and waste water is pumped to the Dmax system. The feed is then delivered directly onto the first side of the split, high frequency dewatering screen where the rag is removed and discharged into a skip. The grit material and waste water falls

through the polyurethane screen deck to the collection sump where it is then pumped through a hydrocyclone and discharged onto the second side of the split screen. At this stage in the process the grit is dewatered while the waste water is sent back to the treatment plant for further processing. At the end of the process there are a number of materials available to Severn Trent Water for further use.

The grit removed from the waste is sold as recycled aggregates to the construction market for use in a variety of projects. The other screenings have a potential re-use in incineration – an avenue to electricity generation. Similarly the organics are returned to the digestion process to produce methane in another move by Severn Trent towards their target of generating 30% of their own electricity within the next 5 years. In terms of the impact of the system on waste volumes, the Minworth plant has reduced waste to landfill by 50% since it was introduced. This is the saving made by Severn Trent Water when the full rental and operational costs of the plant have been paid to Biffa. *"In anyone's language the reduction in waste volumes made possible by this plant are extremely significant"* says Nick Williams.

Following the successful operation of this pilot scheme Severn Trent recently placed an order with CDE for a new 200 tons per day processing system at the Coleshill site, which is very close to the Minworth plant and is also managed by Nick Williams. *"Our order for the Coleshill plant is specific recognition of the successes we have seen at Minworth"* highlights Nick. *"With the increased capacity of 200 tons per day at Coleshill we will be able to deliver even more significant savings over the coming years."*

With a growing focus on reducing waste to landfill and increasing regulation of the industry as whole, Nick believes that major water companies have to step out of their comfort zone and take challenging decisions on how they deal with their waste materials.

Taking sand away





View of the plant from the bottom end of yard

"It was only through a top down commitment to exploring new ideas and innovations that we were able to get this system up and running," explains Nick. "Through the commitment of ourselves, Biffa and CDE to get this thing right we have been able to create a successful system which I believe can be applied throughout the industry to efficiently reduce waste and increase recycling."



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Sizers in Irish waste water treatment plant



Mogensen recently supplied two specially-designed, fully dust-proofed Sizers for the screening of dried waste sludge pellets, which are marketed as Bio-Fert agricultural fertiliser. The machines are installed at the Ringsend Waste Water Treatment Plant, which was commissioned by Dublin City Council but is operated

and maintained by Celtic Anghian Water. The plant was completed in 2003 as part of a multi-million Euro project to improve the environment of the Dublin Bay Area. Major benefits achieved include much cleaner water in Dublin Bay and in the city's rivers; two of Dublin's beaches, Dollymount and Seapoint have been awarded Blue Flag status. Further benefits are the economic use of the dried waste sludge and significant energy savings compared with the previous plant.

In 2007 further extensive work was carried out to improve odour control. At that time it was recognised that, as a result of the installation of new sludge dryers, the two vibratory screens used to size the 4mm diameter fertilizer pellets needed to be modified or replaced in order to satisfy the requirements of ATEX Directive 94/9/EC, the interior of each screen having been classified as a Zone 20 space because of the continuous presence of a Class ST1 combustible dust at a temperature of 70°C. It proved to be impracticable to modify the existing screens satisfactorily. Mogensen was, therefore, asked to quote for two Sizers specially designed to fit into the space occupied by the earlier machines.

The feed inlet and product outlet positions of the two machines supplied match those of the original screens: it was possible, therefore, to install the new machines without modifying the existing plant structure. The feed inlet and product outlets are all flanged and fitted with high-pressure, flexible connectors. The Sizers, in which all product-contact components are manufactured from Grade 304 (Euronorm 1.4301) stainless steel, have been certified to ATEX 94/9/EC Zone 20 and are designed to withstand an internal pressure of 0.4bar should a dust explosion occur. Each Sizer is powered by two Invicta rotary electric vibrators type BLz30-25/4 rated at 1150 watts.

Each machine can handle a feed of 20 tph of material at 70 °C with a minimum bulk density of 350 kg/m³, and separate it into oversize, saleable product and fines. The oversize and fines are re-circulated to the pellet presses. Celtic Anghian Water is reported to be pleased with the performance of the Sizers, which have now been in operation for approximately 14 months.



www.hub-4.com/directory/583



Quarry and waste solutions specialist takes delivery of a low noise wheeled excavator

A Surrey-based dry waste recycling company has recently taken delivery of a Doosan DX160W wheeled excavator for use in a new recycling and materials recovery unit. The machine was chosen for its compact dimensions and low noise levels.

J & J Franks, which has been operating a sand quarry at its Betchworth site since the 1950s, has since developed the business into a fully integrated quarrying and waste solutions business under the guidance of Peter Crate who took over the company from his father in 1998.

One of the first tasks undertaken by Peter was to replace ageing equipment with the best value and quietest excavators and wheeled loaders he could find at the time, resulting in the purchase of a fleet of Doosan machines.

The latest DX160W excavator, supplied by local dealer Promac Solutions of Aldermaston, has been equipped with an hydraulic high-rise cab to provide up to 2 m of extra height for maximum operating visibility, a rotating sorting grab and a height limiter to enable it to work safely within the new 8 m high recycling building - a height dictated by local green belt building restrictions.

The DX160W is powered a Doosan 6-cylinder common-rail diesel engine developing 99 kW at 2000 rpm and weighs approximately 17 tonnes in the configuration supplied to J & J Franks.



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More than 1,000 cone crushers remanufactured and sold worldwide

JW Jones Company, based southwest of Indianapolis, Indiana, USA, specialises in remanufacturing and refurbishing all makes and models of aggregate and recycle crushing, screening and washing. The company's management estimates that it has remanufactured and sold more than 1,000 cone crushers worldwide to date—with 60 percent of those being Symons cone crushers.



The company searches for, acquires, and then remanufactures cone crushers from the ground up, including the chassis on portable

units, in its Cone Fabrication facility that is part of its 100,000 ft² complete operations facility. Each cone crusher is completely taken apart, evaluated, remanufactured and then sold to contractors or producers worldwide at up to 50% less cost when compared to a new cone crusher today. Any part that is out of specification gets replaced, including: liners, main frames, bushings, gears, hoppers/bowls, heads, shafts, bearings, seals, housing, springs, motors, pumps, alarms and all other wear parts. The company offers up to a six-month warranty and sometimes longer.

These remanufactured stationary and portable cone crushers are available in size ranges from 0.6 to 2.1 m and are engineered to crush materials from limestone to river rock. The company can customise other manufacturer's cone crushers to fit most plant operations with production requirements up to 1,500 tph.



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J Doyle invests in purpose built materials recycling facility

J Doyle, a long established metal and waste handling specialist and member of the Hargreaves Hamilton Group of companies, is increasing throughput at its Bolton site and improving recycling rates as a result of recent investment in a purpose built materials recycling facility.

Housed within a new 20,000 ft² building at the entrance to its Bolton site, the new facility is the culmination of months of planning and is an integral part of the company's business expansion strategy. Featuring a complete waste segregation and handling system from CDP Plant the new facility marks another landmark in J Doyle's 80 year history in waste recycling and will be a key element in the company's plans to increase site throughput through diversification into new markets and their ability to handle higher volumes, more quickly than previously.

Waste handling equipment within the facility includes a McCloskey 823 trommel screen operating in conjunction with an eight bay picking station complete with Enviro Cabin, overband magnet and air knife. This integrated plant processes the general industrial waste into separate streams; cardboard, paper, wood, 25 mm fines, plastic, metal and recycled aggregate. Waste paper is air conveyed to a compactor for volume reduction and more efficient transport costs.

The majority of the waste at the site is tipped by J Doyle's own fleet of HGVs but with plenty of room for growth the company is already seeing increased tipping by other firms.

"The new facility means not only will we be able to handle more loads but we will be able to recycle more of the waste and extract materials that would otherwise go to landfill. We are also bucking employment trends by increasing our workforce to operate the loading equipment and on the picking line," says William Nuttall, manager at J Doyle.

"We have invested in the development of this new materials recycling facility to enable us to respond to increasing levels

of legislation regarding the recycling of waste and the escalation in landfill tax. Without this new equipment we could not have handled a higher volume of waste on this site but now not only are we able to handle the requirements of our current business customers in a more efficient manner but we will now be able to expand our service to new customers also. By improving recycling rates, generating higher quality waste streams and making landfill tax savings we see this project being self funding," confirms William.

CDP Plant is the appointed distributor for McCloskey International throughout Central England, offering a range of trommels, flat deck screens, picking stations and conveyor systems which can be customised to virtually any size to suit customers' applications. Pickers can be positioned on either or both sides of the variable speed conveyor and, for enhanced working conditions for operatives, fully enclosed enviro-cabins such as those installed for J Doyle - have heating and lighting. Discharge chutes can be positioned as required and in any number for convenient 'binning' of unwanted or recyclable materials in their respective stockpiles.

"Before purchase of the equipment we had a number of planning meetings with CDP Plant who were very accommodating regarding making the changes to overall system design, to ensure we were happy with the final plan. Through the use of the McCloskey plant we can now offer a complete recycling package to all manner of industries," said William.

"It is our strategy to be one of the few leading companies able to offer clients a complete recycling package for metals, general waste and hazardous waste. We are proud that of the 1000's of tonnes of material we process each month, we send only 15-20% to landfill."



www.hub-4.com/directory/6800

Short option brings significant savings

A switch to a fleet of specially modified Jungheinrich counterbalanced forklift trucks will result in significant cost savings for a leading recycling company

Viridor is one of the UK's leading waste management companies. With 240 operational sites across the UK, including 24 landfill locations and 18 material recycling facilities, the business is capable of dealing with solid and liquid wastes of all types including hazardous or other special waste products.

At Viridor's recycling facility in Crayford, Kent, domestic waste materials such as glass, paper, cardboard and plastics are separated and processed before being baled and shipped for further processing into raw materials and, ultimately, going on to begin a second life as a new manufactured product.

Loose material gathered from the kerbside collections organised by councils and local authorities throughout the UK arrives by lorry at the Crayford plant around the clock. Indeed, it is perhaps testament to the way that the British public has embraced the environmental agenda that the site operates 24 hours a day, seven days a week.

Incoming material is taken from the lorries and delivered directly to the processing plant by a fleet of front-hoe loaders. Once separated and processed, materials are neatly bound into bales, which are then transferred into containers using a fleet of Jungheinrich counterbalanced forklift trucks.

The forklift trucks – six diesel-powered models from the Jungheinrich IC-engine VFG range – have all been specially modified for the application. The modifications have had a dramatic impact on cost efficiency at the site, while site safety will also benefit.

For example, the trucks' cab and mast have both been lowered to allow the forklifts and their loads to drive inside containers that measure just over 8ft high. The trucks that Viridor had been operating at the site before the arrival of the Jungheinrich machines needed a mast clearance height in excess of 9 ft. This meant that Viridor had to transport bales of material in 9' 6" high containers. Because, the dimensions of the bales only allowed the blocks of recycled material to be stacked two high within the 9' 6" containers, a lot of empty space was left at the top of the container units.

With the lower mast of the Jungheinrich trucks Viridor can now transport the same number of bales in 8' 6" high containers with little or no wasted space. The shift to the lower height containers has enabled the company to achieve significant transport cost savings per container and with up to 70 container loads leaving the Crayford facility every day the annual saving is staggering.

Furthermore, to ensure that containers are stuffed in the most efficient and safe way, the forklifts feature double width bale clamps. The clamps allow two square bales measuring 1200 x 1200 mm and weighing up to 1100 kg each to be carried side by side which dramatically speeds up the container stuffing process.

For added safety the Jungheinrich trucks have been fitted with a reversing camera system. When the trucks are reversing, a camera transmits a clear picture of the rear view to a screen within the operator's cab. This is particularly beneficial when the trucks are backing out of a container having deposited a load. The system not only gives a clear and unobstructed rear view, but ensures that the operator does not have to twist his body around uncomfortably to

see any obstacles that may be in his way. Over the course of a typical shift, this significantly reduces operator fatigue which, in turn, means that the trucks perform at optimum efficiency.

Of course, the intensity of the operation and harshness of the outdoor environment at Crayford, means that efficient and reliable materials handling equipment is essential. While a full cab – complete with a CD system – ensures that the operator is sheltered from the worst of the elements, to limit the effect of the high levels of dust and other debris generated on site, the Jungheinrich trucks are all fitted with cyclonic air filters. The filters restrict the amount of air-borne particles that enter the engine, which means that down time is kept to an absolute minimum.

Featuring a hydrostatic drive, the Jungheinrich VFG series trucks are particularly suited to highly intensive materials handling operations where a lot of 'shuttling' work is involved. Furthermore, because hydrostatic drive technology has only a few mechanical components, the trucks are low maintenance and easy to service.

Viridor's Barry Lowers comments: "The savings that the switch to smaller containers will allow us to make are very impressive. We had previously been wasting money transporting a lot of 'fresh air' in the 9' 6" containers!"

He adds: "The VFG truck's proven reliability was also a significant influence on our purchase decision. The new trucks are far more efficient than our previous fleet, which were always breaking down. We work the trucks extremely hard and it is important that they are available when called upon and the new Jungheinrich models have given us no problems whatsoever. I have been extremely impressed with the way they perform. The operators also really like the reverse safety camera. Viridor is extremely health and safety conscious and anything that improves on site safety is always very welcome."



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Recycling starts with a bang

Fairport Engineering has been working with MBA Polymers UK for just over a year assisting in the development of a brand new £25 Million state of the art plastics processing plant in Nottinghamshire. MBA Polymers is a leader in recycling high-value plastics from complex waste streams and end-of-life durable goods such as appliances, computer and business equipment, automobiles, and even sporting equipment. The company's site in Worksop was formerly used for glass production and will provide the ideal location logistics-wise for housing the planned 80,000 tonnes per annum facility.

