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Issue 11

Global News and Information on the Bulk Materials Handling, Recycling and Quarrying Industries

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Mobile Crushing and Screening in Action

The unification of the Extec and Fintec brands within the Sandvik group of companies has created the world's most comprehensive and dynamic line-up of mobile crushing and screening equipment. The Sandvik Mobile Screening and Crushing range now delivers all the familiar characteristics of productivity, versatility and exceptionally low running costs, but they are now combined with levels of durability and aftersales support that are synonymous with the Sandvik name. New name, improved service, same great product.





Safety in falling accident numbers

Can you eliminate risk, particularly in dangerous working

environments? Quarrying has always been a dangerous industry in which to work and while risks to health and safety remain, there appears to be a definite and significant improvement in reducing this risk. Back in 2000, the Health & Safety Executive launched its Hard Target initiative, which managed to achieve a 55% reduction in accidents up to the year 2006/7. It is now looking at Target Zero, which aims to achieve zero reportable accidents by 2015.

At its Health and Safety Best Practice Awards 2009, which took place on 6 October at the Institution of Civil Engineers in Central London, the Minerals Product Association (MPA) substantiated the progress being made towards this ambitious target with an impressive and encouraging statistic: in the last 10 years, accidents amongst MPA members have been reduced by 80%, demonstrating that the sector is well on course to attaining its goal. The achievement was highlighted in a range of examples of health and safety best practice, which were showcased at the awards.

This year there were 211 entries across eight categories, a surprisingly high level of entries considering the challenging economic climate. The categories included Occupational Good Health, LGV Drivers Safety, Worker Involvement, Contractors Safety, Communicating Bitumen Safety, Training Initiatives, Management Systems Initiatives and, finally, Engineering Initiatives

The two top prizes, the Sir Frank Davies Trophy, for best small or medium sized enterprise, and the John Crabbe Memorial Trophy, for overall excellence in health and safety, were won by Singleton Birch and Lafarge Aggregates and Concrete UK respectively.

Lord Jordan of Bournville, CBE, the principal guest and president of the Royal Society for the Prevention of Accidents, who presented the awards, commented:

"The mineral products industry is critically important to the future of the UK – but arguably its contribution to creating – quite literally – the foundations of the UK economy is under-recognised. Just as under-recognised in my view is the fantastic work which

your association and its members and stakeholders have undertaken to drive down workplace accidents and to safeguard employees' health."

The MPA's chief executive, Nigel Jackson, said: *"MPA's overarching expectation of Zero Injuries is complemented by an interim five year Hard Target to halve the number of injuries incurred in 2004. I can safely predict that by the end of 2009 we will meet and beat this target"*.

The waste management sector, meanwhile, was urged not to lose sight of safety in the midst of competing industry issues at a RoSPA conference.

The Royal Society for the Prevention of Accidents' Health and Safety in Waste Management event held in October recognised the host of legitimate pressures demanding the industry's attention – including resource issues linked to the recession and warned that this might see the wellbeing of workers slide to the bottom of firms' priority lists. But the conference, called "Is safety lost within waste management?" aimed to put sector safety issues at the top of the agenda.

The waste management industry, which reports around 4,000 accidents each year, has an estimated fatal incident rate of around ten times the national average. The accident rate of 2,500 accidents per 100,000 workers is around four times the national average.

Roger Bibbings, RoSPA occupational safety adviser, said: *"Although there have been encouraging steps in the industry to address the number of incidents, there is still much to be done."*

The large numbers involved can sometimes mask the reality of this issue – each accident involves individuals, some of whom will have their lives ruined as a consequence and others of whom will never return home from work. It's worth remembering too that the devastating human toll also costs firms time, money and morale."

Everyone involved in the industry, from the directors and senior managers at board levels, to the newest recycling firm recruit, has a part to play in making sure safety is not lost in waste management."

Ross Matthews - Editor

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CMB provides a new standard in

The CMB website launch defines a new industry standard delivering complete solutions to Crushing and Screening Operations Worldwide. Providing a full range of products, services and resources, CMB is uniquely placed and established within the Quarry, Mining and Recycling Industry, supplying parts, services, refurbishments, new cone crushers, jaw crushers, screens, feeders, conveyors, second hand equipment, even bespoke engineering – the complete solution provider with expert ability, resources and full product range.

CMB International is a family run business with very hands on Directors Martin Brough Managing Director and Chris Hall, Technical Director. Both Martin and Chris have spent their working life with crushing and screening equipment worldwide and provide vast experience and expertise, resulting in a company focused on delivering customer satisfaction with the widest range of products and services under one roof.

Working as a site service engineer, Martin realised that there was a lack of quality service support for crushers and screening equipment. CMB was established in 1996 to initially meet this need but as customer requirements and requests grew into new areas so did Martins commitment to provide solutions and evolve the Company into providing a comprehensive, total range of quality products and services that enables a customer's need to be met with one phone call.

Technical Director, Chris Hall has a wealth of knowledge put to good use during the design and development process of CMB's excellent range of crushing and screening equipment which have been designed for easy operation and maintenance, optimum output and long life.

- **Do you want the reassurance of 24 hour telephone back up and quick response times?** CMB have always recognised the need for telephone back up and continue to provide back up around the clock, recognising that machine down-time means loss of production and customers profitability.
- **Do you want reliable parts and service?** Operating a system which complies with ISO9001 : 2000 certification, all parts are manufactured, stored and dispatched with full traceability and to the highest standard.
- **Do you want the highest standard of refurbishments which will maximise production use with existing equipment?** Comprehensive workshop facilities and good relationships with quality engineering suppliers, enable CMB to provide the highest standard of refurbishment to put your existing equipment successfully back into promoting maximum production.
- **Do you want new equipment – Cone crushers, Jaw crushers, Screens, Feeders, Conveyors, all built for optimum performance, easy maintenance and will last because they are made to?** The continuing philosophy of CMB has always been customer driven, as part of this ongoing process CMB designed and continue to deliver crushing and screening equipment that help maximise production and profits for customers
- **Do you want bespoke Engineering?** Years of experience, expertise and ability enable CMB to continue to provide bespoke engineering and turnkey solutions. Bespoke screens to fit existing space and structures to minimise downtime and costs is one type of request fulfilled by CMB.
- **Do you want a new plant designing or an existing plant changed to meet growing production needs?** Do you think that you've got the wrong equipment for the application and/or



to give you the desired materials and outputs? CMB can provide designs, flow calculations and equipment – the total package.

- **Do you want peace of mind that you are working with people who care about providing you with the best, most complete forward focused solution for you and deliver every time?** CMB know that customers want to focus on crushed rock, not rock crushers which is why CMB has continued to evolve and grow into the company that provides a full range of products and services under one roof, it just made sense.



**SAFE contractor
accreditation**
Oct '09

CMB International Ltd have been awarded accreditation to the SAFE contractor Scheme

"The SAFE contractor Charter Standards set down the benchmark against which contractors and service providers are assessed"

SAFE contractor recognises the ever increasing demands of legislation to ensure the Health & Safety competency of the contractors you appoint, assessing the suitability of and how seriously a contractor takes Health & Safety arrangements.

Accreditation to the SAFE contractor Scheme both represents and demonstrates CMB's continued commitment to, proper assessment and reduction of exposure of all to risk, achieving and maintaining the highest Health & Safety standards and professionalism throughout its operation.



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complete solutions



CMB's range of Rockmonster jaw crushers are modern, cast steel, all roller-bearing machines. Designed to cope with some of the worlds' toughest aggregates, this is a machine developed specifically for heavy duty quarry work. The crusher features stepless mechanical/hydraulic adjustment enabling the operator to quickly change settings. There are no shims to change or bolts to re-tighten during the adjustment procedure. Welding has been kept to a minimum in the design. The massive front wall and cross beam are special heat treated castings that are bolted and pinned into position. This method of construction avoids stress concentration often found in welded components.



The CMB 150 Rockstar cone crusher, a modern cast steel all roller bearing machine features hydraulic adjustment, which enables the operator to rapidly change the discharge setting, if necessary during the crushing

operation. The machines hydraulics also incorporate tramp metal release, automatic reset and an unblocking feature which, will clear the crushing chamber in a matter of minutes. Re-metalling is carried out with the crushing head in situ. The short shaft configuration, which requires no top bearing, enables all major components to be removed from above, and demands minimal head room for installation and maintenance.



The proven all roller bearing design provides for lower power consumption, long life, easy spares availability and the need for a more compact lubrication system.

CMB offers a comprehensive range of vibrating screens, feeders and conveyors specifically designed for the aggregates market. Equipment can accommodate whatever screening media is specified by the customer (wire cloth, polyurethane, rubber punch plate etc.). Screens or feeders can be custom designed to fit an application, whether new or existing.

A range of mobile crushing plant for quarrying, recycling and mining applications are designed and manufactured. The CMB mobile plant range incorporates the CMB's cone and jaw crushers and are available in tracked, wheeled or skid form.



BARDON AGGREGATES (Cwm Nant) LT-125 May '09

CMB were awarded the order to extensively refurbish and modify a Lokotrack LT-125 by Bardon Aggregates at Cwm Nant. The various sections were stripped-down to bare chassis', including the hydraulic and electrical systems, while the main structures were modified best to meet the customers particular requirements.

The LT-125 Jaw Crusher, was dismantled to component form and extensive refurbishment completed, particularly to the Jaw stock, to bring it back to full working order.

Part of the project was to design, build and install a new 1.2m x 4.8m Grizzly Feeder which was completed successfully..

The Hydraulic and Electrical Systems were re-assembled in a simpler form as part of the modifications necessary to meet the customers on going needs. Access Ladders, Handrails and Platforms were also modified to accommodate specific requirements.

Since delivery to site this unit has made a considerable contribution to meeting the production requirements of the Cwm Nant site.

CMB continue to provide full service and support to this unit, site and customer.

CMB were awarded this substantial contract having provided us sound technical and practical advise, service and support for our plant and equipment for many years, as a result of its successful completion we look forward to our working relationship continuing to develop.



Allister Williams. Quarry Manager Bardon Aggregates, Cwm Nant.



CMB International Ltd won the tender for the refurbish of two 20' x 5' Double deck screens at our Barton Quarry.

Although price was important, the main criterion was the ability to demonstrate their competence to plan and execute the job safely; working closely with our site team led by Stefan Kelemko. The other criterion was to remove, refurbish and replace both screens etc. in a 4 week period to suit our production schedule. Having worked together previously CMB International Ltd knew the high standards Hanson expects and provided a complete safety plan and worked with Stefan's team to complete the job safely and on time.



Phil Bradshaw, Area Operations Manager, Hanson Aggregates - Central.

Further substantial fall in second quarter sales as MPA calls on government to reverse planned 50% cut in public investment

Aggregates, cement, asphalt and ready-mixed concrete volumes again fell sharply in the second quarter of 2009 as the construction recession intensified.

Compared with the same period of 2008, sales volume of crushed rock and sand and gravel aggregates fell by 29 and 27% respectively, cement and ready-mixed concrete by 32 and 37% respectively, and asphalt by 27%.

These rates of decline are broadly similar to the first quarter, and are likely to moderate slightly in the second half of the year as industry demand dropped dramatically in the third and fourth quarter of 2008, so the comparative base is reduced.

MPA executive director, Simon van der Byl, said: "These are awful numbers and the market decline we see in 2009 will be the worst since records began. 2009 is also likely to show the biggest annual reduction in construction output in the post WW2 period and the lowest number of housing starts since 1924, highlighting the unprecedented market conditions our industry and other material suppliers are operating in."

Recent forecasts predict further decline in construction activity in 2010 and a very slow subsequent recovery.

In these circumstances, government should be planning to sustain much needed investment in our infrastructure and public services to underpin the economy and utilising the huge spare capacity available in the construction and materials industries and supply chains. Instead the budget set out a 50% reduction in public net investment over the next four years."

Simon added: "It is hugely disappointing that a government which took decisive actions to support the financial sector is not prepared to use a fraction of those sums to sustain investment when it is most needed. The resources of our sector and the rest of the construction industry will be wasted unless there is a far more positive approach to investment by the Government as economic recession moves towards a fragile recovery."

Patrick O'Shea takes over as MPA chairman



Patrick O'Shea, chief executive of Hanson UK, become MPA chairman for the next 2 years from 1 September 2009.