On 12 February Fairport commenced with the demolition of the now redundant glass batching and mixing plant in order to make way for the new plastic processing facility, with the final stage of the demolition and remediation works taking place on 8 March and included the old glass furnace and its associated 70m high concrete chimney.

The demolition was undertaken using shaped explosive charges and the rubble generated will be treated on site to make a recycled aggregate that can be used for construction purposes.

MBA Polymers UK is a joint venture company formed between MBA Polymers of Richmond, California and European Metal Recycling (EMR) of Warrington, Lancashire and will recover plastics from upgraded "shredder residue". This shredder residue is a complex plastics-rich mixture of materials resulting from the recycling of automobiles, appliances and other metal-rich streams. It is estimated that over 10 million tons of plastics from automobiles, electronics, appliances and other end-of-life durable goods are disposed of each year around the world. These plastics are commonly landfilled or incinerated at high economic and environmental costs because they have been deemed too complicated or expensive to recover.

David Ireland, EMR's director of technical services is quoted as saying:

"EMR is a leader in metals recycling and this collaboration with MBA will make us a leader in plastic recycling too. It is a very significant step not only for EMR and MBA but for the UK too as this investment will allow us to recover the previously untapped plastic resource in the materials we recycle. Not only will this divert materials from landfill and generate significant CO2 savings but it will also put EMR at the forefront in meeting the very demanding recycling targets set under producer responsibility regimes in vehicle and electronics recycling. These targets are very exacting and can only be met by applying new technologies to the recovery of plastics. We have been working with MBA for some time on this problem and we are very excited that we have now reached the stage where we can start to build a plant in the UK"

MBA and EMR also believe that this venture represents not only an important business for both companies; but it also provides large social and environmental benefits as well.

Michael Biddle, MBA's founder and president, provided some examples of the 'win-win' benefits that go beyond the obvious reduction in waste:

"Additional benefits are realised through the efficient production of plastics from plentiful domestic scrap and waste materials, which is particularly important in these times of high energy and commodity costs. Rather than build expensive and energy-consuming chemical plants, our company provides a way to manufacture plastics at a significantly lower economic and environmental costs. Our plants require much less energy compared to a traditional petrochemical-based plastics plant to make the same amount and types of



MBA's Worksop plant before demolition



MBA's after the explosive charge

plastics. And for every ton of virgin plastic we replace, we can save two to three tons of the greenhouse gas CO2 from entering the atmosphere".

Fairport Engineering was appointed as MBA Polymers' EPCM contractor in January 2008 and has been providing services to facilitate plant design & build, site selection and achievement of regulatory permissions since then. The recent closing of the design & build contract now allows Fairport the opportunity to "fast-track" the plant completion in the early part of 2010.

Paul Fitton, Fairport's MD, comments: "I am obviously delighted to be awarded an assignment of this nature under current trading conditions. I truly believe that our proven long-standing expertise in bulk materials processing and handling projects makes us an ideal partner for MBA and EMR on this project."

Paul added: "Having brought on-line our own MSW processing facility at Huyton, Liverpool early last year this new project confirms our sustained involvement and capability in the high technology end of the rapidly expanding recycling and energy from waste sector."

This demolition was undertaken using shaped explosive charges and the rubble generated will be treated on site to make a recycled aggregate that can be used for construction purposes.



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R 984 C Litronic High-Rise Industrial Rehandler is first machine of its kind – believed to be the largest of its type in the world.

World's first high-rise industrial rehandler goes to Norton

S. Norton & Co, the family-owned secondary metals processor and major exporter headquartered in Liverpool, has invested in the R 984 C Litronic High-Rise Industrial Rehandler. This is the first machine of its kind – believed to be the largest of its type in the world – and has been produced by Liebherr's specialist dedicated materials handler manufacturing facilities, which were recently opened at the group's Kirchdorf factory in southern Germany.

The R 984 C High-Rise is the culmination of extensive consultations over many months between Norton, the design and product development team at Kirchdorf and the UK sales engineers at Liebherr-Great Britain.

The materials handler is now hard at work at Norton's West Canada Docks facilities in Liverpool, where it is loading large volumes of furnace-ready scrap metal into specialist cargo vessels for export all over the world. A significant attribute of this machine is its ability to 'soft load' bulk vessels by placing the scrap metal on the cargo floor in a controlled operation, rather than simply dropping the load from height. This soft load process eliminates the possibility of damage to the cargo hold floor.

Norton has processing centres in Liverpool and Manchester, which are designed to maximise extraction of recyclable ferrous and non-ferrous metals from incoming feed stock sourced nationwide, whilst minimising non-recyclable waste going to landfill. Norton's modern shearing and shredding equipment ensures high-grade furnace-ready secondary metals for their global customer base, while ensuring significant reductions in tip-to-landfill non-recyclables with the environmental benefits that this engenders. Dockside operations are largely based in Liverpool (South Canada 2 and 3 and West Canada docks), with a further exporting facility located in Southampton Docks. In addition to their secondary metals activities, Norton also operates an extensive collection service for all types of metal waste, including WEEE, with a large fleet of roll-on-off vehicles, articulated bulkers and over 300 skips of varying capacities.

This latest addition to Norton's materials handling fleet joins seven other Liebherr machines, including four other R 984s. It is estimated that these and the newly delivered R 984 C High-Rise will be handling over 1,000,000 tonnes of scrap metal annually.

The R 984 C Litronic High-Rise industrial rehandler is a 210-plus tonnes machine, powered by a Cummins QSK-19 C 750 six-cylinder engine which develops 504 kW. Of special interest is the newly developed heavy-duty undercarriage and high-rise support structure, which raises the machine by 8.7 m to the slew-ring and, with the fixed elevated cab, gives the operator a 12.9 m line of sight – particularly important for optimum load view when soft-loading bulk cargo vessels. The tracks themselves provide total stability, with a footprint of approximately 8 x 9.5 m and equipped with 750 mm wide cast steel flat trackpads. Catwalks are installed all round the upper tower and there are stairs to the lower platform and safe access to the upper carriage via operator-controlled electrically powered access gates, which are monitored by CCTV with an in-cab screen. Special additional fuel tanks, extra to the 1,500 litres tank on the machine itself, have been integrated into the turret at ground level (2 x 3,000 litres) which allow the machine to run for up to 100 hours without refuelling. A further feature specific to this machine is an access ladder, which runs from the ground up through the turret to allow safe and easy internal inspection of the slew-ring.

The superstructure features a torque resistant, modular design upper frame and parallel length girders for attachment mounting. Catwalks are installed on both sides. An electric service crane is located on the counterweight and this is powered by its own separate diesel generator installed on the middle platform. The air-conditioned, ergonomically designed, elevated operator's cab is resiliently mounted, sound insulated and fitted with tinted windows. The driver's seat is fully adjustable, with shock-absorbing suspension and headrest. Travel, slew and attachment operation is via twin joystick controls mounted into the seat armrests. The high-technology Litronic system monitors hydraulics and engine performance, providing real-time operating conditions via an LCD display which keeps the operator fully informed at all times. Additional dust filtration has been fitted for added operator comfort and safety and four extra working lights have been installed on the cabin roof – two forward and two rear. Spillard CCTV cameras and in-cab monitors have been retro-fitted to give the operator a clear view of the undercarriage and a further camera is located on the stick to provide total vision of the grab and its load, even

when lowered deep into a vessel's hold. An automatic central greasing system takes care of upper carriage and attachment lubrication.

As for performance capabilities: the monobloc industrial boom is 16.5 m long and the industrial stick length is 14.5 m with an extra 1.2 m adaptor for attachment lift, giving 29 m reach with an 8 tonnes capacity, including the type GM 75 five-tine grab. In this configuration, lift height is a maximum 33.50 m and the optimum lowering depth below ground level is 9 m; hoist and stick cylinders have load-holding valves. Four operating modes are available, adjusting machine performance and hydraulics to match the application: 'Lift' for standard lifting operations; 'Fine' for precision work; 'Eco' for optimum economy and environmentally friendly operation; 'Power' for heavy-duty tasks.

A giant floating crane at the dockyard, 'The Mersey Mammoth', is used to lift and transport this 210+ tonnes materials handler between Norton's various dockside facilities. Special lifting points have been designed into the R 984 C High-Rise to enable the entire machine to be craned and relocated by this impressive and efficient method.

Norton company director Matthew Norton says: "We are very pleased with this new machine.... R 984 C High-Rise is performing well and is an excellent addition to our fleet of specialist materials handlers".

Norton & Co has placed an order for a second R 984 C High-Rise, delivered at the end of June.



Left to right: Mr Joachim Strobel (joint managing director, Liebherr-Hydraulikbagger GmbH); Jan Liebherr; Matthew Norton (director, S. Norton & Co); Werner Seifried (joint managing director, Liebherr-Hydraulikbagger GmbH).



www.hub-4.com/directory/504

Wash Plant for Nottinghamshire Recycling gets the washing done

Nottinghamshire Recycling (NRL) recently took delivery of a new full washing and water management plant.

Based in Worksop, Nottinghamshire, NRL is a sustainable waste solution provider processing C&D waste, green waste, wood and recycled aggregates. The new washing and water management plant (which includes a Gennaretti centrifuge system) will provide NRL with the ability to divert recycled aggregates from landfill and supply high quality clean washed materials to the local construction materials market.


When deciding which processing plant to purchase NRL focused on the quality of the equipment, bespoke plant design and specification for their site, back up service and support and a proven ability to process difficult recycled materials.

Production process

With production of recycled aggregates currently at 100 tph, on site material is fed by excavator into a static Chieftain 1400 feed hopper featuring a single-deck, live head grid and an electric variable speed feeder.

Material is then fed from the hopper onto an inclined conveyor, which conveys it under a belt magnet to remove the ferrous metal and delivers onto a 10 x 5 static rinser screen. Fitted with polyurethane modules on all decks the rinser screen box incorporates 6 top and 6 bottom deck spray bars with plastic nozzles.

This machine has a patented 10' x 5' four bearing 'free floating' screen box, which eliminates the need for any fine tuning; acting as the primary screen the rinser facilitates the



removal of more sand and silt out of the material. This fine sand is then fed to a conical sump where any lightweight contaminants overflow into a self-cleaning filter. Any fine sand is then pumped to the Fines Master 120 Compact twin grade plant. The coarse sand is also fed to the opposite side of the sand plant. Material passing over the integral screen decks is then fed onto a T4026 conveyor to stockpile, and a further direct feed into the latest design of Powerscreen Recycling Logwasher.

Capable of producing up to 120 tonnes of contaminant-free sand and gravel, the Powerscreen Recycling Logwasher comprises an inclined trough fitted with two counter-rotating axles with high-tensile exchangeable blades and an elevated spray-bar system. The unit mixes incoming feed while milling and washing the material at the same time. Any lumps of earth or clay are broken down during this process and carried away in the wash water, while any lighter particles are floated off through specially designed outflow exits onto a 6 x 2 trash screen fitted with polyurethane modules.

The scrubbed gravel is discharged onto an 8 x 4 dewatering screen fitted with polyurethane modules and three spray bars to provide a final rinse, with water and sand gravity flowing into an adjacent Powerscreen Finesmaster. Clean material is then conveyed via a transfer conveyor to a 10 x 5 double-deck dry screen. This dry screen grades the material into three sizes of 10, 20, and 40 mm, which are conveyed and stocked by three further radial stockpile conveyors.

In the production process any material from both the bottom of the recycled logwasher is then fed into a Fines Master 120 compact twin grade, static sand recovery unit where it is classified at approximately 75 micron and dewatered. Working for maximum sand grade flexibility, the Fines Master 120 compact can produce a combined total of around 120 tph; comprising a 15" fines cyclone and a 24" course cyclone,

a centrifugal slurry pump, a collection tank and a high-frequency 12 x 5 dewatering screen fitted with polyurethane dewatering modules mounted on a single carrier chassis. The machine delivers one grade of course sand and one grade of fine sand to stockpile with the flexibility to blend the fine and coarse sand to maximise either sand grading. Any silt or lightweight waste being sent to a filter, which feeds to a sump, with silt sent to the thickener.

Water management and centrifuge operation

As water management was an essential part of the project DUO Equipment, in conjunction with its partner Gennaretti, supplied a GHT 503 variable speed centrifuge system which is capable of processing up to 15 tph.

In addition to the centrifuge, the water management system includes a foul water pump, automatic flocculent mixing and dosing station for the thickener system, 7 m diameter deep cone thickener tank with pneumatic discharge valve, sludge and fresh water tank; and all the support framework, structure, walkways and access platforms.

Operating principle

The Waste water and silt from the top of the cyclones on the Fines Master gravitates flow into a steel sump tank adjacent to the Fines Master and through an in-line screw filter to remove organic material and polystyrene. The silty water is then pumped to the top of the deep cone thickener. Simultaneously the batching pumps automatically inject the flocculent solution into the delivery pipes to mix with the material. As a result, inside the thickener tank, the sludge will drop to the bottom of the cone while the clean water weirs over the top of the thickener into the clarified water tank. This water is then re-used by the wash plant for continuous cleaning of the material.

The underflow from the thickener

then gravity feeds into a sludge tank with an internal rake. This material is then pumped directly to the centrifuge system to be dewatered and stockpiled into an allocated bay. The clarified water is then pumped back into the system via the deep cone thickener.

The whole process is based upon a complete closed loop system, which enables recycling of as much water as possible back into the wash plant.

Fintan McKeever, director at DUO Equipment, comments: "The inclusion of the Gennaretti Decanter Centrifuge was an obvious choice for this project. The Gennaretti Centrifuge has proved very successful in processing silts from recycled aggregates, sand and gravel, and limestone and offers a continuous process incorporating an automatic variable speed control to handle large fluctuations in feed material."