The decision reflects the board's desire to change the way it operates by rotating the chairmanship amongst board members over time.

He will be taking over from Lynda Chase-Gardener who has been chairman of MPA since its inception in March 2009. Lynda previously led the QPA for 4 years as chairman, before MPA was formed.

Patrick O'Shea paid tribute to the contribution that Lynda has made to both MPA, and formerly QPA. He said: "I would like to thank Lynda on behalf of the board, council and the wider membership for the immense contribution she has made in bringing the MPA into being. Her stewardship, drive and professionalism over the last 2 years have been critical in bringing the alignment of the industry from the drawing board into reality."

Previously at QPA Lynda was a long standing producer member of Council and F&P and then led the association for 4 years as Chairman during which time it became Trade Association of the year in 2006 and received further key industry awards and accolades as well as becoming widely recognised and respected nationally and internationally.

Lynda can feel a real sense of pride in these unprecedented achievements and we wish her well with her continuing industry and other business interests."

Lynda responded: "I am proud to have led the creation of MPA which is now going from strength to strength. I leave it in good hands and look forward to seeing it raise its profile, voice and influence with Government and other key audiences and stakeholders."



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A-Plant launches new insurance package for hire industry



Hire firm A-Plant has launched an insurance package that enables customers to insure hired equipment against loss or damage for up to £100,000 for any one incident.

A-Plant has teamed up with HAE (Hire Association Europe) Insurance Services to offer A-Guard Insurance, which can be used to cover equipment hired from A-Plant - from a compressor, dumper and generator to a powered access machine, small tools or accommodation unit - for 15% of the hire rate of the equipment.

A-Guard Insurance is offered through specialist HSB Engineering Insurance and covers equipment whilst on hire from A-Plant.



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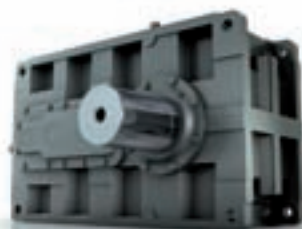
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Customers to benefit from OTR/County joint venture

OTR Tyres and the County Tyres Group have expanded their operations and formed a new company to enhance the service to earthmover tyre users in South West England and South Wales.



The new company, County OTR Tyres, will have Regional Service Hubs based in Taffs Well (Cardiff), Bristol, Launceston and Frome with a new Service Site planned for West Wales.

"What this means for customers is an increased support network with enhanced earthmover tyre operations throughout the regions. The formation of County OTR Tyres brings together the two main operators in the South West and Wales to enhance the service that is provided. The combination of local knowledge, experience, resources and global best practice will not only benefit our customers, but the industry as a whole," commented Graeme Manning, OTR commercial director and MD of the new company.



www.hub-4.com/directory/629

100 years and still going strong

Lanway Ltd is celebrating a century of trading. The company was set up by Mr Francis Lane in 1909 to manufacture Coal handling equipment in addition to general mechanical engineering. The company quickly grew due to the importance of the coal industry and was protected throughout both of the wars. In 1946 Mr Lane was joined by his son Francis. At the same time it was incorporated into a limited company, 'Francis & John S. Lane Limited'.

In 1951, the company designed and produced its first Lanway Rotary Hammermill, for (amongst many other uses) the size reduction of stone.

The very same machine is still in daily use, and subsequently hundreds more machines have been produced. This is in addition to Lanway Sledger Crushers, Impact crushers, Screens & Conveyors. In 1962 Francis & John S. Lane Ltd, became part of the MacMaster Group.

In 2000 the company name changed to 'Lanway Ltd' and it was re-incorporated to include its present set of Directors, Malcolm & Edward MacMaster. In addition to new Lanway equipment, the company offers a full spares and service package for all Lanway machines and manganese steel castings to suit other brands.



www.hub-4.com/directory/497

Waste management companies plan ahead for increased activity

The number of planning applications submitted, and consents granted, in 2009 to date for waste management facilities has increased by 51% over last year. This is mainly due to the further diversion of waste away from landfill resulting in the need for companies to invest in other treatment options.

BDS Marketing Research has identified 725 applications and consents for waste facilities in the first eight months of 2009, for both extensions to existing sites, and new schemes. Most sectors of the waste management industry have seen more planning developments in the current year, compared with 2008.

However, the main growth has been seen in proposals for new anaerobic digestion and MBT plants. BDS is aware of 27 proposals for AD facilities having been submitted during 2009, by companies such as Bygen Power, Biffa and Fernbrook Bio. Nine MBT plants are planned by companies including Viridor, Shanks, Biffa and New Earth Solutions.

The energy from waste sector is also seeing growth, with BDS identifying more than twice as many planning proposals in 2009 compared with last year.

Just over a half of the total number of planning developments refers to waste transfer stations, MRFs and other recycling schemes. Landfill developments now represent just 4% of all waste related schemes. Yet 10 years ago, planning applications for landfill sites represented over half of the market. Nearly 80 schemes are proposed for composting schemes, which confirm the continued interest in this sector.

Meanwhile, difficult times for concrete block paving suppliers

In another survey BDS found that despite record investment in public works, suppliers of concrete block paving are currently experiencing the worst trading for more than 10 years. Production has fallen below 20 million m², a level not seen since the 1990s. The BDS report estimates the outputs of all plants in the sector, provides further information on plant closures and openings, and produces a three year industry forecast.

BDS has identified eight plants that have closed since 2006. These represented 12% of industry capacity when working. Sales have fallen by 22% over the same period and production has been cut back at other works to keep stocks at manageable levels. However, the industry needs the market to recover to ensure that other works are not forced to close. The consultancy is forecasting that the rate of decline will begin to slow. There are signs that the housing market is beginning to recover, while output in the industrial and commercial sectors has already fallen dramatically. By the middle of 2010, BDS expects sales to be improving and this trend is forecast to continue into the following year. However, cut backs in Government expenditure on capital expenditure are expected, and BDS believe that this will hit the concrete block paving market from 2012 onwards.

The consultancy has estimated that Marshalls continues as the largest concrete block manufacturer in the country, producing the most in five out of ten economic regions. Brett, Aggregate Industries, Plasmor and Cemex are the other market leaders, and these five companies represent an estimated 87% of the market. BDS has identified a total of 13 companies in the industry.

It estimates that the South East and West Midlands are the main importing regions, with the East Midlands and South West being the main exporting areas.



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Hanson Building Products managing director David Szymanski (far right) leads some of the construction industry's key figures around the Measham brick factor

Top CEOs experience new Hanson brick factory first hand

Many of the construction industry's key figures were among the VIP guests to be given an exclusive tour of Hanson's new £50 million brick factory at Measham in Leicestershire on 30 September.

They included Construction Products Association chief executive Michael Ankers, Keith Wright, production director at Travis Perkins and Steve Ashmore, managing director of the Wolseley Group. In addition, Hanson's customers were invited to see first hand how the most sustainable bricks of their kind are produced.

Among them was Nigel Dodds, group buyer at Persimmon Homes, who said: "Hanson's new factory is extremely impressive. In addition to its sustainability credentials it offers bricks with a consistent colour, dimension tolerance and quality, which is of vital importance for us and our customers."

The Measham factory is the largest 'soft-mud' brick plant in Europe and has sustainability and quality at its core. It stands on a brownfield site and has been developed to combine locally sourced recycled raw materials with low energy, low waste processes to make bricks with the lowest embodied CO2 available. With the capacity to produce 30,000 bricks an hour, the fully mechanised factory can operate with just 28 staff.

The factory now produces eight different bricks – four pressed and four thrown, in red and buff plain and multi options – with a range of 18 specials due to start production next month.

The open day was hosted by Patrick O'Shea, Hanson UK chief executive officer, and David Szymanski, Hanson Building Products managing director. Dr Bernd Scheifele, chairman of the managing board of Hanson's parent company, HeidelbergCement AG, unveiled a plaque to mark the factory's official opening.

"The Measham factory has the capacity to produce the same volume of bricks as five of our previous factories and this investment in the current economic downturn will give us a competitive edge when the market recovers," said David Szymanski.

Leading industrial weighing specialist acquires Nordic Bulk AS

Leading European industrial weighing specialist Precia-Molen has recently completed the acquisition of weighing and transportation system specialist Nordic Bulk AS. Nordic Bulk AS is a market leader in the Scandinavian market offering a range of dynamic bulk weighing solutions within the quarrying, recycling and demolition industries.



Precia-Molen specialises in industrial weighing, both static and dynamic within the minerals, cement, waste and agricultural industries and has an enviable reputation for innovation and quality at the forefront of weighing technology. The acquisition of Nordic Bulk AS forms part of Precia-Molen Group's strategy, and will secure sales and service outlets in the Scandinavian market.

Nordic Bulk AS currently supply a wide range of dynamic weighing solutions including on-board belt weighers with an accuracy between 0.5-2.0% to all major mobile and static crusher manufacturers, including Metso, Sandvik, Kleeman and Extec. The comprehensive product range will be fully integrated into the Precia-Molen range allowing the company to offer additional products to the UK and Europe. Precia-Molen will provide one flexible solution to suit all types of crushers either mobile or static within the quarrying, recycling and demolition industries.



www.hub-4.com/directory/683



Waste separation just got easier

The problem with managing waste is quickly disposed of by hanging the 'Beaverswood

'racksack' to end frames around the warehouse. The 'racksack' will fix easily onto most racking and shelving systems that are between 900mm and 1100mm wide using two 'S' locators. The locators hook into the holes on the side profile of the end frames allowing the sack to be quickly removed and emptied.

Although originally designed for the warehouse, but due to its flexible method of fixing, the 'S' locators can be hung over or hooked onto any substrate, the racksack can be used in any areas where waste has become a problem.

User demand has also encouraged Beaverswood to add another six designs to the range making ten different versions in total. Contact Beaverswood for further details on this new range and also request your free of charge catalogue and general sample pack.



www.hub-4.com/directory/12172

Rapid International Celebrate 40 Years of Engineering Success

One company that has survived many an economic downturn and have lived to tell the tale is Tandragee-based, Rapid International Ltd. Rapid International Ltd are recognised as one of the world's leading manufacturers of concrete pan and planetary mixers, mobile plants, concrete batching plants and mixer washout systems. They supply to the concrete, construction and environmental industries. This year Rapid are proud to be celebrating four decades of engineering excellence.

Formerly known as Craigavon Engineering, the company was set up in 1969 by Jim Lappin and the late Bertie Pickering in a small garage on the outskirts of Portadown, N. Ireland. They began by supplying the agricultural sector, manufacturing link boxes for tractors along with cattle and

pig trailers. As is always the case with Rapid International, they kept a close eye on the market; listened to customers and shifted their focus to the construction industry and quickly became specialists in bespoke Batching Plants.

This decision has paid off handsomely and today Rapid boasts an award-winning product portfolio and sales extending to more than 20 countries around the world. With all design and production taking place at Rapid's impressive 36,000 sq ft manufacturing base, in Tandragee, N. Ireland Rapid are still providing quality mixing and batching products to the concrete and environmental industries. Exciting developments are under way, with new mixers for the future, watch this space...



www.hub-4.com/directory/5066

Airtec Filtration offer a solution to rising costs

Airtec Filtration have specialised in the design, supply and installation of top quality refurbished equipment for over ten years, saving customers as much as 60% on the cost of new equipment.

Experts in the field of dust and fume control, customers come to Airtec to provide bespoke engineering solutions to suit a variety of applications and budgets. With industry renowned fine dust filters from the likes of Donaldson DCE, Dantherm's Airmaster and Nederman, Airtec are sure to have the right filter for you.

With over 15 years in the field, Engineering Director Neil Edwards explains "We pride ourselves on offering efficient, affordable and reliable products, which is why customers come back time and time again".

All refurbished equipment go through a rigorous inspection, repair, re-spray and testing program which is all backed by a one years warranty as standard. Service, maintenance and COSHH LEV packages are also available to compliment any installation.



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www.haas-recycling.de

Recycling conversations

Ross Matthews visited the RWM Show in September and talked with solution suppliers about new technology and trends

People seem to want to recycle despite the recession according to the views of many of the 500 exhibitors at the Recycling & Waste Management exhibition (RWM 09) held during September.