With the NRL project, DUO Equipment delivered a fully automatic silt management system that was specifically designed and sized for the process, minimising operator input and maintaining low running costs.

DUO took into account such factors as the silt content, clay content and settlement rate of the raw material. The flocculent mixing and dosing system installed maintains a continuous supply of clean water and automatically mixes a batch of flocculent solution when the level drops. An operator only has to add the powder to a storage bin.

The installation of the new washing plant and water management system has been very beneficial for NRL, as its managing director Kevin Burgess comments: "The choice of the plant was based on the need to utilise a closed loop water treatment system and the ability to produce a consistent product to a very demanding market specification. We have significant amounts of Powerscreen machines across all of our recycling sites and expect and receive guaranteed service support from DUO and Powerscreen. The new aggregate washing plant will help to maintain Nottinghamshire Recycling's position as one of the major suppliers of quality recycled aggregates in the Midlands."

Empty rates protests continue

Quarrying has been a cornerstone of industry in Britain throughout history but is its infrastructure being threatened by an unfair tax. David Flood calls for the industry to show the government how damaging the removal of empty rates relief can be

Disused quarries did not have to pay business rates prior to 1 April 2009 when Empty Rating Relief was removed and vacant properties became liable for 'empty rates' at the full amount.

Quarries and other installations associated with aggregate production and distribution are classed as 'industrial' users and as such qualify for a six month rates void period before empty rates need to be paid.

Despite the efforts of many lobbying groups the government's position on the imposition of empty rates on unoccupied commercial property remains steadfast. This is continuing to place unwelcome additional overhead costs on the quarrying sector. Empty business rates now represent a significant percentage of the cost of owning unused property and have led to the demolition or decommissioning of many buildings and plants.

A petition to reinstate empty property rating relief, which was sponsored by the British Property Federation, attracted over 5000 signatures but failed to sway the treasury [The government response can be viewed at <http://www.number10.gov.uk/Page19763>].

The magazine 'Property Week' continues to raise awareness of the issues. The publication's 'Empty Threat' campaign has brought together pressure groups from diverse areas of industry and commerce and has continued to keep the issue at the forefront of people's thinking. [Property Week 'Empty Threat' page at <http://www.propertyweek.com/section.asp?navcode=3492>]

Linda Riordan, MP for Halifax, meanwhile tabled an Early Day Motion number 2045 in July 2008 [See the parliament website at: <http://edmi.parliament.uk/EDMi/EDMDetails.aspx?EDMID=36387&Session=891>]. It asks 'that this house urges the government to exercise its power, as given in the Rating (Empty Property) Act 2007, to reintroduce empty property rate relief immediately in response to the world economic downturn and worsening conditions in the property market; notes that empty property rate relief is a tool used to stimulate investment and growth in the property market during times of economic difficulty; and further notes that the withdrawal of the relief is having unintended consequences such as creating unnecessary financial hardship for people with small businesses, compromising regeneration schemes and constraining the supply of affordable commercial property.' To date it has received the support of 125 MPs.

A new web site

A new website has been set up to highlight the difficulties being caused to industry by the removal of empty rates relief. www.emptyrates.com brings together commentators on the empty rates issue. People who are affected by empty rates can add their voice to the growing number of concerned individuals from all businesses that are worried about the effects of this draconian tax, made worse by the recession.

The removal of empty rates relief is sometimes perceived as mainly affecting the property industry, however the effects are felt much more widely and acutely. Few developers wish to complete projects to be faced with having to pay empty rates six months, (or three months for shops and offices) after the project has been completed.

Accordingly most developments have been shelved or abandoned, causing a sharp decline in construction activity. The worldwide recession is a primary factor in this chain of events but the removal of rating relief has worsened the problem. Obviously this reduction in workload for the construction sector has a direct correlation with demand in the quarries. During this recession when demand for aggregates is in steep decline the last thing that anyone wants is for a new tax, which significantly increases overhead costs. The government says that the measure was introduced to encourage businesses to lower rents and be more flexible with their leasing arrangements. That is all well and good but finding a taker for a mothballed quarry is no easy matter.

The writer of this article visited the House of Commons to lobby his MP about the detrimental effect that the removal of empty rates relief is having on business. As a result of this meeting Mark Tami, MP for Alyn and Deeside, wrote on 6 February 2009 to Lord Mandelson expressing his concerns about the effects of the empty rates tax. The reply came from the Rt Hon John Healey MP as Minister for Local Government. It basically trots out the party line on why the government thought that empty rates relief should be removed and that although they hear the industry concerns they are not prepared to reinstate the relief. Mr Healey says that they want the incentive to bring empty property back into use and it would place a burden on other taxpayers. 'To re-introduce relief for all empty property would be costly and not well targeted. It would re-introduce a subsidy to owners of empty property and impose a real cost on other taxpayers.' Mr Healey goes on to talk about the other help being given to business by allowing businesses more time to pay the 5% increase in the Universal Business Rate (UBR) and by allowing businesses to defer tax payments. The letter ends that 'the government will continue to support businesses through these difficult economic times.'

Good words, but words are cheap. This government has decided that port operators should pay business rates back dated for some three years. A petition was launched to try to raise awareness of the difficulty that this measure would put many occupiers in. Anyone involved in marine dredging would potentially be affected by this issue. Once again the protests have fallen on deaf ears as the governments need for revenue has clouded its ability to apply common sense [the response to the petition can be viewed at <http://www.number10.gov.uk/Page19763>].

Empty rates relief should be reinstated but as the government will not budge another suggestion has been made. A survey was conducted jointly by the RICS and Lambert Smith Hampton on the effects of the removal of Empty Property Relief (EPR). One of the recommendations of the survey was that the void period before empty rates are charged should be extended to twelve months across the whole commercial property sector. A petition has been launched to raise awareness of this issue and if you wish to show your support please sign up at <http://petitions.number10.gov.uk/extendEPRvoid/>

Footnote: David Flood is managing director of Rateable Value (www.rateablevalue.co.uk), a company specifically set up to help firms mitigate their liability to empty rates taxes. In the early 1990s David sat on the committee of the North Wales Institute of Quarrying. David can be contacted on 0844 811 8000 or david.flood@rateablevalue.co.uk

New mobile crushing and screening plant for Ewenny Quarry



Ewenny Quarry in Bridgend, south Wales as recently received a GipoCOMBI RC130FDR mobile crushing and screening plant, supplied by Aggregate, Processing and Recycling (APR), the - as the UK and Ireland agent for GIPO

Owned and operated by Lafarge Aggregates, one of the UK's leading aggregate companies, the quarry supplies product to the whole of South Wales.

With the quarry's static aggregate crushing plant currently processing single size material the new unit is being utilised as a primary and secondary crusher, operating at 180 tph processing 'as-blasted' limestone into 0-5 and 5-25 mm aggregates.

The crushing and screening plant supplied for the project is a heavy duty machine of compact design driven by a Caterpillar C15 engine that supplies 430 kw in total, allowing 380 kw plus to be applied to the crusher. Featuring a dual-zone blockage release system, the variable speed P130 impact crusher allows maximum variance on output grading; all gap adjustments are hydraulic and crusher inlet + top apron have hydraulic lift for blockage reduction.

A variable speed feeder supplies the blasted limestone to a two-deck pre-screen with scalping at 0-40 mm and crusher bypass facility. Crusher discharge is catered for with the provision of a tray feeder as standard to absorb impact and protect the conveyor. Final screening of material is performed by a 4.5 x 2 m two-deck screen incorporating a 25 mm aperture top deck and a 5 mm aperture bottom deck.

To ensure optimum dust suppression the machine is fitted with a system that includes an on-board stainless steel tank and water pump which supplies spray bars at the crusher inlet / outlet and also to all conveyor heads.

Additional features include aluminium covers on all conveyors, plus walkways and maintenance platforms around all relevant parts of the machine for easy maintenance.

The GipoCOMBI RC130FDR utilises a system of combined crushing and screening in closed circuit to achieve maximum efficiency. With fuel consumption significantly lower in comparison to a separate crusher and screen, the machine also has the advantage of a much quicker set-up and movement times than when aligning two separate units.

Other major advantages include the reduction of loading and stockpile clearing activity. Once material is fed into the GipoCOMBI it is contained within the machine until the process is complete, hence no extra work, or fuel usage on loading shovels handling oversize stone back to the hopper.

Maintenance is well catered for as the machine has only one engine and not two, and features less conveyor belts overall than the combination of a separate crusher and screen, resulting in less risk of downtime and lower service costs.



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Sandvik beat the blues with international customer event

QA440

Sandvik Mining and Construction held a four day customer event on 23-26 June at the company's Swadlincote factory, the Belfry Hotel, and with live machinery demonstrations at Armac's recycling centre near Birmingham Airport. Ross Matthews was among the guests.

With no Hillhead show this year Sandvik wanted an opportunity to mark the integration and rebranding, of the Extec and Fintec product lines as part of its product offering and so, taking advantage of clear blue late-June skies, the company held a customer event of its own.

The original plan when Sandvik made its acquisitions was made was to launch the rebrand in January of this year. However, as the worst economic climate in 50 years took hold of the country, a delay was deemed prudent.

Over the course of the event centred around the new global centre of excellence that has recently been created at the former Extec factory in Swadlincote (which is also Sandvik's centre for mining and construction within the UK and Ireland) a thousand visitors from as far a field as Venezuela, China, Spain, Ireland and Norway made their way to the event.

The rebranding of Extec and Fintec was the main business. A quick look back to the spring of 2007 reminds us that Sandvik acquired the two manufacturers of mobile crushing and screening equipment - Extec Screens and Crushers, and Fintec Crushing and Screening to provide mid-size and light equipment to allowed complement Sandvik's product range and attain a market leading position in a rapidly growing industry.

Explaining the synergy created by the purchases, mobile screening and crushing managing director, Steve Powell, says: "Sandvik will bring its global network with access to quarry and mining customers. Extec and Fintec bring access to contractor customers and a competitive product line of tracked mobile crushers and screens. Extec and Fintec also benefit from Sandvik's global resources, and technical know-how, as Sandvik brings advanced crusher and screener product technology combined with excellent process knowledge."

Duncan McGregor, vice president Global Construction Product Line, echoes Powell's sentiments that the biggest customer advantages of bringing Fintec and Extec together under Sandvik are its global presence, in particular, worldwide distribution and improved aftermarket support. He explained that mobile crushing and screening equipment has come a long way in the last ten years: "What used to be impossible to achieve with mobile equipment is now possible. The contractor segment, complete with its own special business logic, has become a major part



Sandvik's management team hosting the event: John Nethery, global product line manager, mobile crusher and screens, Duncan McGregor, VP Construction Equipment, Anders Kjellborg, VP Business Development Construction Segment

of the materials processing business all over the world; as the contractor business follows a business logic, very well matched by a distribution strategy, we need to understand how to serve this segment in the best possible way."

Duncan believes Sandvik has the right background to address the needs of this particular customer segment. "The traditional business where Sandvik is particularly well aligned consists of customers who are not contractors; they own and sell minerals, whether for

construction materials or for what they are worth in terms of content. This is a new area of development for the acquired businesses, but quite normal for the heavier range from Sandvik Rock Processing for example."

The company reported sales of 93 bn SEK in 2008 and has achieved 16% growth every year. Commenting on the current economic situation during the presentation Duncan said: "While we continue to be impacted by the worst economic climate in 50 years we believe there is still a market, the market will get better and the underlying demand is there. Credit will become available again and when customers' stockpiles of aggregates are gone, customers will come back. So Sandvik continues to invest in the business, particularly in mobile crushing & screening."

So Despite Fintec and Extec's well-established reputations, with its mobile crusher and screen range unified under a single brand, the event provided the worldwide launch for the new model nomenclature and machine colours

Duncan comments: "Going to one brand increases customer awareness of Sandvik's full offering. Branding and segment strategy helps Sandvik to improve and broaden the services to a variety of customers by using the wider breadth of our organisation, but the Extec and Fintec brands products are still there, and the features that made them world leaders are incorporated into the new product offering. We needed an occasion that would highlight just how important mobile crushing and screening is to Sandvik."

The new brand was displayed in action in a live demonstration of the company's equipment range at Armac's recycling centre near Birmingham Airport. ►

Models on show

The event was not limited solely to mobile crushing and screening. Anders Kjelberg, vice president of business development explains: "Sandvik offers a full range encompassing drill rigs, tools, breakers, static plants that possess direct applications to companies of all sizes that are involved in quarrying, construction, demolition, recycling, surface mining. These products also possess attributes that are suited to the contractor segment. The mobile screening and crushing division now allows our customers to enjoy a one-stop shop, so that we can truly be the solutions partner of choice for all our customers, world-wide."

The demonstration included a quarrying display of a QJ340 (formerly the C-12+) tracked jaw crusher, feeding a QH330 (the F1080) tracked cone crusher, and then feeding directly into a QA450 (the S-7) tracked triple deck screener.

A demolition and recycling display featured a variety of feeds showing the QE330 (the F640) tracked scalper, QA330 (F542) double deck tracked screen, and a QI430 (F1440) tracked impact crusher feeding a QA440 (S-6) tracked doublescreen.

A variety of materials were processed, producing differing sizes, in order to highlight the inherent flexibility of the product range, whatever the application.

In order to provide an over view of the full Sandvik product offering a static display was also in evidence. The machines shown here included the UH440i Tracked Cone Crusher, QJ330 (F1107) Tracked Jaw Crusher, QE440 (E-8) Tracked scalping and screening system, QE140 (Robotrac) Tracked scalper, Hammer Tree, BR2150 Breaker, BR2577 Breaker, BR3890 Breaker, RG22-N (TIC) Grab, RG28-N (TIC) Grab, BB1300/BR825 Boom with breaker and the DP1500i (TIC) Drill Rig.

Sandvik also used the event to mark the world-wide launch of a new product that Sandvik sees filling a niche for a larger scalping unit. With an ability to process 900 tph, the QE440 has been developed to deal with operating requirements that traditional screening solutions are unable to adequately cater for. A large screening area combined with robust construction, makes it a suitable machine for serious producers of aggregates, whether comprising secondary or virgin materials.



At the event, Sandvik introduced its new 1700 kg BR2577, the company's new mid-range hydraulic breaker suitable for carriers in the 23-28 tonne range. With an impact range of 450-750 blows per minute, the unit also features a Fixed Blow energy system to optimise impact energy with every blow, regardless of hydraulic flow fluctuations. The breaker has been designed to allow a range of features to be retrofitted to match an application. Among these features is a soft blow sensor that reduces the impact power and frequency in softer conditions – in practice it looks like the hammer is slowing down however that's the system adjusting the power according to the need, thus preserving the life of the unit and reducing noise.

Sandvik's QA450



A QI430 feeds the QA440



New tyre pressure monitor



With tyres for an off road vehicles costing anything from £40k, monitoring is essential to for any quarry business that wants to avoid unnecessary blowouts. Investing as little as £400 in a PressurePro device, could save a quarry thousands of pounds in replacement tyres, according to the device's UK sole supplier, Aide Automotive. The unit continually reads tyre pressures and reports readings via Radio Frequency (RF) signals to a monitor in the cab, allowing users to view current pressures whether the vehicle is parked or moving. Audible and visual alerts warn drivers to low or high tyre pressures, allowing drivers to report to a manager before tyres cause health & safety issues or plant incidents. Further to adding greater safety and convenience to vehicles, other significant benefits from maintaining the correct pressure include increased fuel efficiency, extended tyre life, decreased maintenance, diminished downtime and reduced emissions.



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New screen replaces old timer at Lafarge's Lockington Quarry

Finedoor has recently completed a contract to replace an aged aggregate screen at Lockington Quarry, Leicestershire has replaced its aged aggregate screen. Owned and operated by Lafarge Aggregates Lockington Quarry operates an aggregate and wash plant processing 360,000 tonnes of sand and gravel per annum. The site supplies, an on-site bagging plant and an on-site readymix plant as well as local markets.

The new replacement screen was designed to fit into the same location within the plant by Finedoor. This company specialises in dimensionally similar replacement screens so was able to supply a new unit which can be installed into an existing location and be designed and manufactured to sit on the existing steelwork.

After completing an on-site evaluation Finedoor manufactured a 6.1 x 2.4 m two and a half deck screen.

The Finedoor Ritescreen is constructed of 12 mm thick rigid side plates with heavy duty bolted in deck frames. Of two bearing construction the screen features grease lubrication and is designed to suit side tension rubber tensioned screen media. Coil spring mounting to isolate vibration was supplied with the base plate.

The Ritescreen features an alloy steel shaft and incorporates removable imbalance weights. It is driven by a 30 kW TEFC squirrel cage motor and drive pulley complete with vee-belt drive all mounted on a spring loaded motor base. Feed and discharge trays fitted with rubber liners complete the specification.

The existing feed / discharge chutes and conveyors usually require very little, or no modifications, thereby reducing costs and installation time.

The successful installation brought the plant back into operation within the agreed time frame.



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APS Signs Up With Baioni



The specialist washing arm of the Finlay Group has secured a sole distribution agreement with Italian Centrifuge manufacturer, Baioni. APS now markets the Baioni's Centrifugal Decanter Systems – first showcased to the UK market at Hillhead in 2007 – across the United Kingdom and Ireland.

Capable of reclaiming both water and solids from quarry effluent that is generated from aggregate-waste washing plants, the Centrifuge Decanter System enables quarry or waste transfer operators to reclaim inherent solids, then recycle and reuse water immediately - eliminating the use of large settlement lagoons usually associated with the usual quarry-based washing plants.

The system has been developed over an 11 year period specifically for quarry, sand and gravel and reclaimed material applications, and has proved to be very popular in Italy and worldwide.

APS is marketing three specific models the Baidec 65, 65L and 80L, capable of processing between five and thirty tonnes per hour - dependent upon the specific nature of the material & dry solids grading. The machines are equipped with full plc management controls, which allow them to run automatically.

The Centrifuges work on the principle of the difference in specific weights between the various materials to separate. Solid particles in suspension in a liquid tend to go down because of the force of gravity.

With the decanter, it is possible to reproduce and enhance this process inside a cylinder which rotates at high speed to increase the force of gravity in proportion to the speed, therefore making the separation process almost instantaneous.

John Dunne, a director of Finlay Group, said: "Baioni has an exceptional and time proven track record in this sector and the quality of their products, combined with our sales, technical support and after-sales service, makes for a good partnership".



www.hub-4.com/directory/1824



Big Boys Toys

OTR has added another specialist fitting truck to its fleet. Based at Leicester, the new Iveco 6 x 4 EuroTrakker has the latest Euro 5 engine and AS Tronic gearbox, a HMF 2220 fully remote crane complete with OTR 2700 tyre handler and screw compressor air management system.

As the new truck went to work, operations director Darren Flint said: "We have an increased demand for service from customers in the region with larger rigid dump truck tyres so another service vehicle was essential."

OTR operates a fleet of 37 specialist fitting trucks from six regional service hubs and 12 service operating sites located throughout the UK.



www.hub-4.com/directory/629

Plane solution offers crushing benefit for Lafarge

Ross Matthews visits a demonstration showing how Lafarge found a solution for ripping out a new haul road to gain access to the extension to its Whitwell Quarry that provides an alternative solution to drilling and blasting.



The Rock Hawk planes out a haul road

Lafarge Aggregates's dolomitic limestone quarry at Whitwell in Nottinghamshire, produces 1.5 million tonnes a year. Its main purpose is the supply of limestone containing very pure silica and iron to feed rotary kilns used in the production of materials for steel manufacture, while the lower benches of the quarry produce good clean limestone for the civil engineering market.

An extension area to the quarry provides a further ten year supply, unfortunately a main road came between these two areas. So that heavy duty vehicles could access and avoid the main road, Lafarge needed to dig an underpass.

This posed the challenge of ripping out rock for a new haul road as part of a huge project that would include closing a main highway passing through the quarry and building a new bridge to allow the haul road to proceed beneath. Once completed however, he project would allow the new area of the quarry

to be opened on the opposite side of the existing quarry without having to use the main highway.

While the main road was temporarily closed, a central section was pre-blasted to allow the construction of a concrete bridge deck. However the resulting ramp was almost a sheer face blocking access to the extension with no way to get at this area without further blasting. This, of course, was out of the question because of the bridge's proximity.

A road planer was tried but it proved to be too slow and simply not up to the arduous conditions. Then Lafarge found a solution offered by trenching contractor AJ Gammond in the form of a piece of equipment called the Rock Hawk.

Distributed in the UK and worldwide by Westquay Trading, The Rock Hawk rock excavator is designed and built by trenching technology engineering company Tesmec for trench excavation in reinforced concrete or solid rock. The machine will trench,

excavate and crush in a single process, providing readily available, usable crushed materials for recycling or backfill - large or small, coarse or fine.

An alternative to blasting the Rock Hawk will not fracture the underlying rock bed, a typical problem when blasting. When heavy duty vehicles use haulage roads with a fractured rock bed pot holes or road break up will soon develop.

The Rock Hawk consists of a large main tractor unit with an attachment to the rear of the machine. Built with a trench width capacity of up to 3810 mm the Rock Hawk can trench working areas in a series of passes. Maximum trench depth is 600 mm and the drum can perform at speeds of 21, 30 or 39 rpm. The tractor is a standard unit that supports a variety of powerful attachments. It is powered by a Caterpillar C16, 6 cylinder engine and has a 111 litre/hour fuel consumption at full load with 12 hour operating range. ►

A 50 tonne Rock Hawg TRS 1175, with two operators, was tasked with ripping out the rock either side of the newly installed bridge at Whitwell to form a trench over 100 metres long with an 18 m width. In the 10 day project period, the machine was able to rip out 500 m³ of material effortlessly, with the added benefit of the extracted material being useable for sale – the primary crush material produced by the Rock Hawg can go straight in production without being recrushed. This in itself helped self fund the extraction of the material.

Describing the benefits of this plant Shane Tompkin, quarry manager at Lafarge's Whitwell site, says: "There are two traditional ways of getting stone out: drilling and blasting or mechanically excavating it. The Rock Hawg offers a third alternative to 'plane' out material."

He continues: "This method was much quicker than any other technique and it provides a good finish with very stable cut faces either side. The process produces good quality material that can be sold, if a market can be found, or reprocessed."

Stage two of the project involves bringing down the level of the current quarry to the haul road, again avoiding blasting and potential quarry fracture close to the bridge area. An 18 m wide trench over 50 metres in length will be completed in 6 days using the new Tesmec TRS 1475 Rock Hawg with two operators, producing more crushed stone and reusable aggregate.

The latest Rock Hawg

Westquay Trading recently introduced the TRS1475 - the first 126 tonne Rock Hawg working in the UK and Europe. Sold to AJ Gammonds the new Rock Hawg is claimed to provide the most powerful trench and excavation machines working in the country.

Having already achieved success with its 50-tonne Rock Hawg - including the project at Whitwell, AJ Gammonds is the first UK firm to make the investment in the TRS1475. The company believes that adding a powerful 126-tonne model is a natural progression to meet the demands of certain sites.

Tesmec products are well established in large scale civil engineering with a product range that includes chain saws, trenchers and bucket wheels among many other engineering products. In addition to the Rock Hawg, Tesmec manufactures tractor tool carriers, chain saws and Bucket wheels. The Rock Hawg is relatively new technology for demolition, reclamation, civil engineering and utilities industries. In quarries Rock Hawgs have already proved their worth, a viable alternative to blasting in solid rock areas preventing rock fragmentation and ground disturbance – critical for quarry areas.



www.hub-4.com/directory/11078



The Rock Hawg planes out a haul road



The Rock Hawg TRS1475 can trench up to 3810 mm wide. The end result can be stones, gravel, sand or aggregates for back fill or hardcore base. The machine is configured to suit the rock type being excavated. In quarries the unit can replace the need for vertical drills for blasting, rippers, pick hammers, mining trucks and primary crushers. The output is determined by the size of Rock Hawg machine – lower or higher dependent on rock type, hardness, brittleness and configuration of the drum. The size of the Rock Hawg affects the impact energy of the digging teeth – the bigger the machine, the bigger the stones dug out.



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Linatex supplied and installed a computer controlled Sand Classification and Lignite Removal Plant

Hanson installs computer controlled sand classification and lignite removal plant

Owned and operated by Hanson Aggregates, Barton Quarry is located south of Burton on Trent on the outskirts of the village of Barton under Needwood.

Worked since the early seventies the site contains extensive deposits of sand and gravel with traces of lignite. The site which lies in a flood plain has specific summer and winter excavations from which 3/4 million tonnes/annum of sand and gravel is extracted and sent to the main 220 tph plant to produce concrete aggregates, coarse and fine sand and tile sand.

Originally built in the early 1990s in order to produce 150 tph of concrete sand, the plant then comprised a pair of T-type classifiers which were fed by 624 Hydrocyclones complete with overflow sieve bends, a C-type (fines) classifier and a tower mounted 1048 stock piling sand separator.

The industry standards of the day meant that sieve bends in combination with a C-Type classifier positioned downstream were able to produce an acceptable end product.

Later, a fine 'tile' sand screen dewatering and stock piling plant was positioned adjacent to the T-type module, producing a high value secondary product from any excess of fine material. This plant however was later mothballed and currently awaits reinstatement.

Twenty years on, with the building industry demanding higher quality sand, Linatex was invited to tender for re-engineering the existing plant and supplying additional process equipment, which would be necessary to meet the tougher standards for lignite removal.

With increased safety standards, Linatex also took the opportunity to suggest installation of the latest (wind powered and radio controlled) version of its swivel chute. This offered a welcome alternative for Hanson as this retro-fit would eliminate the need to routinely send personnel up the vertical stock piling tower ladders, consequently eliminating obvious safety issues.

Having successfully tendered for the project Linatex supplied and installed a computer controlled Sand Classification and Lignite Removal Plant designed to produce a single

Process

The plant would continue to treat up to 150 tph of -5 mm material with the existing sieve bends being decommissioned and replaced by a 1mm sizing screen in conjunction with a Linatex state-of-the-art DMS to handle contaminant removal.

The feed material, having been screened at -5 mm, is pumped to a pair of hydrocyclones (fed by a common distribution box). Each of the two T-types being configured to perform approximately a 400 μ m cut on 75 tph of the feed. The underflow from the T-types is then reunited within a feed regulating sump in readiness for transfer to the stock piling tower along with the overflow after its passage through the lignite removal module.

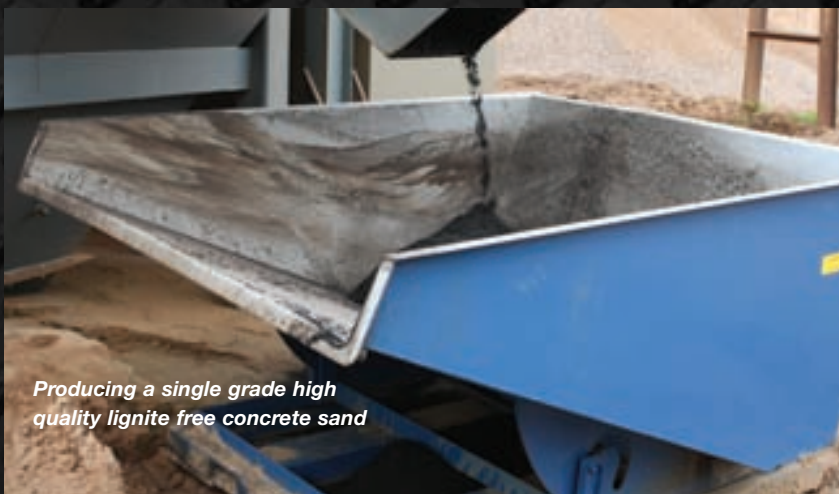
Conditions within the T-type classifiers mean that all the low



where a sand separator removes most of the water rendering the end product suitable for stock piling.