The initial attendance figures appear to back this up with an 8% increase on last year's record figure. A total of 9,781 people (subject to audit) visited RWM 09 at the Birmingham NEC from 15 to 17 September.

"RWM has grown consistently over the last five years and against the background of a general economic downturn we still saw substantially more visitors and exhibitors than ever this year," said event director Gerry Sherwood. "There was a real buzz about this year's show, which with the new Korean pavilion had a growing international flavour among exhibitors and visitors alike. Up and down the show floor record numbers had clearly come to RWM to do business."

Inside the exhibition halls were three free seminar theatres. Among the most popular presentations were from Miller Homes and Wates in the construction sector, and those covering the subjects of anaerobic digestion, energy from waste and carbon reduction.

Among the business being done, JCB announced the sale of two new high specification machines on show in the outdoor area to Newcastle-based Graphite Resources Limited, which will use them for handling waste at its £50 million Derwenthaugh EcoParc facility on the banks of the River Tyne. The vehicles were 456ZX wheeled loading shovel and JCB JS220LC tracked excavator complete with new JCB SG Selector Grab attachment.

Corin Wright, sales and marketing manager at JMC Recycling was happy with the success of their stand: "We took orders for 24 of our metal recycling machines including all of our display models. That's more than last year and much more than we were expecting in the current climate. We are also getting more orders from our sales follow up."

"We've been absolutely inundated," said Fraser Macintyre, national sales manager at Recresco.

Hub-4 had its own stand at the show and between talking to visitors it toured the exhibition to talk to a number of other exhibitors to hear about the latest technologies and trends. In this special review, five exhibitors tell Hub readers the news from their stand at RWM 09.

Jonathan Fallon, Sales Director at Kaizen Recycling

Kaizen Recycling specialises in all types of waste markets and in the UK represents three partners: Bulk Handling Systems, Eggersmann Anlagenbau and Haasa Environmental Consulting. BHS focuses on dry recyclables or MRFs. Eggersmann is a plant building company and provides biological treatment plants for MBT. The company has a large share of the European and global market for preprocessing and post processing bio-drying systems and Anerobic Digestion (AD) plants. Haasa supplies Wet Anerobic Digestion Systems.

Eggersmann and Haasa are supplying three of the five MBT systems for the Greater Manchester PFI contract as part of the Viridor Laing consortium. These 100,000 tpa mechanical systems are for pre-treating domestic waste for the Haase wet Anaerobic Digestion System.

Kaizen, however, is also focusing on commercial and industrial and Construction and Demolition MRFs, which we've had a lot of experience in the last 4 years. Recently we secured a contract with Viridor Waste Management have awarded Eggersmann Anlagenbau to build a new Commercial & Industrial Materials Recycling Facility (MRF) at their existing Salmon Pastures site in Sheffield. The system is capable of processing over 150,000 tpa of

commercial and industrial waste, recovering ferrous, non-ferrous, inert fines, stone, wood, dense plastics and RDF from the mixed waste input. Using a combination of shredders, magnets, screens, air separation, eddy current separators and optical sorting equipment the system is highly automated to ensure maximum separation efficiency and purity levels.

The system, which will be fully operational by January 2010, will maximise the recycling from this kind of waste stream that hasn't been handled so well in the past. So this is a key role for Eggersmann on the C&I type of materials. BHS is very strong in the commingled market in the US where disc screen technology is used predominantly over trommel type systems. The main advantage of the BHS screen is the inline design: it produces high tonnages with minimal pickers and you get minimal downtime for maintenance.

Kaizen's biggest recent news is that it has completed the SCA Recycling 120,000 tpa MRF, which is now fully operational. It is working fantastically, living up to all expectations. The SCA plant is the first major opportunity to demonstrate what we can do as a company from a very varied commingled stream.

Also of interest are some new technologies being introduced at RWM, including a new hybrid system that Eggersmann is developing alongside Haasa where they are combining the bio-drying

tunnels with a wet AD process and targeting specific fractions of material to go to specific routes that are more beneficial to the recovery and generation of energy.

On the key trends, the BHS side of the business is seeing a big emphasis on quality going through the MRFs. A lot of the MRFs that have been designed over the last 5-10 years haven't been designed for the collection methods that have been adopted in the UK, especially with the inclusion of glass on many contracts and a lot of the existing systems out there are being flooded because the collections have increased dramatically. They have to deal with anything that's thrown at them but we know that we can provide high capacities from the systems we produce to a reasonable budget.

Quality is another strong trend. You need a shelf life of 15 years from the system so long as it is maintained and serviced at regular intervals. We work with a specialised service company in the UK that services all our systems and stocks spares, which is very important stage in our development.

The main focus at RWM 09 from Kaizen is to bring a combination of solutions from various industries. We have a lot of expertise in these industries and work with companies that have 30-40 years experience in providing proven MRFs in the UK and Europe and globally.

Paul Fears, Managing Director of Eriez

We are trying to take recycling to the next stage. Everybody can separate metals of a larger size of, say, +25 mm but we are looking to take that down to 3, 4 or 5 mm and also we're also looking at difficult materials such as stainless steels. So we have brand new pieces of kit on the stand.

The INOX SREX separator is basically a magnetic drum but we've changed the magnetic configuration in such a way that the permanent magnetic field generated is higher than anything we supply - and I do believe it's the highest in the World. Originally developed in Japan it's going to offer the end customer something that's unique in terms of separation performance.

The eddy current separator has been around since the mid-1980s and you will see several around the RWM show. What we have here though is a separator that separates at 3-5 mm. We can do it effectively and very cleanly. There are a lot of stockpiles around that have maybe 5-10% aluminium/copper in them - we can actually recover this now. Ironically, although this year has been a tough one for everybody, it has been one of our best years for recycling in the UK ever. What we've seen is with the launch of the RevX Eddy Current Separator at RWM last year, we are offering a cost effective machine that is suiting not only the economics of the market but also its separation demands.



People have to make money out of their waste and what we are looking at is giving them a solution that can actually generate cash. It's a tough market and metals are not at the highest prices they have ever been so therefore you have to be more effective, more efficient. And that's what we are trying to give them, technology that will give them a solution?

We invited nearly every recycling company in the UK to come to the RWM show with a sample and carry out a test; people have been amazed at what they can see our machine doing for their materials.

Simon Ingleby Managing Partner of Alfatek UK

We are telling people about our Windshifter, which is the core machine in the plants that we build. AlfaTek is the supplier of Redox recycling equipment such as the Windshifter, which separates and cleans incinerator and metal slags. We can see fewer big turnkey plants being built this year because of the finance situation but we can retrofit this technology in existing plants to enhance the sorting lines that they might have already.

Everybody needs to look at improving their waste streams and getting cleaner recycling to refine their products.

I've been visiting sites in the UK to see a lot of new technologies, looking at possible partnering operations with the different technologies that are out there such as waste to energy and autoclaving. People are finding it difficult to borrow money to go ahead with big projects even though they are keen to go ahead with those projects so they are having to really do a phased development spending as little as they can but to maintain a good quality because in the market sectors taking the recycled materials, they are expecting better quality all the time irrespective of the current financial trends so people are having to improve the quality of recycled materials coming off the plants.

Pat McGeary, Managing Director of Blue

This year in particular at RWM we are focusing on the biomass sector. At the moment the big drive is to build these small megawatt power stations around the country and the big driver here is the wood. Because the amount of waste wood that's going to be available will be limited there's a big drive from Blue looking at MSW and converting it for biomass. This involves a lot from Blue in terms of becoming solution providers - offering turnkey systems right down to drying MSW to put it into RWF, which will eventually lead to 100% no landfill. It's a slow burn sector but we have allocated quite a lot of resources to it internally. Having identified a demand for this so we have allocated some new engineers and investment towards it,

it will be a 2-3 year project for some of these plans but we are very excited about it.

C&I, C&D, mobile shredders and trommels remain our core business but the big drive has to be towards biomass, AD, MSW, MBT, handling food waste and developing other sectors that are becoming very much 'live' now.

We were known primarily as a crushing and screening company five years ago. That all changed and we are now offering full turnkey systems right from the primary shredder at the front end to the baling system at the back end and optical sorting through the non-ferrous and ferrous sorting systems.

There has been a recession throughout the economy this year but we have actually held up quite well and that has come from our move into different sectors.

The number one driver for us is legislation: People will have to recycle as landfill will be history going forward and we feel we are well placed to offer the customer a solution.

Sascha Kloft, Sales Manager of Haas Recycling Systems

We are focusing on the recycling companies that are looking at mobile shredders and carrying out material and waste handling as well as turnkey wood recycling installations. Installations involve pre-shredding, to the screening and hammer milling - quite a small sector but one that we are very strong in - and small installations for pelleting, which is on the increase, as well as the mobile equipment we are showing on our stand.

We have quite a number of installations in the UK, involving 10-15 mobile units. We have turnkey installations such as the biggest wood recycling installation in Europe that is working in Manchester, turning out about 60-80 tph.

On our mobile shredder we are trying to cut down noise levels to a minimum with some special systems, as well as achieving fuel savings from the machine without loss of production. This is a big thing, especially for the mobile machines, because everybody is looking at costs at the moment and you need more arguments to replace machines so they are looking at options that they can get better with.

The other big focus is on pellets, more particularly the wood handling part of the pelleting installations - the whole front end. Due to the fact that we offer turnkey solutions in this specialist field, we do not have a lot of competition in turnkey solutions. We have a large order in Belgium for a big wood recycling installation and a big pelleting installation in Russia that we are going to build early next year and a further plant in Belgium that will be running at the end of October.

The pelleting sector is growing - everybody is talking about it. There are not many people facilitating this in a proper way because there are a lot of factors involved to put up a complete pelleting system. This makes business good for us even during hard times.

A podcast with interviews from the people featured in this review and others at RWM 09 can be found at www.hub-4.com RWM 10 takes place from 14 to 16 September 2010 at the Birmingham NEC.



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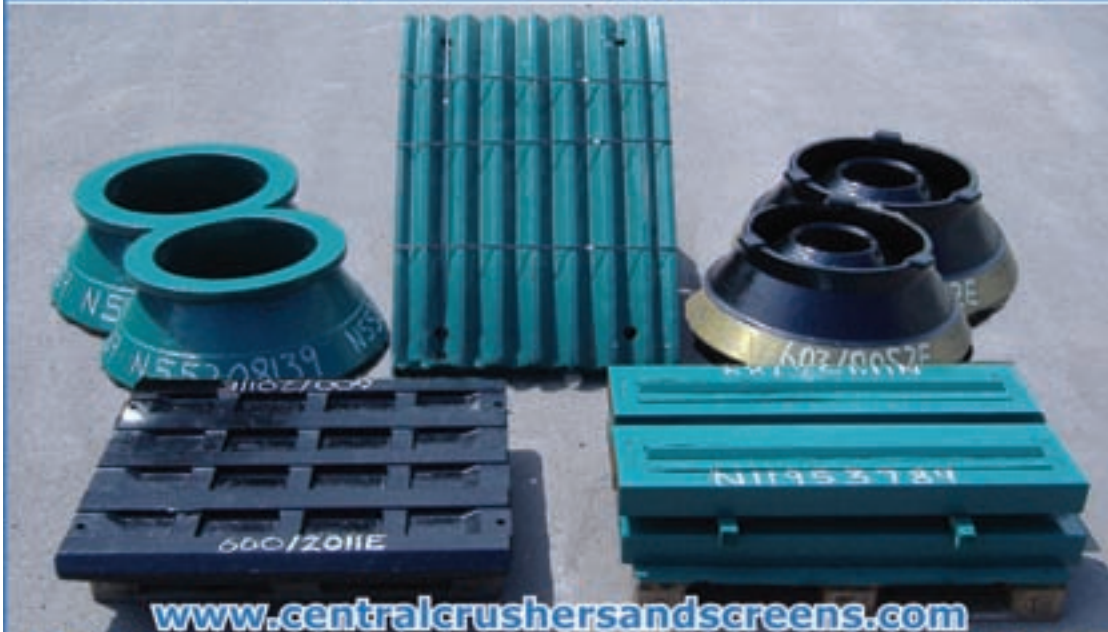
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Henshaws receives a new look reclaimer

Recycling



A new look Terex Finlay 883 reclaimer has been supplied by Finlay Plant North West – part of the Finlay Group of companies - to waste management company Henshaws, based in Macclesfield, Cheshire.