Beneath the stock piling separator are three discharge chutes, these being fed selectively by a Linatex radio controlled swivel chute (deriving its total energy from a wind driven vertical turbine). 12V DC powered this environmentally friendly retro-fit is operated remotely from the control room by hand held transmitter.

Start/stop control of the sand plant's pump and screen motors are incorporated within the start/stop control system for the gravel plant, which feeds it. The Linatex control system though, independently supervises the sand classification and lignite removal processes, providing touch screen Human / Machine Interface (HMI) local to the sand plant, continuous parametric data logging and an automated interface signal to invoke material stoppage upon any one of a number of configurable alarm conditions.



Producing a single grade high quality lignite free concrete sand

grade high quality lignite free concrete sand. This also included all structural steel and pipe work and the re-commissioning of the complete sand processing plant.

The additional slurry pumps, sizing screen, Dense Medium Separator (DMS), radio controlled stock piling swivel chute, classification control system and replacement T-type Classifiers were all supplied from Linatex's range of process equipment. This offered Hanson Aggregates piece of mind as it ensured that the equipment selected for each process step originated from a single source and was tailored specifically for the application and not an 'off the shelf' (near enough) item.

The project was completed through two phases - phase 1 (T-type renewal and phase 2 preparation) May 2008 and phase two (DMS installation and final commissioning) in June 2008.

Following final commissioning, a series of four product samples were taken from the stock piling chute over the course of a day's operation of the plant. The average lignite present within these samples being less than 0.04% (wt) in accordance with Linatex's guarantee.

density (SG <1.6) contamination is discharged along with the -400 μ m sand in the overflow launder and directed to the lignite removal module where the coarse (+1 mm) contamination is first screened off and discharged directly into a bin for removal from site.

A feed regulating under-pan beneath the coarse lignite screen allows all the minus 400 μ m sand to be collected and pumped to a sand separator from where it is discharged in a dewatered condition directly into the DMS for removal of the remaining fine lignite and any other small particle low density contamination.

Within the DMS a deep bed of fine sand creates conditions through which low density particles cannot pass. A gentle up-current maintains the bed in a heavy, non turbulent, but fluidized state whilst the computerized DMS control algorithm closely controls the underflow discharge valves to the extent that all the fine lignite (with very little if any fine sand) is returned via the DMS overflow to the effluent management system.

Fine sand leaving the DMS underflow collector box rejoins the coarse fraction (from the T-type classifier underflows) where they are both pumped to the stock piling tower

The end result

Since final commissioning, the newly enhanced and refurbished plant has produced consistently high quality, lignite free (<0.04% by weight) concrete sand with complete reliability. Additionally the superior performance of the sizing screen/ DMS combination over the sieve bends has yielded a marked reduction in the loss of fine sand with the effluent return water.

Peter Luker, assistant unit manager, comments: "We were extremely pleased with the installation of the new plant, it has consistently provided the required end product, giving us complete confidence. The HMI offers a complete view of the current status and although we can adjust the set points we have had no need to do so. We receive full support and in-house training."



[www.hub-4.com/
directory/507](http://www.hub-4.com/directory/507)

Round the clock dust control at Brooklyn C&D Transfer Station

At Cooper Tank's transfer station huge quantities of dust can be released in just a few seconds when trucks are dumping or front loaders are transporting material

A dust suppression system creates a virtual dust blanket over the entire tipping area at the site

A New York transfer station has employed a high-efficiency dust suppression system at its 40,000 ft² facility, creating a virtual dust blanket over the entire tipping area at a busy site that processes around 1300 tons of construction and demolition debris per day. Cooper Tank Transfer mounted the oscillating unit on a stationary I-beam, about 20 feet off the ground, in order to obtain maximum reach and coverage. The durable design has been running 24 hours a day, six days a week for over a year, delivering effective dust management to protect workers, commercial neighbours and the surrounding environment.

Cooper Tank has served the C&D industry for more than 50 years, originally founded as a manufacturer of boiler expansion tanks and liquid fuel storage tanks. The company later expanded into debris containers for residential and industrial waste removal, including front / rear loading containers, roll-offs and compaction equipment. The transfer station has served the NYC area for more than two decades, consistently helping to minimize landfill contributions from C&D operations and improve recycle / re-use rates.

The facility has employed several methods of dust control since its opening in 1986, including an extensive perimeter misting system, wind screens and manual spraying. All provided some benefit, but in the face of tightening regulations and increasing environmental awareness, company officials began investigating advanced technologies to improve dust management even further.

"In our operations, huge quantities of dust can be released in just a few seconds when trucks are dumping or front loaders are transporting material," observes general manager Ray Kvedaras. "We wanted to find a technique that would address the

problem in the immediate area, right as it was occurring."

The Equipment

To accomplish that goal, the company purchased a DustBoss DB-30, the smallest in a family of suppression equipment from Dust Control Technology. The unit has a 7.5 HP motor that generates 9200 CFM of air movement, and it features a ring of specially-designed brass nozzles that atomize the water supply to droplets between 50 and 200 microns in size for maximum particle attraction.

The ducted fan design has an adjustable throw angle from 0-50° elevation and oscillates up to 70°. With a throw of up to 100 feet from ground level, it delivers exceptional coverage of more than 5,000 square feet using just a standard 5/8" garden hose. From its elevated perch at the Cooper transfer station, the unit's reach is far greater.

Because of its compact size, the DB-30 is an option for indoor locations or confined spaces. The machine comes with a 1-1/2" pre-filter with quick cam release for easy access, and it can be set up to run potable or non-potable water. Options include single phase or international motors, carriage mount for easy mobility and a dosing pump for odour control or other additives.

The Facility

The Cooper facility has developed into a well-respected organisation over the

years, providing a vital service for the waste handling and recycling industries in New York City. Currently processing more than 400,000 tons of C&D waste per year, about 80% of its intake is recycled to beneficial uses.

Excavators with grapples handle much of the conveyor loading, and material is screened twice to remove fines and debris under 12" in size, which is processed mechanically. Ferrous metals are removed by magnet, while stone and brick are separated with an air knife. Larger pieces are separated by one of 16 manual pickers on the conveyor line.

"Another benefit of the DustBoss is that it doesn't soak the conveyor or debris pile the way manual spraying does," added Kvedaras. "Too much water can cause the screens to block up with a mucky residue, which complicates processing and increases maintenance," he said.

According to Kvedaras, the primary benefit is the ability to create a constant mist, without dedicating additional manpower to the effort. *"Using the DustBoss helps prevent us from being caught off-guard by a particularly dry or dusty load," he added. "It also contributes to our overall commitment to environmental responsibility and respect for our neighbours. It's been a very effective technique for us."*

 www.hub-4.com/directory/11299

Monsoon seasoned for dust control

Among the range of solutions that OdourDust Dust Control can offer for stopping dust rise or to suppress it from the air is Buffalo Turbine's Monsoon. This unit will move water or other fluid through a proprietary gyrating atomizing nozzle, which will expel solution from a rotating hub through a screen at the perimeter of the atomizing nozzle. This results in a high speed impact that pulverises the fluid into a uniform spectrum of droplets.

When formed the tiny droplets will mix with the highly turbulent airflow generated by the Buffalo Turbine 14" single stage turbine, and will be projected into the air. The 50-200 micron size droplets will collect and trap airborne Dust Particulates and odours, ultimately resulting in an immediate reduction of pollution on site.

No generator is required for this diesel-driven, portable unit. Wireless nozzle and throttle control and oscillating stand and a reach of 40 m provides controlled dust suppression for a range of sites.



Personnel de-dusting

Air Control Industries' 'Jetblack' blower-powered personnel and localised cleaning/drying system provides what it claims is a safer and more cost-effective alternative to compressed systems. The system is available as either a wall fixed unit or a portable one, and is ideal for use throughout industry, from the food manufacture/processing to cement and foundry locations.

Whilst compressed air systems rely on high pressure, low volume air delivery, ACI's Jetblack employs high volumes at low pressure - operating at less than 3psi it is safe even when air is blown directly at the skin. Fan speed can be varied to suit different applications and the air delivered is clean because it has been drawn in via a filtered inlet.

Being powered by an electrically driven blower, the Jetblack is claimed to be cheaper to run than compressed systems because it offers the double saving of requiring less energy (1.4 kW input) to operate and being easy to turn on/off as required to help eliminate waste. There is also the additional bonus of noise output being less than 78 dB.

The Jetblack has 1.42 m flexible hose (2.44 m is optional) between the power unit and hand-gun, and requires just a standard single phase supply (240 V or 110 V).



Airflow monitoring devices recommended for fume extraction equipment

Flextraction recommends that companies fit an airflow monitoring indicator to all hoods on its LEV fume and dust extraction systems to ensure that the velocity of the air entering the hood is adequate. It is not against the law not to have these indicators; however the law states that employers must correctly maintain their LEV Systems.

Flextraction is offering to visit companies with LEV systems, who have not fitted air flow monitoring indicators, but who are seeking to do so, to give them a 'free of charge' assessment and advice on how they can meet the HSE recommendations. Most indicators are simple gauges that show if there is adequate air flow or not and should be used in conjunction with good operator practice.

In addition to the simpler airflow indicators, Flextraction is introducing in the near future an electronic airflow monitoring indicator, which not only visually shows the operator if the air flow is correct, but has an additional audible alarm to warn the operator if there is a fall in the air velocity. It is small in size, easy to install on the hood or at an LEV point on the extraction hose. Places where the operator can easily see it. Flextraction will calibrate the devices, which are battery powered, on installation.

Lee Darton, Flextraction's sales manager said: "Airflow monitoring devices are the most simple and economic way of monitoring the efficiency of LEV systems. They are easily retrofitted to existing hoods or at a point where the operator can see it. It is also very important that the operator also moves the hood to within the correct working zone.

"It is our understanding that there would be around 4,000 fewer occupational deaths in the UK from Chronic Obstructive Pulmonary Disease, if operatives were no longer exposed to dusts, smoke and fumes. I am told a high percentage of deaths are related to the inhalation of welding fumes. Any action against a company with an under performing LEV system can prove to be very expensive, whereas the installation of a low cost air flow indicator could have solved the problem."

 www.hub-4.com/directory/7544

Dust Suppression at the Port of Tyne

Wright Rain has been awarded a contract to provide a suppression system for the control of coal dust at the Port of Tyne complex in Newcastle.

For years coal has been imported into the UK, arriving daily in huge ships from various countries including Russia, Venezuela and Colombia. Much of this cargo is discharged at the Port of Tyne dockyard before being transported by train onward to power stations throughout the UK. The speed of turnaround is impressive but this has in turn produced dust problems made worse by the make up of tiny particles of coal, which have a tendency to drift skywards very easily, especially in dry windy conditions. This had become a major concern for the port authorities in particular because of the effects to other activities within the general dock area.

Port of Tyne development engineer Kevin Emmett was tasked with finding a solution to the problem. "It is important that we manage a fast distribution offer to our customers" said Kevin. The huge volumes of coal arrive at the complex and are unloaded and transported by high speed conveyor belt before being dropped into nine 60,000 ton stock piles. The conveyor, which is nearly a quarter of a mile long, is capable of moving coal at 2,000 tph at speeds of 3.5 metres per second. "As you can imagine" comments Kevin "Dry windy days in particular can cause severe dust problems which on occasion can be very troublesome to our immediate neighbours as well as to the surrounding area"

Wright Rain was consulted and using its in-house technical team, was able to offer a solution by design. Kevin, who had previously been impressed with Wright Rain system installations at Immingham and Bristol docks, says: "Wright Rain offered the professionalism and expertise that a contract of this magnitude demanded and they delivered just that".

 www.hub-4.com/directory/908

Ship loader conversions

Be it conversions of existing loaders or designs for bulk goods or bagged cargo loading and even combined systems for loading bulk and bagged goods, project managers from SMB International have been involved in numerous projects. The main focus of these complex systems is for the loading of fertiliser, sulphur and cement, as well as bulk and bagged goods in general. This north German developer's specialty however is a combined ship loader for sacks and bulk goods. It incorporates multiple conveyor belts and both types of loading are carried out separately from one another mechanically.

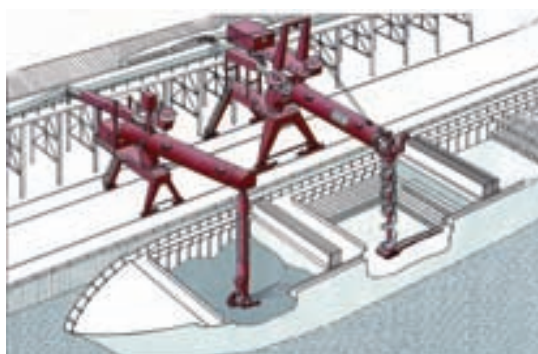
Systems to overcome adverse conditions

Each order has specific requirements: whether nature-related requirements concerning wind, snow, heat and earthquake danger, or product-related due to flammability or work areas with risk of explosion. SMB employees are currently working on a combination loader in Russia, which is designed to load cement in both loose and bagged form. The machine must function without a hitch at temperatures as low as -40° Celsius. "Each new order brings a new challenge with it. That is what makes our work so exciting, since we are constantly learning in the process, enabling us to develop inventive individual solutions," explains Andreas Heckel, managing director of SMB International GmbH. Individual systems have now been created such as ones with a special turntable for bagged cargo loading, centrifugal belts for loose goods which can distribute the goods up to 10 m in breadth, or cascade slides with a special arrangement of the cascade elements to enable nearly dust-free loading of bulk goods.