The machinery features the all new white paintwork that is being progressively introduced by Terex Finlay to replace the previous distinctive orange colour. It is the first machine off the production line in the new colour.

This is the third 883 reclaimer supplied by Finlay Plant North West to Henshaws to recycle inert waste within the last five years. – the existing machinery helping Henshaws to increase its recycling rate to 90 per cent.

This latest version comes with longer conveyors, which will further enhance the stock piling capability and enable the company to recycle even more waste.

Now in its 22nd year of trading, Henshaws' blend of customer service, industry expertise and sector specific solutions have seen the business grow from a small skip business – based on one mini skip loader and five skips – to become one of the largest and most dynamic waste recycling operators in the North West region.

Founded by Joe Henshaw, who is now the managing director of Henshaws, the company has shown year-on-year growth and employs more than 50 people.

It has a wide-ranging customer base, including blue chip companies, construction sites, the public sector and householders. Henshaws also caters for a large number of events in the North West.

Operating from a 16 acre site - housing modern offices and the latest machinery and equipment – the company's fleet

includes 15 skip loaders, five eight-wheeler hook lifters and five bin wagons.

Joe Henshaw, said: "We have been working with Finlay Plant North West for more than 15 years, and they've been on hand to offer the machinery we need to grow the business.

We originally started out with barrel screens, then trommels, before moving on to the reclaimers. The 883 has transformed our operations here. We've found it will work all year round, and it is capable of dealing with skip waste direct. Recycling soil, bricks and hardcore, the machine produces 10 mm top soil, crush and run, and oversized material for crushing.

We've also been able to reduce the amount of fines going to landfill, due to the fact the top deck of the machine is fitted with heavy duty tines.

It is important for us to have a supplier with same day service and spares back-up, so that is why we keep with Finlay Plant."

The Finlay 883 works as an aggregate screener after a primary crusher, or on its own as a frontline screening machine.

Applications include quarry waste, construction and demolition debris, topsoil and aggregates. Processing at a rate of up to 500 tonnes per hour, the key to the 883 is its adaptability, whatever the application or industry.

Neil Partington, managing director of Finlay Plant North West said: "The Terex Finlay 883 has proved to be a really versatile piece of equipment.

"Designed specifically for the recycling industry, it is also suited to working in quarry waste, construction and demolition debris, topsoil, timber, slag and aggregates."



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Recycling

Crushing demands

Ross Matthews sees BP Mitchell's crushers being put through their paces at the Eco Aggregates operation in Hertfordshire

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When Brendan Mitchell formed his company he set his stall by a singular vision to provide a multi-skilled service to the building and construction industry. It was in this environment that quality of service, and total reliability, was the hallmark that separated the 'men from the boys.'

The company began life as a single owner-driver, but this soon developed into a large multi-faceted organisation requiring careful management and nurturing in those early days. In the years that followed the company has acquired a vast fleet of vehicles, which encompasses plant to service every conceivable need on the building site. Brendan Mitchell, who takes great pride in the quality of service delivered to all of his valued clients, personally supervises every project. In Brendan's own words: "our business has grown through the range and variety of projects we have undertaken over the years. But more importantly, our growth has been sustained by the numerous clients referred to us by 'word of mouth' and personal recommendation."

Changes within the construction industry have placed onerous demands and challenges for contractors, and these demands require very high standards when it comes to delivering service on site. B P Mitchell are ideally suited for the 'front end of the business', where the fast track bulk excavation, site clearance, recycling, haulage and material supply can be delivered on demand. To this end they are currently able to supply quality topsoil, washed sharp sand, recycled sharp sand, ballast, MOT type 1 (Limestone), crushed concrete products Type 1/Type 2/6F1/6F2, recycled 10/20/40 mm stone - all of which are crushed by the Sandvik range of crushing equipment.

This takes place at a site at Cole Green near Hatfield in Hertfordshire, which is playing a key role in diverting waste from landfill. Operated by BP Mitchell, the 7 acre Eco Aggregates operation houses a soil washing plant that in a closed loop approach recovers aggregates and sand from construction waste so it can be delivered as recycled product back to the construction industry. Recovered material is used locally in applications such as construction, composting, roof tile manufacture, block paving, bricks and blocks and landscapes.

Over the next 7 years the site aims to recycle some 1.5 million tones of C&D waste of which 1.2 million tones will be recovered as reusable sands and aggregates - that's an 85% reclamation rate.

The soil washing process turns the inert construction waste into clean, washed and graded aggregates using high pressure water jetting, robust scrubbing and vibrating decks to separate sand and soils from natural

stone and rock contained in the feedstock material.

Washed stones are separated in 10, 20 and 40 mm size and stockpiled to suit site or market requirements while two grades of sand can be separated from the fines suspended in the water used in the washing process. Soils are removed from the water using flocculent thickeners and mechanical plate presses. 75% of the water used is recycled and put back into the jetting system at the front end of the operation. The only by-product at the site is silt. This gets washed out and goes into the main tank and is processed by the centrifuge press and pumped out to the lake. The washing plant process produces up to 1700 tonnes of product a day.

Crushing & Screening

The operation's specialist screening and crushing processing machinery enables the production of recycled soils, secondary aggregates and sub-base materials.

It's a process that can be carried out either on site or at the Soil Washing depot and produces graded materials that are compliant with the specification for Highways Works and European specifications for Construction Industry use and contract specific products.

Two older crushers work with the main soil washing plant, taking the rejects from the plant to crush down to a smaller size. On each of these crushers a plate is put over the grizzly bar and then the jaws are tightened up to get the 10 and 20 mm.

Eco Aggregates soil washing operation at Cole Green



ECO Aggregates soil washing operation at Cole Green



The most recent addition to the fleet at Cole Green is a Sandvik QJ340 tracked jaw crusher that was developed as the Extec C-12+ like the other crushers. In fact this is fifth such machine that BP Mitchell has acquired. It sits separately from the others and takes in C&D waste – anything with hardcore from builders' waste, as long as it's clean hardcore – and crushes it. The resulting Type 2 material can then be sent back out to site again for applications such as bases, use under the slabs or wherever it is suitable.

The latest Sandvik QJ340 crusher is used just for Type 2 purposes so unlike the other crushers, instead of having a plate welded over the jaws it is kept open. Once the material comes out of the crusher it gets loaded on BP Mitchell lorries and taken to applications such as road works. If separate sizes are required, for example if pure oversize for a soakaway is required, the material can go through a screen.

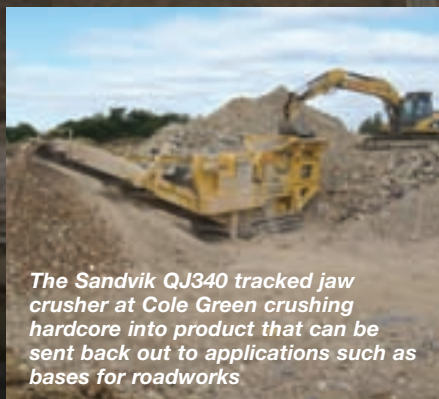
The QJ340 is powered by a C-9 engine that meets all known emissions standards. With its large feed opening and high crushing speed it delivers outputs at Cole Green of 1000 t a day. A reverse crushing action capability relieves blockages and an automatic lubrication system is fitted as an option. At Cole Green it runs continuously from 7am to 5pm 5 days a week. Occasionally it will work a Saturday morning as well. Get a day and a half on a tank of diesel.

BP Mitchell has always preferred Extec, now Sandvik, equipment having found other models hard to use and not so easy to maintain.

The latest Sandvik mobile crusher also offers the versatility to act as a substitute for one of the other crushers at Cole Green if required and the unit can be sent out to site if needed for demolition jobs, etc.

Plant hire is another vital aspect of BP Mitchell's business, and quite often part of the large fleet can be out working in partnership with many associate friends who see BPM as an integral part of their business.

During its visit in September, HUB-4 found the site busy, despite the current economic climate, currently trying to process as much as possible before the autumn and winter sets in making conditions difficult. The site is continuously producing stone for which there seems to be insatiable demand, especially 20 mm, which goes back into BP



The Sandvik QJ340 tracked jaw crusher at Cole Green crushing hardcore into product that can be sent back out to applications such as bases for roadworks



One of the two crushers working with rejects from the soil wash plant

Mitchell's ready-mix division located in the yard on the other side of the field to Cole Green.

And why do people go to BP Mitchell? In Brendan's view it's down to "a well earned reputation is born out of consistently providing good service at a price that's affordable and a delivery record that often exceeds the client's expectations".

Although traditional business values of quality service, reliability and customer focus have been the guiding lights of BP Mitchell's business, they have not been slow to embrace modern thinking when it comes to staff development, health and safety. Great emphasis is placed upon the importance of acquiring professional training and skills for all staff. New operatives are rigorously assessed and must be CITB or CMPE trained in order to work for the company. Site operation staff are fully

conversant with current health and safety regulations, and possess the relevant knowledge to deal with any issues on site.

Having worked with many local authorities and municipal bodies throughout the UK, BP Mitchell's in-depth knowledge of disposing hazardous materials, contaminated soil waste and transporting abnormal loads off site is a positive benefit when faced with such problems.

BP Mitchell boasts an impressive list of clients ranging from Borough Councils to Airport Authorities, from School Projects to Leisure Parks, Local Developers to Infrastructure Projects. The company motto is based on four words - delivering service on site - this is what BP Mitchell, and has been proved by their continuing growth in these difficult times.



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The time is right for waste separation system

With the impetus never being greater to divert waste from landfill with ever tightening legislations, Britania Crest, based in Hookwood, Surrey has recently purchased a new C&D recycling plant from Blue Machinery (London). As one of the South East's largest family owned skip hire and waste recycling companies, it was felt the time was right to invest in a waste separation system to improve the efficiency of their operation. Starting out in 1993, Britania Crest has excelled in providing an affordable and professional service in the collection and handling of local authority, commercial, construction and domestic waste from the Surrey and West Sussex areas.

The long and successful business relationship with Blue ensured that Britania Crest had no doubts as to whom they should turn to for the design and installation of their new C&D recycling plant. Having cast an eye over the various technologies available on the market for a number of years, Britania Crest decided that Kiverco, distributed throughout the UK by Blue, was the best option.

Commenting on the new plant, Director Chris Foss said: *"With an investment of such magnitude, it was vital that we made the right decision and got a system tailored to our needs. As a result, we spend a number of years looking at the various options available to us and decided to go with the Kiverco plant from Blue for a number of reasons. Firstly, we felt that the build quality of the Kiverco was unrivalled. Due to the strong manufacturing, we feel the robustness of the plant will ensure we get better value for money in the long run",* Chris added *"The people at Blue fully understood our operational requirements, displaying their expertise in providing a solution to fulfil our specific needs. Their team were first class from initial design phase through to plant installation."*



The new plant consists of a number of different modules, which are combined to ensure maximum recovery of materials. At the front end, the material is fed onto a 1200mm wide belt feeder, which delivers the material into the Kiverco 835 static trommel. Fitted with 40mm punch plate for removal of fines, the fully enclosed rotating screening drum is 13 metres in length and 3.30 metres in diameter.

The fines then drop down and onto a collection conveyor which transfers the material out of the building and directly onto a Powerscreen Warrior 1400 for secondary screen to produce a 0-6mm soil, 6-20mm stone and 20-40mm for concrete.

A series of free standing feed, transfer and discharge conveyors provide the essential linkage to ensure flow of material through the processing equipment. Space restrictions meant running the picking station at a 90 degree angle to maximise the potential of the building, this is then fed with an incline conveyor directly from the trommel. The Kiverco picking station is fully enclosed with heating and lighting for operatives' comfort and safety.

4 Bays and 8 drop chutes are positioned either side of the picking belt to enable Britania to remove plastics, cardboard, papers and wood. An overband magnet and a blower are positioned at the end of the station for the safe removal of ferrous metals and lights after picking.

Commenting on the early success of the plant, Chris Foss said *"Prior to the installation of the new plant, we used to use our grab to pick of the large items then screen of the fines achieving approximately 67% recoverable. With the new system, we are already seeing our recycleable rate at 95%".*



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TEG finds answer to screening animal by-products



The switch to an excavator-mounted screening bucket attachment from Dig A Screener has provided in-vessel composting specialist, TEG, with a cost-effective answer to the screening of animal by-products at its Hutton site in Lancashire.

As one of the few approved technologies capable of treating animal by-product (ABP) waste, the TEG Silo Cage in-vessel composting system can accept a variety of green and kitchen food waste as well as waste from food, beverage and catering companies, abattoirs and animal processors.

To ensure ABP approval, animal by-product waste needs to be reduced to a specified particle size before being mixed with green waste and feed into silos for composting.

"We handle approximately 100 tonnes of food waste a week here at Hutton, of which a Dig A Screener REMU 600SL deals with the 80% that contains animal waste by-products," commented TEG engineering and development/maintenance manager Craig Wright. "This includes domestic together with commercial waste from food processors including pizza and baked bean manufacturers."

We previously used another type of screener bucket in an attempt to find a viable economic alternative to either a twin-shaft shredder or trommel screen, but that was only partially successful. The Dig A Screener REMU bucket has provided us with a flexible and relatively low-cost screening solution, mounted as and when required, to our JCB Loadall telehandler. It is more than capable of handling the diverse variety of high moisture content materials we receive."

The Dig A Screener REMU SL series is suitable for both wheel loaders and backhoes between 2 and 24 tonnes and excavators from 2 and 30 tonnes. With a choice of screening sizes capable of screening down to 15mm and the ability to handle a variety of materials, they are ideal for all weather/all year wet screening applications.

Paper recycler streamlines with two telehandlers and a wheeled loader

The 4507 telehandler



A waste paper shredding and recycling specialist has recently taken delivery of a pair of Kramer machines to help streamline the handling of some 2500 tonne of material every week.

Pulp Friction of Erith in Kent was established in 1995 and has grown steadily to become one of the South East's leading commercial waste management companies.

The two Kramer machines, supplied by local dealer Hydrex, consist of a 4507 telehandler and an 880 wheeled loader. Both units feature the company's proven 4-wheel steer and 4-wheel drive system, which makes them particularly suitable for operation in confined and difficult access areas such as those found at Pulp Friction's recycling centres.

Commenting on the new acquisitions, co-owner and operations director Ben Cox said: *"We like to use heavy-duty, reliable machines on our busy sites in order to minimise downtime. Also, besides its outstanding manoeuvrability, the*

driver of the 880 has superb all-round visibility which is extremely important where it is based because of the number of operatives we have hand sorting material on the ground."

The 4507 telehandler is also proving to be ideal for its job because, despite its compact dimensions, it is able to place and push waste paper into tall stockpiles, which saves valuable space, and compress material into bulkers to ensure maximum capacity is achieved for transport. As Mr. Cox says, *"It does everything we need at a fraction of the cost of a conventional wheeled loader large enough to perform the same tasks."*

The 880 is the largest wheeled loader in Kramer's range and is powered by a Deutz turbocharged and intercooled diesel engine developing 90 kW (122 hp) and offers a maximum payload of 4200 kg. The 4507 telehandler is powered by a similar sized engine and can lift 3800 kg to a maximum height of 7100 mm and has a useful turning radius of just 3600 mm.

 www.hub-4.com/directory/11647

The 880 wheel loader





EMS growing steadily despite tough marketplace

EMS, the Northern Irish supplier of waste recycling equipment, is reporting steady growth despite the turbulence in the overall economy at present. Harry McCourt, managing director of the company, which engineers bespoke waste sorting systems for the full range of waste streams, said: "The current economic Climate has provided EMS with as many opportunities as challenges".

Having recently recruited a new design team to further improve its product range the company has also developed new equipment to meet the demands of the ever-changing marketplace and can now offer a full 3D CAD design service to clients.

The company has also extended its network of dealers and engineering support staff to ensure its coverage of all areas of the UK for sales and service.

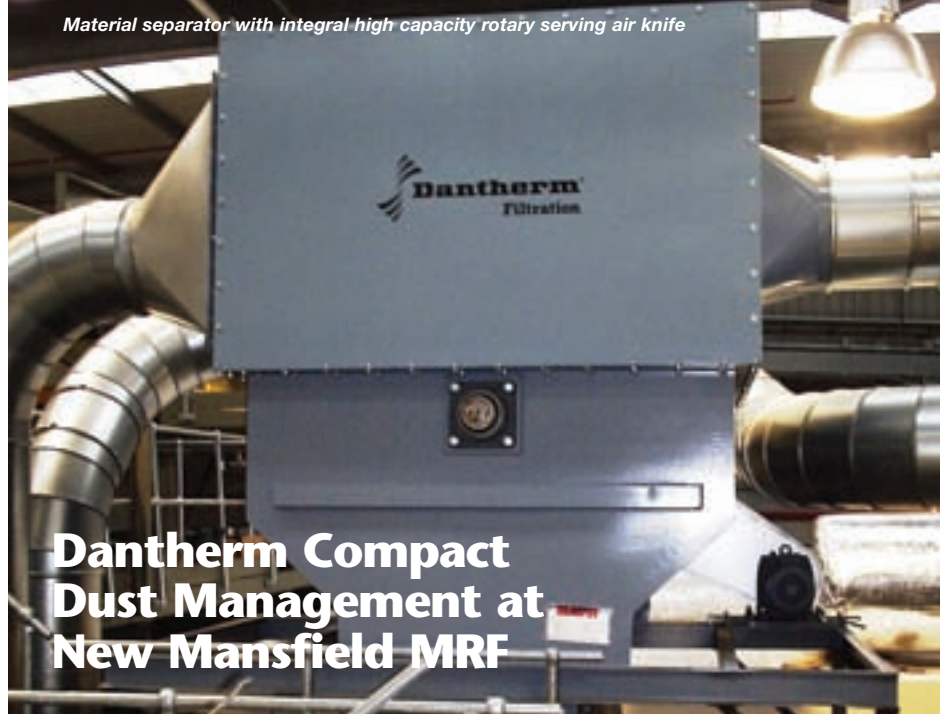
EMS has seen the dividends of its work with plants installed recently for three customers throughout the UK and Europe. At the O'Brien Group in Newcastle, a plant sorts 30,000 tons per year of commingled waste. The installation includes multiple sorting lines, trommel screen and magnetic separators.

At Barr Environmental in Heathfield, Ayr, EMS has installed a plant to cope with 600 tons per week of MSW, construction, demolition and industrial waste. This plant was specially designed for the Heathfield facility and incorporates the input from the civic amenity collection on site. At Mersey Skips Recycling in Liverpool an EMS plant was installed earlier this year to process 500 tons per week of mixed C&D and C&I waste.

The company's most recent installation has been for Timmins Waste in Wolverhampton. The installation for this family run company includes an 823 trommel complete with a five-bay picking station, with both air and magnetic separation. The plant has been designed to suit this city centre site and has received the blessing of local council and planners. The EMS plant has also helped the company land some significant new business.

Further afield, EMS also recently installed its first plant in Portugal for a company handling 300 tons per week of co-mingled waste. The plant includes sunken chain conveyors, sorting station magnets and baler.

Material separator with integral high capacity rotary serving air knife



Dantherm Compact Dust Management at New Mansfield MRF

The Veolia materials recycling facility (MRF) at Mansfield, officially opened on 10th March by the Chairman of Nottinghamshire County Council The Hon. Joan Taylor MBE, is a state of the art waste separation and handling centre housed in a new dedicated building. Through O Kay Engineering Services Ltd., Dantherm Filtration were contracted to provide the necessary dust control measures. As all plant is situated within the building, floor space and headroom were significant factors in the selection of the extraction equipment. Two Dantherm Cyclopac 4Y5 cyclonic dust collectors with a combined capacity of 52,300m³/h, were installed to extract from eight conveyor transfer points and three air knives. These filter units handle the maximum airflow volume whilst occupying only about 3m² of floor space each. The other air knife was served by a separate Dantherm MJB tubular bag filter. Waste from each Cyclopac filter is discharged via a rotary valve into two separate bins fitted with castors for convenience.

Whilst footprint and headroom were key reasons why O Kay Engineering selected Dantherm, they also wanted to use a single supplier for all the dust control needs. To this end, Dantherm also supplied four air knives with dedicated blower fans rated at 1870m³/h each associated with a Dantherm NFV material separator. Nordfab QF clipped and FL ducting, manufactured by Dantherm, was used throughout, extracting from purpose designed hoods for each function. A further requirement was full ATEX compliance for all relevant components. The new filter units, rotary valves and material separators have all been externally tested and carry ATEX EC-Type Examination certificates.

Working in close cooperation with the customer, Dantherm's project team Adrian Sharpe and Chris Mumford were able to supply every aspect of the dust control system unobtrusively to meet the exacting needs of the processes.



Two Cyclopac4Y5 dust collectors occupy minimal floor space



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Baling gets a boost at Smurfit Kappa Recycling

Smurfit Kappa Recycling customers can recycle even more with the installation of a new £500,000 Bollegraaf HBC-120S at the paper reprocessor's Nottingham depot.

The Bollegraaf HBC-120S enables Smurfit Kappa Recycling to obtain environmental benefits and efficiencies. More material can be baled in a shorter time. The density of the bales is greater. This provides efficiency gains in handling, storage and transportation of the material to the company's paper mills in Blackburn and Kent.

Materials that were traditionally difficult to bale, such as tri-wall cardboard, can now be handled there thanks to the new baler's pre-shredding unit. Further benefits are offered by the incorporation of a pre-press flap, which requires less maintenance than a traditional shearing mechanism and results in more uniform bales that are easier to stack and transport. The baler also features an advanced safety system and touch screen technology.

"At Smurfit Kappa Recycling we are always looking for ways to improve environmental performance and customer service. This new baler has made our processing times quicker and given us greater capacity and flexibility to help businesses and councils in the region to recycle all kinds of material," said Gary Grant, UK operations manager.



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Mid UK Recycling takes delivery of the UK's first CR 225 -10 LT pre-shredder



Eleven weeks after receiving the initial inquiry from Chris Mountain – MD of Mid UK Recycling, Metso Lindemann delivered the first tracked mounted CR 225 -10 LT pre-shredder to a UK customer. Chris Tressler, UK general manager, recalls an e-mail was received from Chris Mountain requesting information and prices of Metso's pre shredders. A summary specification and budget price was sent followed up with a site meeting. A formal offer was submitted, a visit to Germany was arranged by Dirk Schrader, product manager, Metso Lindemann GmbH, to see

machines in operation and the contract was agreed at the airport before returning to the UK. The machine arrived on site at 1.00pm on the 29 April this year and went into operation that afternoon.

After being in operation for one month additional operator and maintenance training was provided by Metso Lindemann to ensure the Mid UK Recycling staff, were fully aware of how to keep the pre-shredder in A1 condition so the performing remains at the optimum level.

The machine combines the waste recycling capability of the Metso Lindemann CR 225 crusher with the mobility of the track-mounted rock crushers manufactured by fellow Metso Construction Group.

Weighing in at 42.5 tonnes, the CR 225 LT is powered by a 415 kW Caterpillar C15 ACERT diesel engine that meets all known emissions regulations. This power unit is fuelled from a 1,350 litre tank that provides sufficient fuel for several days' operation without refuelling.

Metso's pre-shredder is carried on a track-mounted chassis that is based upon the LT1213 rock crusher and allows the machine to manoeuvre quickly and efficiently under its own power.

At the heart of the pre-shredder is a CR 225 crushing unit that features two counter-rotating rotor blades that revolve up to 40 times per minute. The rotor discs are made of extremely wear resistant Lindur steel. The special geometry and the combination of rotor and stator tools result in a sturdy anchorage and the selective crushing of abrasive parts up to a length of 150 mm while delivering a throughput of 30- 50 tph.

The self-sufficient crusher is designed for optimum operational flexibility as a universal pre-shredder for all kinds of waste with outstanding performance and throughput and can be integrated into a static recycling facility or can form part of a short-term rental fleet. The CR 225 LT is designed for both difficult terrain and extreme gradients, as well as for difficult materials, such as mattresses, carpets, railway sleepers, tree trunks, and even thick paper rolls. Chris Mountain says the machine has coped with everything Mid UK has thrown at it.