Save money with conversions

In their conversion work, SMB engineers make use of existing steel structures, to which they apply state-of-the-art technology. This is well worth it, especially in consideration of structural requirements as well as current steel prices. This makes a total conversion less expensive to carry out than a complete new construction. SMB can conduct a complete conversion within only six weeks of interrupted loading. In doing so, the German mechanical engineering company performs the entire conversion, from design to project management and drafting all the way to technical implementation and on-site supervision – anywhere in the world.

 www.hub-4.com/directory/11297



Switch with no limits

Trolex has launched a new version of its Flexiprobe multi-purpose limit switch, which has extensive applications in the materials handling and process engineering industries.

With its heavy-duty specification, the new Flexiprobe is available at £150. With a variety of roller and paddle accessories for the end of the actuator, Flexiprobe can be used for position sensing, movement detection, safety interlocks, level detection, conveyor detection and vehicle detection. This means that it can be used to detect and monitor such things as material flow along a conveyor belt, belt alignment, water flow, spillage, rope run-out and emergency stop detection.

To mark the launch of the new Flexiprobe, Trolex is inviting industrial users to enter a competition to win £300 of holiday vouchers. All that entrants need to do is visit www.trolex.com/flexiprobe and suggest an application that Flexiprobe would be most useful for in their industry. The competition closing date has been extended to 14th August 2009.

Some examples of the use of the new Flexiprobe multi-purpose limit switch from Trolex. Clockwise from bottom left are level detection, cable movement, vehicle movement, and in arduous conditions where it's dust tight and waterproof to IP67 standards.

 www.hub-4.com/directory/11825

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Arabian cement company automates Rabigh plant dispatch operations

The Arabian Cement Company (ACC) of Jeddah, Kingdom of Saudi Arabia will be receiving a Dispatch Automation System at its Rabigh plant from Precia-Molen. The system is based around the GeneSYS and GSM software, Precia-Molen will provide an essential element of the full automation package that contractor FLS Automation is providing for the new production line 6 at Rabigh.

ACC requires an on-site weighing and load management system that can achieve three specific goals: to achieve controlled and orderly traffic within the plant, to optimise order handling and delivery tracking, and to automate the loading of trucks, with full integration into the ACC Oracle business management system.

The most visible problem the GeneSYS system will solve at at Rabigh is essentially one of traffic congestion as the current dispatch system is entirely paper based.

Particularly useful to ACC is the GeneSYS development of simultaneous Arabic and English user interface. Precia-Molen was also tasked with interfacing with the existing plant bulk loading cement silo's, and the auto packers to ensure the correct number of bags are loaded.

In total 23 BI300 driver consoles will be supplied, all with swipe stations, including ticket printers for producing the final dispatch documentation; all working efficiently under local temperature extremes of up to 45°C.



www.hub-4.com/directory/683

Canning Conveyor supply conveyors for Heathrow Terminal Five project

Canning Conveyor has supplied feed extraction conveyors to main contractor Dosco Engineering for a project at Heathrow Terminal Five.

Dosco has over 50 years experience in the design, manufacture and refurbishment of machines and systems and has recently been awarded the contract to design and supply a SB400 Boom in Shield Tunnelling Machine to drive the Baggage Tunnel for BAA's new Terminal Five at Heathrow Airport, London.

The tunnels pass through an ideal tunnelling media - London clay. Dosco road-header booms have in the past been used in this type of ground, with great success, to excavate the Piccadilly Line Extension, Heathrow Terminal 4 and 5 and projects for London Transport, Jubilee line including the Heathrow Express Link project to Terminals 4 and 5.

Canning Conveyor supplied two 800 mm wide conveyors for the project with a capacity of approximately 600 tph, based on a specific gravity of 1.68 tonne/m³

The first conveyor which accepts material feed from the tunnelling machine into a loading hopper is 21.5 metres in length, with the first 7.5 metres inclined and the remainder horizontal.

Manufactured with channel frame construction this



conveyor is powered by a 30kW shaft mounted geared drive unit driving a 500mm diameter x 900mm face drum with full rubber lagging, providing a belt speed of 2.5 m/sec.

3-roll fixed troughed idler sets at 600mm pitch support the belt with standard flat-faced return rollers, with 102mm diameter rubber coated close-pitched idlers sets in the loading section.

Canning Conveyor also supplied a cross feed conveyor fitted with a loading hopper. This conveyor is 2.7 metres in length, of similar specification and is powered by a 11 kW shaft mounted geared drive unit driving a 315mm diameter x 900mm face drum with full rubber lagging, providing a belt speed of 2.5 m/sec.

3-roll fixed troughed idler sets support the belt with standard flat-faced return rollers again with 102mm diameter rubber coated close-pitched idlers sets in the loading section.

Belt tension on this conveyor is achieved by a manually operated hand pump operating two hydraulic cylinders; this arrangement is part of the tail drum mounting assembly.

The specification was completed by the inclusion of a torsion type belt scraper fitted adjacent to the head drum, and a plough to both conveyors.

The shield which is of segmental construction is 5510mm outside diameter and incorporates 18 push cylinders and 2 face support cylinders. The cutter boom is a 142 kW (190 hp) single speed boom, having a clay head, to excavate the ground.

The boom is fitted with a flipper plate to assist with loading. This flipper plate is hydraulically operated, folding flush with the boom when not in use. The TBM back-up consists of 8 sledges which run on wheels on the inside of the built lining.

These sledges carry the hydraulic power pack, electrical control panel and transformer, ventilation tubing handling system and all the other requirements of a 21st century tunnelling machine. ►





Commenting on the conveyor installation, John Crompton of Dosco said, *"Canning were very helpful with the specification of the equipment supplied."*

The 2.1km tunnel is being built by Ferrovial Agroman Airports (UK) Ltd; part of the world renowned Ferrovial Agroman construction company. Commenting on the project, Tunnel Manager Alfonso Chicharro said, *"We have high hopes for this and other ventures in and around the UK"*.



www.hub-4.com/directory/1715

Instrumentation achieves EC Type approval



The Precia-Molen I 400 range of instrumentation for dynamic weighing applications has received EC Type approval under

the Measuring Instruments Directive.

The I 400 MBS, is a single- or multi-scale controller that can be connected to a range of dynamic belt weighers. The unit can also control the operation of an automatic bulk scale from our ABS-xl range.

Designated for automatic weighing this instrumentation would previously require a trading standards officer to attend site to verify the belt scale or dynamic lorry loading system for trade use.

Furthermore, automatic weighing instruments would also need to obtain an approval in each EC country, however, as this approval has now been gained under the Measuring Instruments Directive this requirement is eliminated.

With this approval Precia-Molen can now add this range of instrumentation to the 'self verified' list of equipment providing benefits for customers in the efficiency of equipment calibration and verification, without the delay of waiting for the availability of trading standards officers, both for new installations and re-verifications.

In industries where blending and batching of various materials is important, such as Animal Feed, Food Production and Chemicals, the I 400 offers a solution for integration of weight measurement in any industrial process. A modular build around CAN OPEN field bus allows up to 32 weighing systems to be linked together enabling communication to host systems using the most common control protocols: DeviceNet, Profibus and Ethernet [TCP/IP] MODBUS.

The I 400 can be combined with Precia-Molen's GeneSYS management software to provide a complete solution or integrated into an existing system.



www.hub-4.com/directory/683

Environmentally friendly lubricant pack

Fuchs has introduced an environmentally friendly lubricant pack called Bag in Box. Advantages include reduced waste disposal costs, minimal handling and a reduction of carbon footprint. The unit comes in a 100% recyclable outer case and with 75% less plastic to dispose of compared to rigid plastic packaging, thus reducing disposal costs. Bag in Box features a container with a collapsing inner bag ensuring complete emptying without air ingress. A 20 litre unit is claimed to be 52% more efficient in the use of storage space than a conventional 20 litre plastic container.



www.hub-4.com/directory/324



New flow detection version

Leading level and flow specialists Hycontrol are introducing the flow detection version of their tried and tested Microsense microwave switch already used in applications worldwide. This versatile instrument provides the ideal non-invasive solution for effective flow-no-flow detection for a wide range of particulate materials including grain, flour, cement, ore, stone, coal and animal feed. The flow switch, which uses an advanced microwave Doppler principle, can be used in pipelines, pneumatic transfer lines, chutes, conveyors, transfer bins or free air.

This cost effective, simple to fit, instrument can be used to warn of impending plant problems such as blockages, filter problems or valve failure; thereby improving plant efficiency, reducing waste and increasing productivity.

During operation the sensing head transmits a continuous low power microwave beam towards the flowing product. A percentage of these microwaves are reflected back to the sensing head where they are then analysed to determine whether the product is moving or stationary. The microwaves only detect flowing, moving material in front of the sensor, ignoring stationary objects as well as being unaffected by airborne contaminants.

The highly penetrating, yet completely harmless, 24 GHz microwave signal passes through any material build-up on the transmitter face and will even detect through pipes of non-conducting materials such as plastic and ceramics. The waves will also pass through and ignore any product build-up on the inside of pipes or chutes. This capability of being able to 'see' through low dielectric materials makes the technology ideal for non-invasive flow detection in lined pipes. In addition, the Microsense can be mounted behind low dielectric PTFE or polypropylene 'windows' to maintain the integrity of the pipe or chute and prevent any restriction to material flow. This also means that the switch can be removed and replaced without disrupting the process.

A key feature of the Microsense is its simple intuitive set up procedure using the seven LED to set power levels. The unit has a standard 1" BSPP fitting and is available with wide range of flanges and adaptors, making retrofitting to existing installations very straightforward. A range of output options includes alarm outputs for switch status, system failure or internal instrument temperature warning together with a received power analogue output signal.

Combining the Microsense blocked chute detector with the Microsense flow switch provides a unique solution for two applications within the same installation. By utilising the flow switch on one side of the chute or pipe and the receiver of the blocked chute switch on the other, this application can detect firstly if there is flow in the chute or pipe and secondly if the chute has blocked. Low dielectric windows can be used to protect the sensor heads from abrasion and damage.

The Microsense is just part of Hycontrol's extensive range of level measuring systems, silo protection systems and remote wireless inventory monitoring systems.



www.hub-4.com/directory/421

Simulation goes mobile

BedRock Software has released AggFlow with Track-Mounted (mobile) equipment simulation capability. BedRock has developed this approach starting with Powerscreen International's line of crushing and screening equipment. "As we build our track-mounted data library this will be an important and revolutionary development for the industry," said Bryan Lewis, president of BedRock and inventor of the AggFlow program.

AggFlow is used by aggregate producers, equipment manufacturers and dealers to simulate aggregate and mining operations. Users can calculate mass aggregate and water balances flowing through a plant simulation using stationary and, with this development, mobile equipment.

Simulations can help improve profitability by identifying inefficiencies and bottlenecks; by accurately assessing the impact of proposed changes or new equipment before they are made; and by reducing plant down-time and production errors. AggFlow also helps track and reduce emissions and fuel consumption by refining overall plant efficiency.

Users can select from the pre-populated equipment data library or install their own equipment models in the program using the generic equipment application. Currently, the program provides calculations for more than 2,500 models of aggregate crushing, screening and washing equipment.

AggFlow with Track-Mounted simulation is available Free to all currently licensed AggFlow users.



www.hub-4.com/directory/11993

Recycling Product Focus & RWM Preview



For more information or to book an advertisement in the next feature please contact:
Linda Rainbow – 0845 680 0024 Linda.rainbow@hub-4.com www.hub-4.com

Become leaner and greener by visiting RWM

Throughout the three-day show **Recycling & Waste Management Exhibition (RWM)** show exhibitors will be showcasing the latest methods of sorting and handling construction and demolition waste for reuse and recycling. **Case Construction** will launch its new 21 and 24 tonne excavators as well as the 821EXRecycler and Master Magnets will exhibit new separation equipment that can remove the metal contaminants (ie nails) from wood waste, increasing the value of the recycled woodchip that is now used in playgrounds, pathways, gardens and parks.

Mogensen's stand will feature typical equipment selected from the wide range of standard and custom-designed machines, which have been supplied both to end-users and OEMs in the recycling industry for processing various materials including used tyres and rubber; miscellaneous scrap glass; wood waste, bone meal and other biomass materials; domestic, commercial and industrial waste; composted materials; aerosol cans; scrap metal; recycled concrete, aggregates and plaster board; and mixed textile and plastic waste.

EH Hassell & Sons, sole distributors for Sennebogen cranes and material handlers in the UK will exhibit the Sennebogen 825M 'D' Series Material Handler. Also being exhibited will be an 821M 'C' Series Material Handler and a 305 Multihandler.

Other major names in vehicle and plant technology include Mercedes-Benz, Isuzu, WCR, Liebherr, Manvik Hire, Terex, Hammel, Broxap and Continental Plant Services.

Also exhibiting at RWM will be compliance companies, consultants and waste management contractors who can advise on legal obligations. Site Waste Management Plans for example force construction companies to detail the amount and type of waste that will be produced on projects worth more than £300,000 including how it will be recycled and disposed of.

Gerry Sherwood, RWM's event manager, urges construction companies to send their staff to the show: *"New targets and regulations have made it more important than ever to establish an environmentally sound waste strategy, not only to manage costs and reputation, but also to minimise the impact of stringent new legislation and demanding recycling targets on business processes. Landfill disposal costs are increasing and times are tough for all industries, but particularly those in the building sector. RWM is designed to help you stay up to date with the latest regulation and technologies, which could ultimately make a crucial difference to your profitability."*

Miller Homes, Wates and the Waste & Resources Action Programme (WRAP) will reveal how waste management costs can be cut and efficiency improved on the building site.