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Exhibition and Event Management Services

SHOWPLACE

Showplace is a leading provider of exhibition and event management services offering a unique turn-key solution to all its clients.

Established in 1987, Showplace has been at the forefront of helping to deliver a wide range of projects for the construction industry at all UK and European shows. Through a progressive programme of innovation and development, Showplace is able to offer clients a wide range of exhibition and event services.

With an enviable history of working in many different disciplines from Cowes Week to Wales Rally GB and including events such as SED, Hillhead and Bauma, Showplace has built a fundamental understanding as to how successful events should be run.

For the last 22 years Showplace has worked for some of the leading players in the construction industry helping them to attend all the major shows and exhibitions. Through a range of our own temporary, modular structures known as 'Icons', Showplace has developed a great understanding of how space should be used and the best way to deliver a project. Starting with the client's core objectives, Showplace works closely with each client to fully engage with the whole ethos of the project. This enables us to deliver exactly what the client wants each time and within budget.

As no two events are ever the same, one of the cornerstones of our own philosophy is to try and advise each client on the best way to deliver their exhibition or event. In the current economic climate more "bang for your buck" is the driving force for most customers, so we have recently been looking at ways to deliver more re-useable solutions.

Early planning and getting suppliers involved is a key point when trying to keep within your budget and time scales. Allowing sufficient time to find alternative suppliers and options is vital to your success. The design and understanding of how it will all come together is an area that Showplace has fine tuned over the years.

With a state of the art computer programme to design the stand in front of the client, any changes may be made instantly allowing them to have full input into the project. Some of the most important points that should be made clear from the start include deciding on key priorities for allocation of budget and the main objectives to be achieved from the event. All this information will dictate how your stand should be designed for you and will help maximise the number of visitors.

Showplace can offer clients as much or as little help as they require. After compiling a shopping list of products that would be suitable for their event, we work closely with each client to help allocate their budget wisely. In most cases, it is even possible to come under or within the budget set out - once you know how - it's easy!

If you would like to know more as to how Showplace can help your company deliver its next event or exhibition, please have a look at our website www.showplace.uk.com and call Will Stuart on 01789 262701 for an informal chat.

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Flexibility and Fixed Costs are a Winner for WRG

Waste Recycling Group (WRG) is one of the country's leading waste management services companies with over 100 sites located across England, Scotland and Wales. The range of equipment it operates requires exacting health and safety procedures, and the need to ensure homogenous training standards for its workforce can present a particular challenge according to Group Training Manager Derek Chatting. Since teaming up with Mentor Training 18 months ago, however, a framework for consistent national training delivery is now in place, enabling WRG to easily monitor the frequency and costs of provision throughout the group.

"We have over 300 pieces of machinery, a very wide geographical spread, and a personnel count at our sites ranging from just a couple to over 200," says Derek, "so when we decided to outsource some of our training, any chosen provider was going to have to offer excellent availability of instructors, fast response times, expertise and flexibility. Having compared what was on offer from a number of companies, we found Mentor best equipped to fulfill all of these requirements. A considerable added benefit of Mentor's service is also its set daily rate. Fixed charges with no hidden extras make for realistic costings on our part."

Mentor worked closely with WRG to develop a combined model whereby Mentor delivers training, and WRG has its own assessors in place for the inspection of the core pieces of machinery such as waste compactors, wheeled and

tracked excavators, bulldozers, dumpers and tractors. From Derek's point of view, this partnership has created a system that ensures all WRG sites are working to the latest industry standards and legislation and in terms of best practice is hard to beat.

The frequency of training is naturally driven by operator need, but taking into account new applications and refresher courses, Mentor staff are likely to be present at some WRG sites on any given day of the week. This ready supply of instructors at any location is an advantage compared with other providers – Mentor aims to ensure training within two weeks of a customer application, and WRG has been no exception.

The experience of Mentor's instructors means that personnel dealing with any new applications, such as a number recently encountered at WRG's Buckden Landfill site, are quickly trained up for the task. Derek has also been very impressed with Mentor's flexibility: "If we need an instructor at the last minute, Mentor will go that extra mile to provide this."

Derek sums up: "Thanks to our collaboration with Mentor, we have established a transparent and strategic approach to our training requirements. Our operators are trained to accredited standards by a company that delivers nationally and at the right price, keeping everyone happy."



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Extending equipment life with Biolubricants

Cliff Lea of Fuchs Lubricants examines the protection of hydraulic equipment and potential extension of unit life by use of biolubricants

Hydraulic equipment is ubiquitous in both manufacturing industry and construction, indeed, as staff numbers employed in engineering have declined, numbers of hydraulic power packs and hydraulically operated equipment seem to have increased. Many of the operations previously carried out by people are now carried out by hydraulically powered operations, most noticeable in the automotive industry. Indeed, 'Fluid Technology' has been a rapidly expanding industry, and its percentage growth has outstripped that of engineering itself.

Hydraulics describe the transfer of energy and signals through fluids. It transfers the power to drive, control and move. Hydraulic fluids based on mineral oils, synthetic fluids and fire-resistant fluids are used in all types of machinery and equipment. Hydraulics are a part of everyday life. There is hardly a machine or aircraft which operates without hydraulics. Hydraulic component manufacturers supply nearly all industries including the agriculture and construction machinery sectors, conveyor technology, foodstuff and packaging industries, woodworking and machine tools, ship building, mining and steel industries, aviation and aerospace, medicine, environmental technology and chemicals. Many of these industries are leading players in the global market. Fluid technology makes a significant contribution to the competitiveness of these industries. The innovative development of hydraulic components and systems using the very latest materials, lubricants and electronics give technical developments new impulses.

The field of fluid technology and therefore hydraulics is divided into hydrostatics and hydrodynamics. In hydrostatic systems, the transfer of energy requires static pressure. In hydrostatics, pressures are high but flow rates low. In hydrodynamic systems, the kinetic energy of flowing fluid is used. Pressures are low but flow rates high. Fluids designed for hydrodynamic applications are known as power transmission oils and fluids for hydrostatic applications are known as hydraulic oils. The fluid is the most important element in hydrostatic and hydrodynamic systems and must be treated like a machine element in the planning, realization and commissioning of hydraulic systems.

Impact of fluid chemistry on equipment life

Whilst engineers are well aware that the condition of hydraulic fluids has an enormous impact on pump and system life, ie, particularly water and dirt contamination, particle count, etc., what is little known, is the impact of fluid chemistry on the performance and lifetime of the hydraulic equipment itself, and as we move deeper into the credit crunch, it becomes more important to ensure the correct and even improved design life of hydraulic systems.

A recent case study with new types of hydraulic fluids showed exactly how that design life could be improved, and therefore total overall costs could be reduced. In this study, the usual high performance mineral oils used in hydraulic systems was replaced by chemically different fluids derived from renewable resources. The fact that the materials used were not just modern generation synthetics, but actually derived from renewable resources, makes this a much more interesting Case Study in today's world of uncertain oil futures. These were not just vegetable oil based biodegradable fluids, but were special 4th generation fully synthetic bio-ester based materials, and developed to have both long life and to give much greater anti-wear protection.

The test bed was the hydraulic systems fitted to a variety of equipment used in excavation and construction at the Eden Project in Cornwall.

The Eden Project has quickly become one of the most popular paid-for attractions in the UK, attracting over 1.5 million visitors a year. It had been constructed within Europe's largest china clay quarry and area, which until the arrival of Eden, presented one of the largest regeneration challenges in the UK. Following this regeneration, the

The Eden Project's world famous biomes

centre has become renowned for its enormous biomes, recreating climatic conditions from around the world; the humid tropics biome is said to be the 'largest greenhouse in the world'.

In particular, one of Eden's aims is to demonstrate the many uses for plants and harvestable resources. The use of biolubricants derived from renewable resources fits well with the Eden Project's prime purpose and vision.

Eden was invited to carry out a Case Study in partnership with the National Non-Food Crop Centre, Fuchs Lubricants, Robert McAlpine and Highway Plant to assess and show the use of biolubricants manufactured from harvestable and renewable resources in the equipment in use on site. The aim of the project partners was to show the benefits of this type of lubricant, to show that lubricants derived from crops did indeed fulfil all functions, and to highlight the environmental and sustainable development benefits to a wide audience.

In particular, the case study looked to assess the improvements possible with the very latest generation of biohydraulic fluids, above and beyond benefits when using usual high performance mineral oils.

The project was run during the construction of a new Education Resource Centre; a building which

exemplifies all of the elements of sustainable construction and design. The Eden Project and Fuchs Lubricants identified the opportunity to demonstrate the use of plant based hydraulic fluids in machines used during the construction phase. The use of these lubricants had already been successfully used in vehicles used on site and the new construction project enabled demonstration of their use to the public during the building stages.

Performance advantages

It's been possible to use materials from renewable resources for the production of lubricants from the earliest times, but for the last 100 years, mineral oil based lubricants have predominated. However mineral oil has poor biodegradability, greater persistence in the environment and more pronounced toxicity and the search for greener fluids for the more environmentally demanding applications started over 25 years ago.

A return to use of vegetable oils was an obvious start, but for higher performance, and certainly for the majority of applications, the use of fully saturated synthetic esters, derived from harvestable resources, has proved highly successful in recent years. Product formulations have therefore been developed, trialled and put into service for almost all lubricant applications, and

indeed, some of the performance pluses give pronounced advantages; such materials are even used for racing and competition activities.

These esters give distinct performance advantages including:

- High load carrying abilities – excellent anti-wear character
- Excellent Coefficient of Friction – energy saving benefits
- Low toxicity – high level of safety
- Natural multi-grade properties
- Good solvent powers for additives
- Low evaporation rates – low emissions
- Feedstock for high performance synthetic esters
- Rapid biodegradability – environmentally favoured
- A renewable, harvestable resource.

In particular, their load carrying ability and extremely low coefficient of friction have ensured special consideration in formulations. They also have low evaporation rates ideal in some applications and the have natural 'Multigrade' characteristics and therefore offer benefits where there are significant variations of ambient temperature. ►



IMI Excavator, using saturated ester-based biohydraulic fluid, Plantosyn 46HVI



Merlo using saturated ester-based biohydraulic fluid, Plantosyn 46HVI

For these reasons, selected oils, with appropriate additive treatment, have enjoyed niche usage enjoying these performance benefits, even in the face of lower cost and more thermally stable mineral oil derived products. After further refining and modification, downstream esters from vegetable oils have even greater advantages and such materials are preferred for highly stressed and high temperature applications. Indeed many are used simply for their advanced performance characteristics – their use for formulation of speciality racing and competition lubricants is one prime and well-respected area.

A more recent driver for introduction of biolubricants however, has been the sharp cost increase for mineral oils. It is clearly important for UK companies to look at using indigenous, renewable resources in view of the growing trade imbalances and the severe predictions for the future.

The future uncertainty of mineral oil based lubricants is currently causing concern in the market, with obvious positive implications for harvestable resources. One of the important advantages for crop based lubricants is the much lower coefficient of friction, which can lead to the reduction of energy for almost any equipment using biolubricants; energy savings in operation is an attractive benefit.

Case study: test equipment

Approximately 60 pieces of equipment were selected at Eden to use the new hydraulic fluid, but as an extra feature, a number of other biolubricants were also used, including engine oils, transmission fluids, and bearing greases.

Oil condition monitoring

A major aim of the Case Study was to show the use of latest generation hydraulic fluid derived from renewable resources. In particular, the project aimed to track oil and equipment condition over an extended period of time in stressed applications, within the very dusty and demanding atmosphere of the Eden Project construction site.

Indeed, this site was known to be a very stressful area for lubricants. The Eden Project was developed in what had previously been the

largest china clay quarry in Europe, a despoiled and dusty landscape, which had made construction on the site a major undertaking. In particular, china clay dust itself is a major abrasive substance, causing considerable damage to equipment when entering lubrication systems.

The severely abrasive qualities of china clay are well recognised in the extractive industries: Roger Powell, Highway Plant, who had contracted a number of items of construction equipment to Eden, said that: *"China Clay is recognised as the most invasive and damaging of all quarry dusts, and causes severe damage when entering oil systems."*

Samples of oil were taken at regular intervals and submitted for laboratory analysis. None of the test hydraulic fluids were changed during the two years of the trial and no mechanical problems were been reported.