According to the Department for Environment Food & Rural Affairs (DEFRA), the construction sector accounts for 32% of all the waste produced in the UK - that's over 100 million tonnes of waste each year. But a staggering 90% reduction in construction waste could be achieved through more modern working practices and off-site manufacturing. An entire day of free seminars at RWM on 16 September will address this issue. In the Business Seminar Theatre, Stephen Wielebski, divisional development director for Miller Homes will give a developer's perspective on construction waste and the issues with recycling, Paul Elliot, supply chain manager for Wates will present a case study on achieving the holy grail of zero waste and WRAP's programme manager for materials recycling, Mike Falconer Hall will examine the roles each part of the construction supply chain can play in meeting government targets to halve construction waste to landfill by 2012.

The RWM, taking place at the Birmingham NEC from 15 to 17 September 2009. Register now at www.rwmexhibition.com/epress2 for free fast-track entry and seminar updates.



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Recycling industry is weathering the economic storm



Forklift mounted magnets from the MasterSweep range, Master Magnets recently launched range of magnetic sweepers, the MasterSweep,

Having seen an upturn in demand Adrian Coleman, managing director of Master Magnets is looking forward to RWM.

"Although the global economic downturn has undoubtedly had a negative impact on many of our main market sectors, our orders indicate that the Recycling Industry is weathering the storm well. We will again be exhibiting at the RWM show in September and very much hope that the recent upturn we have seen in the demand for our Magnetic Separation and Metal Detection equipment continues. RWM08 was such a great show for us that we have opted for a larger stand this year as we firmly believe that the show will still attract significant interest."

Visitors to the show can find out more about Master Magnets will be showing the Eddy Current Separators are one of the most widely used types of magnetic separation equipment in the world today and are being increasingly used in various industrial applications for the separation of non-ferrous metals, such as aluminium and copper, from various types of product.

Applications that often call for Eddy Current Separators include the separation of aluminium from crushed glass, the removal of non-ferrous metals from shredded wood and for separating aluminium beverage cans from steel cans and dry non-metallic materials.

In 2006, Master Magnets introduced a Eddy Current Separator system known as the 'Can Sorter'. As the name suggests, the unit was designed specifically to deal with the sorting of used beverage cans (UBC) and consisted of a simple 122 mm diameter, 6 pole rotor, which could be manufactured with an effective belt width of up to 600 mm. The unit's compact design represented a much smaller investment than the higher specification machines in the range whilst still providing customers with an efficient separation of their product.

Demand for can sorting units that could handle high throughput rates became increasingly apparent as customers began to ask for two Can Sorters that could work simultaneously at separating their beverage cans. Master Magnets felt as though this was unnecessary and despite still being a cheaper alternative to purchasing a High Intensity ECS unit, could be avoided if a new 'mid-range' Eddy Current was introduced to fill this gap in the market.

Master Magnets wanted to produce an Eddy Current Separator that was tailor made for general recycling applications, the company determined the need for a unit with belt widths up to 1250 mm for handling larger throughput rates. This new machine, known as the 'R' Type, also had to have an increased level of performance compared to the Can Sorter, to provide optimum separation in general recycling applications. For this reason, the 'R' Type was designed with a 190 mm diameter rotor with 12 poles.

Visitors to RWM may also be interested in Master Magnets' MasterSweep range of magnetic sweepers designed to remove ferrous items such as nails, nuts and bolts and scrap iron etc from large areas, reducing foreign object damage to company vehicles. The range of sweepers includes forklift mounted magnets, which are simply attached to any forklift for the removal of ferrous objects from spaces such as floors, car-parks and loading bays. The MasterSweep range can help prevent the costly downtime associated with the repair or replacement of tyres as well as the cost of the tyres themselves, reducing the running cost of vehicles.

 www.hub-4.com/directory/541

Recycling organic waste at RWM

Blue has partnered Wasteology Systems to provide a product that can tackle the growing issue of diverting organic waste away from Landfill.

Along with its partner BACKHUS, Wasteology has worked to develop an enclosed, agitated tunnel system for processing waste. This new technology ensures a low-cost, highly efficient MBT system for processing most waste streams including MSW, Green/Food, Sewage sludge, and is particularly suited to applications where odour and space are a constraint for waste processing. Wasteology has designed this breakthrough technology which optimises the bio-degradation of organic fraction within a known waste stream, through a controlled environment. The inclusion of the BACKHUS turner as part of the solution ensures the material is gradually moved up the tunnel whilst being agitated in the process. Additionally, the patented vessel design ensures optimum conditions by controlling the input of Oxygen into the mix, thus maximising the bio-degradation or bio-drying of material.

As the first fully ABPR compliant IVC system suppliers in the UK, Wasteology's system continues to fulfil all State Veterinary Service requirements.

David Dunbavand, Wasteology business development director comments "Wasteology are delighted to be working so closely with BACKHUS engineers to develop this new concept, and with BLUE to joint market and project manage installations in the UK. The system is simple by design, but effective. It keeps the waste processing environment to a minimum, reducing risk, capital costs, site footprint and ensures lowest recurring operating costs. We believe there is a huge requirement for such waste management systems as landfill targets (and penalties) rapidly approach. The opportunity to bio-dry waste for RDF purposes is now the hot topic for debate from potential MBT operators, and this system meets this challenge well"

Blue Central managing director, Pat McGeary, commented: "With the pressing issue of diverting organic waste from landfill, we recognised the need for a product to meet this growing demand. In Wasteology and our long term partners Backhus, we feel we have the combined expertise to continue to offer our customers the very best technology currently available for organics recycling"

 www.hub-4.com/directory/2260

Greenview to unveil new organics technologies

Organic material refinement provider Greenview builds and operates systems to suit all bio-wastes, budgets and tonnages across the public and private sectors.

With four new plants scheduled to open in the next twelve months, visitors are invited to see some of the latest proprietary technologies. Systems on display will include the GV Tolle, a pulveriser adapted by Greenview to take organic waste. Significantly quieter than other products available and with a grinding capacity of between 15 and 50 tph, the GV Tolle can dramatically accelerate the composting process, reducing green matter to small 12 mm output particles. Also on show will be a brand new, modular construction system that can be used to create scalable maturation bays. Alfa Wall's series of prefabricated concrete blocks are easy to assemble and highly durable enabling the fast and efficient construction of robust organic recycling facilities.

 www.hub-4.com/directory/12018

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Hassells exhibit new Sennebogen Green Line machines at the RWM show

E.H.Hassell & Sons Ltd, the sole distributors for Sennebogen Cranes and Material Handlers in the UK will feature Green Line material handling machines from the Sennebogen extensive range at the forthcoming RWM exhibition at the NEC in September.

On show will be the new Sennebogen Green Line 825M 'D' Series Material Handler accompanied by a Green Line 821M 'C' Series Material Handler and a 305 Multihandler.

Sennebogen Green Line 821 - A favourite for the metal recycling industry with a great combination of power and speed packed into a compact 22t machine. Load sensing hydraulics, low noise and emissions from a 104kW Deutz engine -great operator comfort.

Sennebogen Green Line 825 - Latest D series machine with MaXcab and a host of great features. A 28 t machine featuring a 135 kW Deutz engine with great reach and lifting power; fast cycles and precision handling with easy access for routine servicing.

Sennebogen Green Line 305 Multihandler - Pure Power in an 11.5t Multihandler with impressive reach, lift and stunning maneuverability from 2 wheel, 4 wheel and crab steer options, the driver gets a safer 4m high view point from the hydraulically elevated cab. Greater visibility also means efficiency and volume gains when loading.

Sennebogen are German manufactured machines designed for a specialist environment. Sennebogen's 57 year heritage in Material Handlers shows clearly in the robust and practical construction of their machines.

Hassells extend a warm welcome to all visitors to view these Sennebogen products and enjoy some hospitality in the outside arena on Stand No. OA111.

Further information:

E. H. Hassell & Sons Ltd, Alderflat Drive, Newstead Ind. Estate, Trentham, Stoke on Trent ST4 8HX Office: 01782 644299 Fax : 01782 657255 Email: info@hassells.com Web: www.hassells.com

Mentor Training join forces with SERAC UK at the RWM exhibition

Mentor Training will be exhibiting for the first time at the RWM show, held at the NEC from the 15th to 17th September 2009.

Mentor is the UK's leading provider of training and associated services for all types of materials handling equipment and workplace transport. Their experience, size and structure ensure the most professional and cost effective support for every type and size of business.

Exhibiting in hall 17 Mentor will share stand 550 with SERAC UK to promote mobile plant training skills and related NVQ's and SVQ's in the recycling and waste management industries.

SERAC UK has delivered learning and NVQ assessment services across the UK for a wide range of clients and sectors, including recycling and waste management.

With the combined knowledge and expertise of both Mentor Training and SERAC UK you can be sure that your operators are fully trained and tested in the safe and efficient use of the equipment.

Please visit us on stand 550 in hall 17 where you will receive a warm welcome.

Contact: Mentor FLT Training Limited, Burley Close, Turnoaks Business Park, Chesterfield, S40 2UB Tel: 01246 555222 Email: Emily.gregory@mentortraining.co.uk Web: www.mentortraining.co.uk



www.hub-4.com/directory/6755

A host of waste solutions from DUO at the RWM exhibition.



A long time supporter of the RWM show DUO Manufacturing (LJH) will be exhibiting on stand OA208 where they will display the latest version (model 1206) of their 6 bay mobile picking station which has been very successful with the waste industry.

This year they will also be joined by DUO Equipment who with Binder will together exhibit on a second stand - 428 in Hall 17.

DUO Equipment has considerable expertise in washing recycled aggregates which provide added value and eliminate the need to send to landfill.

DUO are the UK agent for Binder who offer complete solutions for the separation and sorting of bulk materials and recyclables. On show will be a wide range of glass recycling technology.

Further information:

DUO Manufacturing (LJH) Mendip Works, Leigh Road, Chantry, Nr Frome Somerset BA11 3LR Tel: 01373 836451 Fax: 01373 836879 Email: sales@ljhgroup.co.uk Web: www.duomanufacturing.com



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Haith Industrial exhibit at the forthcoming RWM show

First time exhibitors Haith Industrial have extensive knowledge and expertise in manufacturing machines and systems for the Waste Recycling Industry.

Part of the Haith Tickhill Group the company are widely recognized as for the supply of water processing equipment and are the only UK Company that can offer a full turnkey service.

As a forerunner in design and technology the group has won many awards for quality innovation and is constantly launching new products. They can supply a wide range of products including stone and metal removal equipment, wood chip washers, plastic washers and peat & compost grading systems. Trommel barrels, screens & separators are also included in the range alongside fixed & mobile picking stations.

Within their portfolio is also a full range of solutions for water recycling and sludge de-watering. Haith Industrial can be found in Hall 17 on stand 704 where you are assured of a warm welcome.

Further information:
Haith Industrial Ltd
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The robust Eurodeck weighbridge is specifically designed for operation in such harsh environments and is fitted with Weightron's own fully weld-sealed stainless steel rocker pin load cells, which provide excellent performance and reliability. The concept provides an effective energy restoring system, which ensures the weighbridge deck returns quickly to equilibrium after the vehicle has driven onto the weighbridge. This design, together with the proprietary built-in end stops, prevents potential damage caused by vehicle braking.

However remote the chance maybe, Van Dalen recognise that it is essential that radioactive material doesn't enter their reprocessing chain. To prevent this happening, the Safeweigh radiation detection system is installed at the entry to the weighbridge. As the loaded vehicle passes through the large detector plates, positioned each side of the weighbridge, it is scanned for traces of radioactivity.

As Van Dalen's Regional Manager, Ian Baxter concludes: "Prior to the Weightron installation, we used the port weighbridge at the Hartlepool export terminal. This procedure was somewhat inconvenient and weighing data had to be manually entered into our system. The Weightron D800 weight indicator records all weighing transactions and interfaces with our management software, enabling fast and efficient processing on site.

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Dantherm have specialised in the design, manufacture, installation and maintenance of dust extraction and waste management systems for over 50 years. Locally situated in UK Dantherm Filtration Ltd has the backing of Dantherm's long established design and production centres in Denmark, Germany, Poland, France and other locations. All significant components of their installations, including space saving cyclonic and conventional bag and cartridge filters, versatile Nordfab ducting, Combifab fans, air knives, mechanical and static separators, cyclones, rotary valves, conveyors and customised controls, as well as specialised hoods and enclosures are manufactured in-house, with ISO9001:2000 and ATEX EN13980:2002 quality assurance as appropriate. All products for use with potentially explosive materials have been externally tested and certified and carry ATEX EC Type Examination certificates where necessary.



Because of Dantherm's comprehensive control over the design and manufacture of products and accessories, their experienced design and project engineers can be sure to deliver cohesive, appropriate, economic dust and waste management installations that are long lasting and have low maintenance requirements. Dantherm's own control panel design and production centre can produce dedicated controls to exacting requirements, either as stand alone systems or to be integrated into the client's control installation. Variable speed drives with modulating inputs may be included to optimise energy efficiency regardless of production throughput.

As well as dust extraction at all stages of mineral production and handling, successful applications include dust extraction and material separation for material recycling facilities (MRF) and municipal waste transfer stations and flue gas cleaning for biomass fired boilers and incinerators. The company offers comprehensive servicing, LEV testing for compliance with COSHH regulations, planned maintenance packages and readily available spares. Indeed, Dantherm filter units with more than thirty years service are regularly maintained by the company. An early stage consultation will enable Dantherm's experienced engineers to design equipment and controls with minimum energy consumption, good access for maintenance and long service life to minimise depreciation and therefore lifetime costs.