Tests tracked changes in the viscosity, checked for cross contamination from dust, dirt, water, etc., and carried out particle analysis. As a monitor for any wear occurring within the equipment, analysis was also carried out on all major metals picked up by the oil, including common wear or corrosion components from ferrous, copper based alloys, aluminium, steels, etc.

With completion of all oil condition monitoring tests after two years, it was clear that when compared to mineral oil base fluids of DIN 51542 Class HLP and ISO 6743-3 Class HM, the fourth generation biohydraulic fluids showed high stability, and extremely low wear rates.

Results: comparison with mineral oil

The condition monitoring results over the period of the test showed that the crop-based fluids give a high level of protection, with extremely low wear metals detected in the oil, despite the equipment operating in highly destructive quarry / china clay environment.

Compared to similar equipment operating with mineral oil, the levels of wear metals such as Iron, Chromium, Copper and Aluminium were a factor of typically 10 times lower. This suggests that equipment life may be considerably extended by the use of biofluids from renewable resources, over the use of mineral oils.



Education Centre under construction

Conclusions

New, fourth generation plant-based hydraulic fluids have been trialled during an extensive Case Study in very dusty, demanding conditions during the new construction phase at the Eden Project. The trials have been extended over 2 years. Results show these fluids give excellent and dependable performance and with total absence of mechanical problems reported.

More significantly, the test equipment showed extremely low metal wear rates, a factor particularly commented on by the test laboratory – and the fluid outperformed results obtained with mineral oils by a considerable factor.

Wear rates using the crop based lubricants were at a factor of typically one tenth of those using standard quality mineral hydraulic fluid.

Oil condition in the hydraulic systems continued quite satisfactorily and without need for change.

It is clear that such low wear rates for equipment operating in stressed conditions will give a major boost to equipment operation, and results suggest that there is considerable potential for extension of equipment lifetime, offering considerable cost saving benefits.

With the increasing dependence on hydraulic equipment, and the increasingly sophisticated nature of this equipment, the benefits from these advanced fluids can ensure satisfactory and improved lifetime, and potential cost savings.

LUBRICANT	EQUIPMENT	Iron (Fe)	Chromium (Cr)	Aluminium (Al)	Copper (Cu)	Lead (Pb)
Mineral Hydraulic Oil (ISO 6743-3, HM VG 46)	Shovel	25	5	8	25	10
	Excavator	35	13	13	35	15
Biofluid (FUCHS Plantosyn 46HVI)	Barford Dump Truck	1	0	1	1	0
	IHI Excavator	3	0	0	1	0
	Merlo Telehandler	5	1	1	4	0

Comparison of wear metal, ppm, within the oil over the life of the trial. Shows considerably lower wear rates with crop-based oil, compared to typical use of mineral oil, even operating within the destructive and dusty conditions at Eden.

FOOTNOTE: Acknowledgements:

The author would like to acknowledge the contribution played by all partners in this project: Eden Project – project co-ordinator, National Non-Food Crop Centre, Sir Robert McAlpine Ltd., Highway Plant Ltd.

Photographs by kind courtesy of the Eden Project

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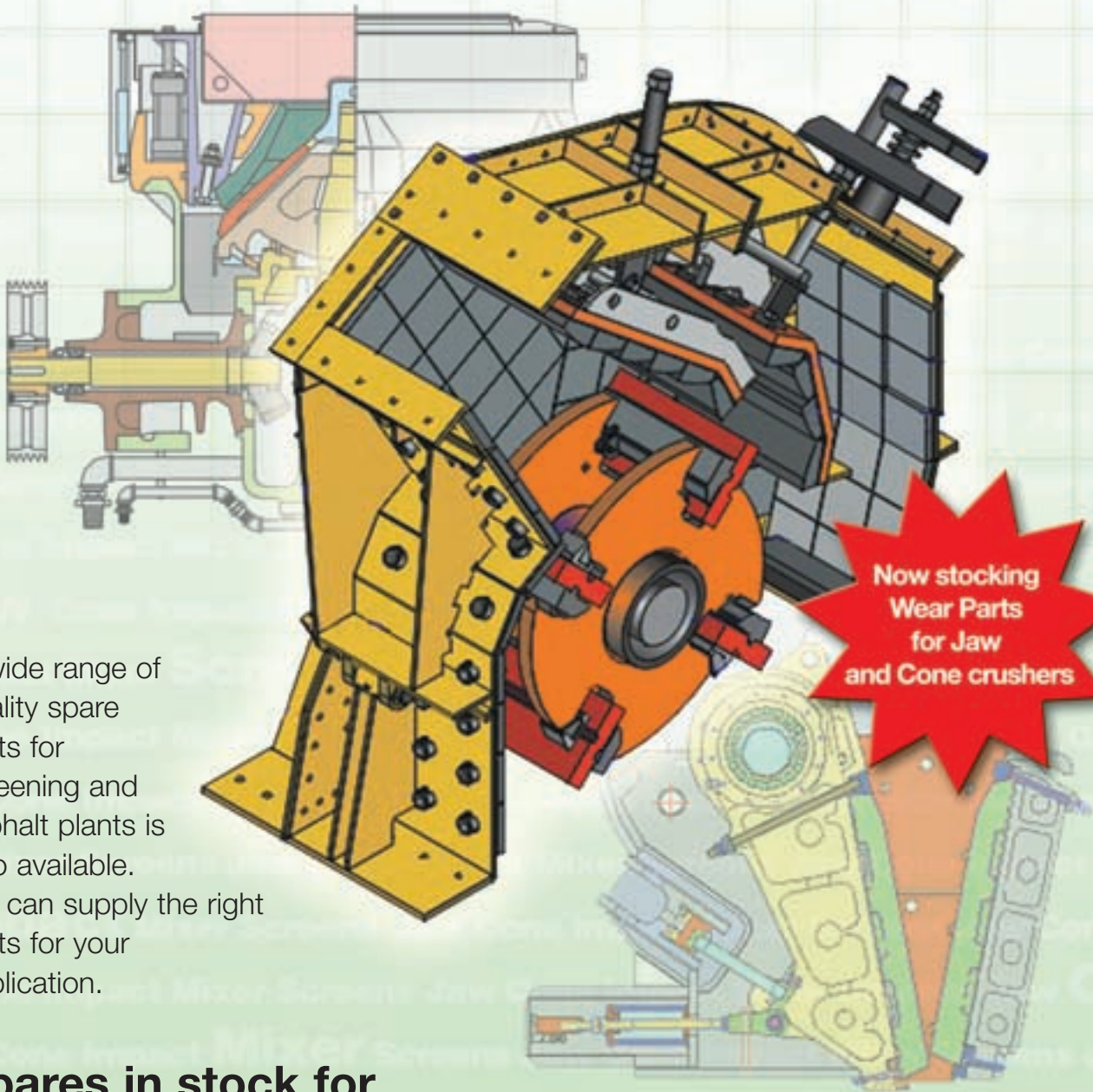
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The In Touch lone worker system gives added protection in safety critical industries

Protection within the lone worker environment

The recent slowdown in the construction industry has inevitably led to the dramatic pruning of workers within quarrying and an increased number of sites have been reduced to a physical one man operation. This situation means some workers may be practically on their own from unlocked gates in the morning to closing them at night.

Responsible employers realise they have a duty of care to protect their lone workers from injury or worse and a cost effective method must be found to help the employer to at least be alerted if there is a problem on site. There is no future in ringing the lone worker every 10 minutes to ask if he is alright, far better a system which will alert the employer if something has gone wrong. Indeed it is clear that many companies now have a culture so strongly biased to the care of the employer, and the safety responsibilities of the employee following training, that accidents rarely occur. However, the duty of care is still there.

In Touch has for many years provided its customers in quarries and sand operations with a lone worker alarm system which assists in protecting worker's who may be away from the main group. In the situation where In Touch provide the radio system to site, this is provided free of charge, and the system is reported to work well. The lone worker radio can of course be used as a normal radio when the lone worker requirement is not needed. This traditional system requires the employee to carry with him a hand held radio programmed with a delay agreed with his senior manager on the same principle as those in larger quarries.

This amounts to a period of time from five minutes to an hour, so that after the elapsed period, the radio emits a tone to the user, which if not cancelled, will send a signal to the rest of the radios that there may be a problem.

In Touch has now developed a new method of helping to protect the lone worker. It is particularly suitable for quarries and concrete plants, which are one man operations.

With the new system, the hand held radio sends the alarm signal to a base radio in the batch cabin, or the weighbridge, which is linked to a stand alone auto dialler linked to a BT landline, which will then send a pre-recorded message of your choice to up to four telephone numbers of the Manager's choice which should all be within fairly easy striking distance of the site. It is clear that there must be strong commitment from the worker, as false alarms would be frustrating and time consuming.

The cost has been deliberately kept to a minimum, but always with effectiveness in mind. All that is required is a licence to operate the radios, two radios, and the autodialler, which can all be supplied by In Touch. The system is in the final testing stage, and will be installed into customer's sites shortly.

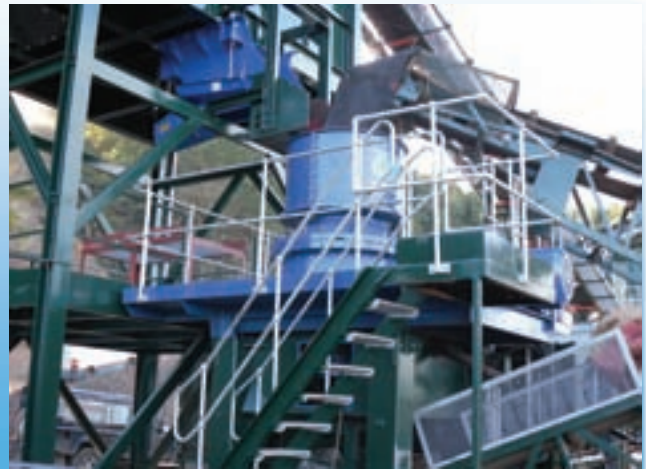
In Touch believe that this will greatly assist organisations to protect their lone workers, whilst keeping costs to a minimum and maintaining a high standard of health and safety.



www.hub-4.com/directory/435

Kinegar Quarries Ltd Install & Commission QMS B3 Cone Crusher

Kinegar Quarries Ltd, have taken delivery of a B3 Cone Crusher from Quarry Manufacturing & Supplies Ltd (QMS). The B3 Cone comes complete with a C3 control, giving Kinegar Quarries Complete Crusher Control. The B series cone crusher from QMS uses the latest in PLC control and remote touch screen operation. The robust touch screen can be mounted in the control room or even on the manager's desk. Connection can be made by WiFi or can be hard wired via Ethernet connection.



The remote touch screen gives Kinegar Quarries full process control, and displays continual real time monitoring of all aspects of the B3 crusher, logging all events and alarms. The operating hours of the B3 can be seen at a glance, both on and off load. Energy costs can be calculated as the C3 records Kilowatt hours used. The touch screen PC also stores PDF versions of all operator manuals, spare parts lists, and electrical layouts. C3 includes the main and auxiliary starters, excluding the need for any third party electrical equipment. As C3 is an integrated part of the crusher system it eliminates all of the local electrical installation work. The only requirement is for power to be connected.

The QMS B3 cone crusher meets exacting quality demands, producing material of excellent shape and high quality. Setting adjustments can be made during production in seconds. The unique hydraulic system provides automatic overload protection, by allowing the head assembly to drop, permitting non crusher able items such as tramp metal to pass through the chamber. The system will then automatically return the head assembly to its original position. The unique design of the hydraulic system means the B3 crusher operates at a definite setting with less setting drift and greater stability.



Kinegar Quarries have chosen the B3 cone crusher for its robust design and high performance. The combination of high motor power, large eccentric throw and higher speed in most cases gives the B3 greater crusher capacities than other crushers of comparable sizes. The B3 cone offers capacities of up to 230 tons per hour, with crushing chambers to suit all product requirements. The B series cone crushers, puts QMS at the forefront of crusher technology.

Samplers for cement and aggregates

How to select and use automatic industrial samplers for the quarrying and cement sector



Belt sampler in action

Automatic sampling is defined as the use of a mechanical device to remove a representative sample from a product flow and direct it either to a manual collection point or into an automatic collection cabinet. The auto collection system provides for preset adjustable timers controlling the number or duration of samples. An inbuilt control flexibility provides for a manual operation override and the facility to change the collection receptacle, type and quantity to suit specific applications.