Visit us in Hall 17 stand 714 for an informative chat with our engineers. Dantherm Filtration Ltd., Limewood Approach, Seacroft, Leeds LS14 1NG Tel: 0113 273 9400 Fax: 0113 265 0735 Dantherm NFV Rotary Separator www.danthermfiltration.co.uk

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www.wastetechnology.eu



Smulders Waste Technology B.V. (SWT)

SWT specialises in the development and manufacturing of machinery for the waste separation industry. Machines with different applications but one resemblance; all are the result of a passionate drive to offer the customer practical solutions. This is what distinguishes SWT from it's competitors.

SWT has earned itself a strong position in the waste separation industry as a result of years of experience and proven to be a specialised manufacturer of turnkey systems and standardised stand-alone equipment like Feeders, Trommel screens, Fines screens, (Mobile) Picking stations, Air-based separations, Magnets, Waste separators and Conveyors

Innovation with practicality in mind

Our main goal is to create added value within our customers' supply chains by means of a constant focus on innovation with a practical application in mind. This is how SWT converts its customers' issues into result-oriented solutions.

Unlimited commitment to the customer

SWT supplies client-specific solutions. This requires insight. Our commitment to the customer and his position within the supply chain is limitless. As far as we are concerned, when we accept an order, we embark on an active co-operation in which the relation, a focus on the solution, and service are paramount.

Definitely a no-nonsense approach

SWT's way of working is distinctive for its flat organisation and no-nonsense approach. This requires flexibility, which benefits you as the customer. This enables us to deliver tailor made work with the highest quality as standard.

As good as our word

A collaboration with SWT means confidence in feasibility and delivery times. The basis for this reliability is the fact that virtually all parts are designed, manufactured and supplied in house. This is a guarantee for swifter operations without any concessions to quality. Quality that SWT can guarantee its customers. After all we have ISO standard 9001, version 2000 accreditation.



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Sorting by Wind Sifting

Waste Recycling Technologies are pleased to announce that they have been appointed as the UK agent for CityEquip product range from Christophel and are to introduce their four new innovative air sifting plants to the UK market.

Steadily increasing quality requirements and the daily changing waste removal routes make the (construction and demolition waste) recycling industry helpless and even drive them to despair. In addition to a clean sort-ing, the solution of these should be energy-efficient as well.

CityEquip gives you two examples on air separation with the new Aircrawler 1600.

Application 1: Mobile recycling of construction waste directly at demolition site.
Feed size 25 – 60 mm

Feeding: Mobile crushing and screening plant

The problems:

- Too much time for the difficult contamination removal, increased costs and delays the demolition work.
- Insufficient job safety in manual sorting at the feed opening of the crusher.
- Quality requirements of the end product cannot be held due to arising fatigue of the staff when manual sorting.

Purpose: Fast and safe job by keeping the quality level of the mineral mix.

Solution: Through the hydraulic lifting cylinder, the diesel-electric Aircrawler 1600 can independ-ently change from transport to working position. The 1.600 mm wide main conveyor leads 160 TPH of the mixed mineral including the light material to the Westeria patented sifting drum. Light and heavy materials are clearly separated now. Over the 800 mm wide conveyor the mineral is lead directly to the stockpile and the lighter materials are blown to the container set below.

Application 2: (example A) On a large recycling and compost ground
Compost separation to sort out plastic pollutions
Feed size 25 – 120 mm

Feeding: Trommel screening unit

Problem: Not decomposable plastics heap and reduce quality of the compost material

Purpose: Temporary use of air separation to improve quality.
Solution: The Self-driven AirCrawler 1600 is moved easily under the oversize conveyor of the compost screening plant. Individually variable distances of the conveyor and the air nozzles to the sifting drum allow exact separation of the feed material.

Application 2: (example B) Picking separation of minerals and light materials.
Feed size 25 – 80 mm

Feeding: Trommel screening unit

Problem: Due to problematic parts in the minerals the product can neither be deposited nor marketed.

Purpose: Production of fine minerals to achieve a clean mineral fraction for merchandise and of light material for incineration plant.

Solution: The Aircrawler 1600 can be flexibly combined with a Trommel. By controlling the amount of air, exactly the setting will be found which meets both quality requirements.



You do not always have to use a mobile plant to solve the problem. CityEquip recommends the AirMaster 1600 with diesel-electric or pure electric drive for semi-mobile and static applications. The AirMaster 1600 is the equivalent to container mobile applications. For medium and lower performances the smaller 1200 series can be used. Very low power consumption and quite good choices to optimize applications with all models make them a favourable alternative in air sifting.

For further information please contact Steve Hill of Waste Recycling Technologies Ltd



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Web: www.tip-top.co.uk



REMA TIP TOP INDUSTRY UK Limited exhibit at RWM 2009

REMA TIP TOP INDUSTRY UK Limited has many things to talk about at this year's RWM exhibition at the NEC, Birmingham. The company makes its debut at RWM (Recycling and Waste Management) 2009 and for visitors attending the show REMA TIP TOP is located in Hall 19 - Stand 1830. REMA TIP TOP's team of industry experts will be on hand to discuss any of your requirements related to conveyor maintenance, wear protection and corrosion protection systems and applications.

REMA TIP TOP acknowledge that the 'Recycling and Waste Management' industry is without doubt becoming one of the most significant influences in the way we cultivate our resources in the 21st century and it is imperative that the industry has a significant service partner every bit as competent and experienced. While high-quality products continue to be an important or even indispensable element, they essentially go hand in hand with a professional and well-organised service.

The show gives the company an excellent opportunity to demonstrate the immense versatility and importance of REMA TIP TOP products and services in multiple industry sectors. REMA TIP TOP is historically associated with Quarrying and Mining where the rugged quality of the TIP TOP product range is well established and respected. However it is fair to say that the brand image is increasingly focused towards being 'a service provider' to cater for the needs and demands of any industry which operates and furthermore requires plant and machinery maintenance and protection solutions.

Every project which REMA TIP TOP undertakes, ranges from problem analysis, consulting, concept development to product installation and after-sales service. REMA TIP TOP provides all that from a single source!

For further information related to this article please contact Don Marshall at REMA TIP TOP INDUSTRY UK Limited on 0870 143 1600.



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Phoenix Plant

SUPPLIERS OF NEW AND USED PLANT FOR ALL THE RECYCLING INDUSTRIES

Phoenix Plant located near Worksop Nottinghamshire, in the Heart of Robin Hood country, has found a niche in the recycling market. Through years of experience and hands on usage of shredding machines, Phoenix has been modifying, servicing and fault finding on most shredders available on the market today. Phoenix has specialised in some of the major brands like Hammel, Powershredder, Extec, and Hass. Phoenix can offer a range of services from new teeth fitted or being welded onto the original rotors, to totally modifying them by converting the course cut to a heavy duty shear cut to suit other applications. Phoenix has found that some of the OEMs, after warranty has expired, fail to support these machines. Phoenix can offer full service backup, problem solving, control panels, new or reconditioned diesel engines and complete overhauls at a fraction of the OEM prices that are being charged. Phoenix will also try to repair a part first rather than supply new. Phoenix has found that some customers, who have bought the common roll on or hook lift type machines, would now like the more mobile tracked units. Phoenix can now supply a tracked undercarriage, fit the appropriate hydraulic parts and remote control, service and simplify the controls to give a satisfied customer a tracked mobile machine without having to buy new. Don't give up on that old shredder yet let Phoenix give your machine a new life.

Phoenix Plant can also supply turn key Recycling Plants, Overband Magnets, Balers, Compactors, Picking Stations, Blowers, Generators, Hydraulic powerpacks, Feeders, Conveyors, Fabrications, Bagging systems, Control Panels, Service engineers.

Contact Phoenix Plant or view the web site for online upto date stock of machines and systems available.



Tel: 0870 143 0056

Tel: 0044 1909 726611

Fax: 0044 1909 722227

www.phoenixplant.com

A Wheely Good Solution from Airtec Filtration!

St Helens based dust and fume extraction specialists Airtec Filtration came to the rescue of leading tyre-recycling company Sitr with a recycled – or refurbished – solution of their own.

Sitr recycle up to 1,000 used tyres every hour, turning the processed rubber into eco-friendly chippings for use in children's playgrounds and gardens across the country. Their green thinking grabbed the attention of former pop star turned gardener, Kim Wilde, who commented on the regional TV programme Granada Reports, "it's fantastic to recycle products, especially in the garden...and it look(s) really good".

But even with their 'green' intentions, Sitr came up against one rather dusty problem. As a consequence of shredding, cutting, mixing and grinding tyres to produce the usable end product, large amounts of dust are created. Sitr called on the expertise of Airtec Filtration to design, supply and install two dust extraction systems that would be in-keeping with their own 'green' philosophy and also, capable of handling the vast amounts of dust generated during production.

Airtec installed two refurbished Donaldson filters; the main system extracting up to 6000m³/hr of dust-laden air and the second up to 4,500m³/hr. Both systems offer shaker filter cleaning to automatically remove dust from the filter bags on shut down, and twin collection bins to reduce the frequency of emptying the resulting waste. The dust-free air is then recycled back into the factory, helping create a much cleaner working environment.

Sitr were pleased to benefit from the cost savings of opting for refurbished equipment but with their own clear vision for being 'green', it only seemed right to do a little recycling of their own with the help of Airtec Filtration.

Airtec Filtration Ltd.
Tel: 01744 733211
Email: sales@airtecfiltration.com



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Autoclave systems



Here is a typical large drum drive by Hagglunds. In this particular case it is one of several Bedminster 70m long 660 tonne Composting drums processing household waste, operated by SMRC in this plant. Each drum is driven by 4 Hagglunds drive motors. The hydraulic pressure balances inherently between the drives and so you get perfect load sharing between the motors without any tricky control problems.

Autoclaves for the processing of municipal solid waste into usable recycled materials are becoming necessary because of the increasing cost to use landfill for disposal.

Hagglunds Drives is involved in providing hydraulic drives for rotating the Autoclave drum both directly at the drum axis where the Hagglunds motor offers a large through hole for passing steam into the drum and alternatively via pinions acting on a girth gear or friction drive depending on the specific design of the autoclave.

However the autoclave drum needs to be driven, Hagglunds have a good and highly efficient solution to drive it with the very wide range of motors they offer that do away with the need of a gearbox. This includes the associated hydraulic systems to operate the auxiliaries and cylinders which may be used to tilt the autoclave body if required and, or, to operate the doors.

Accurate positioning of the drum to enable efficient door operation is also no problem with the proprietary control systems of Hagglunds which also give infinite speed control, start/stop logic and health monitoring.

Hagglunds have recently opened a new facility to build specialised hydraulic power units in the UK to enhance the standard modular power units from the Swedish plant. This means that the systems can be customized to suit exactly the requirements of the system.

For more information contact
sales@uk.hagglunds.com www.hagglunds.com

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The next in our Product Focus series will feature MRF's, Shredders, Conveyors & Ancillary Products.

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Each product Focus is shown as a page turning magazine on the HUB website and is also featured in the quarterly magazine.

For further information or to book and advertisement please contact either linda.rainbow on 0845 680 0024 linda.rainbow@hub-4.com or Daren Thomas on 07719 740 736 daren.thomas@hub-4.coms.

Ultra Plant International Ltd – Manufacturers of Specialist Screening & Crushing Plant

Ultra Plant International Ltd, UK Manufacturers of mobile trommel screening equipment have been providing a range of trommel screening solutions to the waste recycling and aggregate processing industry internationally for almost two decades. Based in Dugannon, Northern Ireland, Ultra Plant operate market services directly from the factory and also through its international dealer network.

With a focus on quality, high value equipment, Ultra Plant International Ltd continues to provide solutions to the waste recycling and aggregates sector.

For further details please call us on 02887747582 or visit us at RWM on Stand 330
www.ultraplantltd.com

 www.hub-4.com/directory/11776

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External Labyrinth Seals for Motorized Pulleys in Recycling Applications

The recycling of general household waste, building waste and refuse incineration provides challenges to seal arrangements of all components utilized within conveyors and sorting systems in this industry.

Some of the main culprits of system failure are VHS/cassette tape, glass, plastic threads and steel or copper wires which can get trapped and wind themselves around critical areas such as shafts and seals.

For Motorized Pulleys, Rulmeca recommend the fitment of extra external steel labyrinth seals at these areas to give the protection needed against these particular problems and enable the pulley to operate without constant attention and therefore fulfil its life potential.

Where there is the added problem of extreme aggressive and abrasive dry dust, or if it is in a wet form of sludge and/or in a hot environment, we would recommend that these seals are of our re-greasable type so they can be initially charged and then continuously purged around the seal area to keep it clear.

The best way of achieving this without constant maintenance is to fit a proprietary 'grease-man' system that administers a measured time-lapse grease release.

Rulmeca can also provide Motorized Pulleys with various options of Stainless Steel shafts and housings to work in very corrosive areas and applications.

These simple and inexpensive measures will considerably extend any Motorized Pulleys working life within these environments and therefore protect the investment made in the drive and save possible downtime and lengthy maintenance tasks.

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Do you need a new website or enhance your existing one?

HUB-4 also develop bespoke websites to help their clients get the most from the internet. Our team have worked with many businesses to build them an on-line presence that is scalable and feature rich, to allow them to communicate effectively with their clients and add benefit to their existing off-line offering. Our websites are all Search Engine Friendly allowing for good page rankings and our clients can update their content whenever they wish, keeping important news items up to date.

We also integrate Email Newsletters into the sites for effective marketing by the use of targeted email campaigns that can be tracked in real time.

Linked into an enhanced entry on the HUB-4 website, our clients get maximum exposure and business potential...!

The business listing on the HUB-4 website is probably the best across all three industries and is split by easy to search categories. Businesses can list their own business in up to six free categories on a standard entry and unlimited categories with an enhanced entry. An enhanced entry also gives them other huge benefits such as company logo, three images, text about their business, a link to their own website driving traffic & potential enquiries and potentially increasing their Google ranking, a highlighted entry at the top of the business listing in each of their chosen categories and all news posted on HUB-4 about their company appears on their entry.



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