Sampling Requirements

Once the sampling parameters have been determined and the equipment selection matched to the requirements, it is imperative that the user is confident that the equipment is fit for purpose in three key areas:

- **Representative Sample** – which must be obtained at the same frequency by the same method and at the same location.
- **Repeatable Sample** – where it becomes vital that the samples are collected in the same way at a predetermined time cycle.
- **Reliable Sample** - the quality of the sample is not only about representation and repeatability but the equipment is rugged, fit for purpose and can be easily operated and maintained.

Sampling Standards

Without going into individual national requirements, the reference to the ASTM standard is to highlight the fact that

sampling of Cement and Aggregate has been defined by the Society in North America and has also been adopted by other countries, thereby providing a common quality assessment template. Naturally, there are alternative standards developed within trading zones such as the ISO in many parts of Europe or in individual countries where the state legislature or even weather patterns can impact on the sampling arrangements adopted but for the purpose of this study the standard followed is the ASTM. For reference the ASTM standard defines the following sampling conditions:

- **Condition A - Stop Belt** is a basic instruction that relates to the removal of a sample, manually or mechanically from a belt in a failsafe stop position.
- **Condition B - Crosscut** – See detailed explanation below.
- **Condition C - Strip** - See detailed explanation below.
- **Condition D - Quartering**. This is the least representative way to take a sample, this is an old method, which is rarely if ever used. The procedure was to take a front end loader scoop up some material from a product pile, dump the material on the ground, then a QC operator would take a quarter section of the pile on the ground, assume it as being representative and endeavor to carry out an analysis confronted with all the vagaries of particle separation.

There are automatic options available and ASTM conditions B and C are fully met by the range of equipment supplied by InterSystems and the Wrights Dowson Group. ►

Sampling Methods

When carrying out an investigating in the use of sampling, the cement and aggregates sector, like any industry are confronted with the issues of sampling requirements and the adoption of the requisite standards but determining the most suitable way to carry out the tasks develops within an industry over many years. The key points to be looked at, albeit briefly, are, to determine what materials are being processed and why are they being sampled, where is the most suitable location for sampling and by what specific method should the samples be obtained.

Typically, using Condition B - Crosscut will entail sampling being carried on belt conveyors for raw materials in quarries such as limestone etc, and in raw meal plant at gravity chutes, hoppers and spout locations. In conveyor terms, to meet the ASTM condition 'B', it is necessary to know the conveyor incline, belt width, belt speed and throughput, together with an awareness the following factors:

- Belts from 600 – 1800 mm.
- Mounted anywhere on the belt.
- 35 degree idlers.
- Sample cutter (3 x std. particle).
- Tip speed 6.0m /sec.

It is worth noting that the sample cutter never touches the belt. As the sectioned drawing in FIG. 1 outlines a typical belt sampler set up and shows the relativity of the key components, conveyor belt and the method of automatically directing the sample to collection.

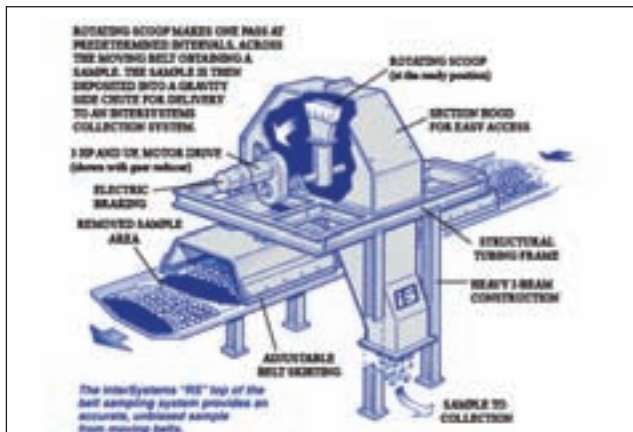
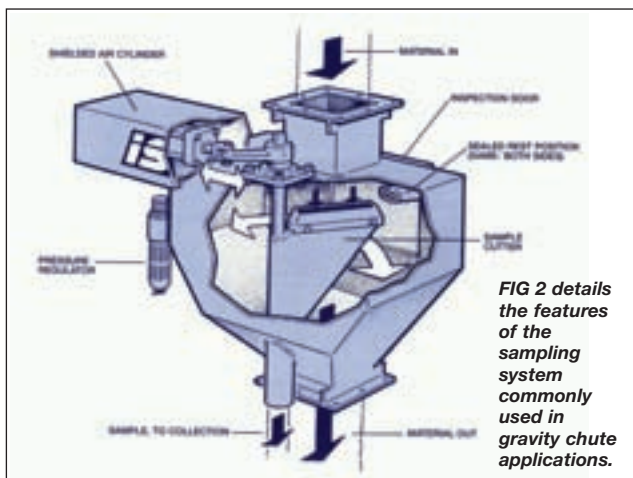


FIGURE 1 Outlines a typical belt sampler set up and shows the relativity of the key components, conveyor belt and the method of automatically directing the sample to collection.

In the Cement industry the ASTM 'B' condition also relates to use in gravity chutes and spouts and typically supports the sampling of raw meal. The InterSystems equipment widely specified in the industry is the type GRA/GRE cross cut sampler or a GRES derivative where sloping wall chutes are used. FIG 2 details the features of the sampling system commonly used in gravity chute applications.



For an ASTM C - Strip sampling condition, the equipment is closely defined for use with clinker and finished cement with the samplers located in gravity spouts, pneumatic

conveying lines, air slides and load out chutes both rail and truck and at belt ends. The operating specification allows for material sampling up to 75 mm the arm actuation is either by air or hydraulic control with a stroke range of 300-1370 mm. The sample arm rotates through 270 degrees.



Sampling system

Sampling Equipment

Over the years as the technical, legal and operational aspects in industry have changed then the sampling equipment has correspondingly evolved and a 'one fits all' culture has sharply reduced. It can be noted that a whole range of industrial samplers such as the types PS, PT, HD-PRT, PRT etc. are used for strip sampling whilst the GRS/GRE models cover the demand for cross cut sampling. Like the long standing InterSystems – Wrights Dowson Group relationship, the development of an understanding has led to a multi faceted approach to sampling problems and it is found that in most industries, including Cement & Aggregates, that inevitably where greater sophistication is a pre requisite a new solution is born. It is in striking this balance that the extensive range of InterSystems Inc, equipment comes to the fore.

New Developments

Naturally, like many other industries the aggregates and cement sector continues to be exposed to new technology, and developments in particle sampling and analysis are no exception. But, there is a question that must be raised, because it is relatively new, late 1990s, and uses the latest in ultrasonic or shape analysis techniques, is it the complete answer?

In Australia, the Materials Board has recently issued a standard, AS 1141.11.2 detailing the use of a Vision Sizing System (VSS), ie, a high speed video camera linked to a computer, which ultimately provides a typical particle size distribution analysis in such a way that it produces comparable results to laboratory sieving. Vision sizing equipment installed at a major Quarry in New South Wales works in conjunction with a belt sampler operating to the Australian standard (AS 4433), which removes the required sample from the belt for electronic vision analysis. There is a written claim that the moisture content can also be obtained from a VSS but whether the chemical content and density is also obtained in the same way has still to be determined.

It appears to have taken a long time to move into the electronic era but still there is a requirement for an electro mechanical device like the InterSystems RS to present the sample. It is also a long way from the ASTM conditions for Quartering or Stopping a Belt to take a sample but innovation, in the VSS – Computer Analysis - Electro Mechanical Sampling will find a way, and it might not take 10 years.

Wrights Dowson Group continues to manufacture and supply Screw Conveyors, Feeders and assorted bulk handling equipment from its factory in Gamlingay, Bedfordshire. Another facet of its capability came about during the 1980s, when Wrights Dowson identified a growing need for a controlled, traceable, quality assessment of a wide range of 'in process' bulk materials.

In 1988 it resulted in the Wrights Dowson Group becoming a distributor for a major North American equipment manufacturer, InterSystems Inc, for their complete range of Industrial Samplers. This strong, continuing relationship between the two companies has enabled Wrights Dowson Group to build a global reputation along side InterSystems in the development and supply of powder, liquid and industrial automatic samplers across a broad swathe of industries.



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Global News and Information on the Bulk Materials Handling, Recycling and Quarrying Industries

A good mix

What is the influence of the mixing process on the performance of speciality concrete?

The goal of any mixing process is to achieve ideal homogeneity. A mixture can be said to be homogeneous if all components are balanced in their concentration. A great many requirements must be met when manufacturing concrete in particular high performance concretes (such as Very-High Performance Concrete (VHPC), Ultra-High Performance Concrete (UHPC) and Ultra-High-reinforced Performance Concrete (UHPFRC)) due the multiple components and recipes that make up such materials. There are many regulations that relate specifically to these components and structures but there are little or no binding standards for the process with which these materials are bought together - namely the mixing of the concrete.

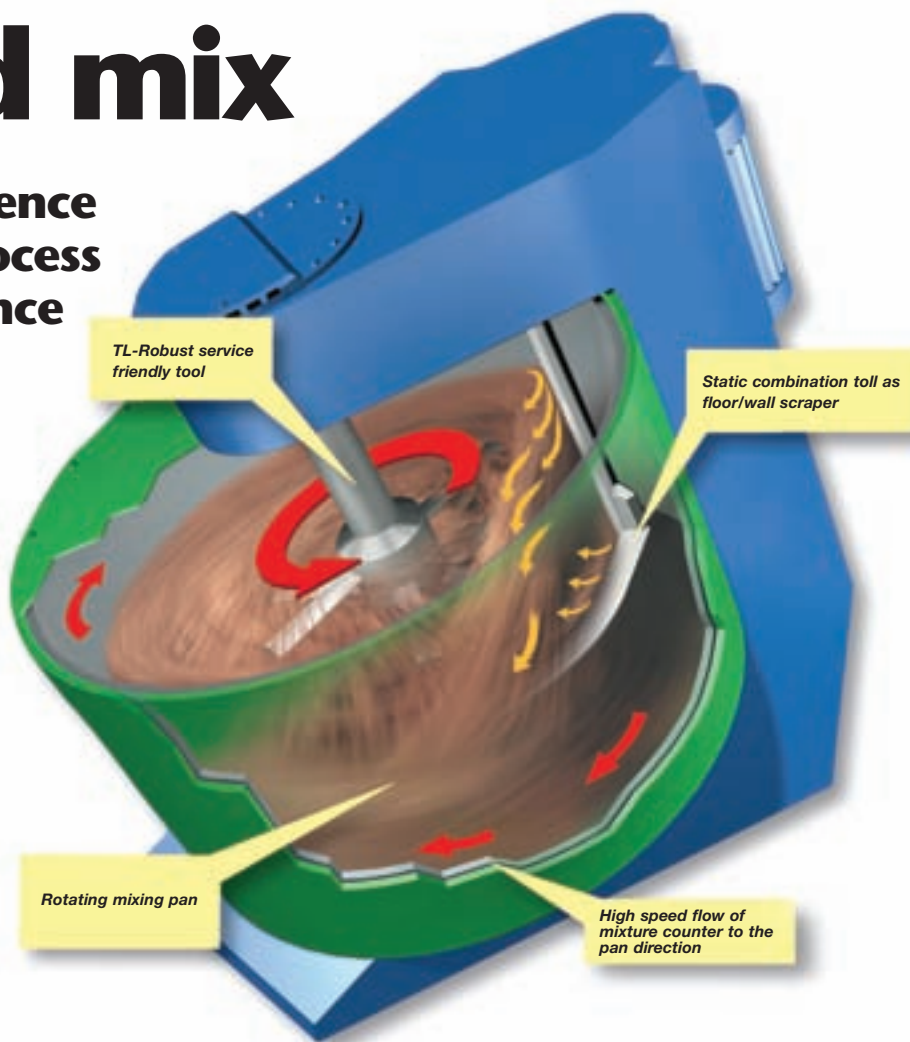
Traditionally the concrete industry has through the years adhered to conservative technology in the form of either Ring Trough or Planetary mixers. In most cases the decision to stay with this technology is to the greater extent driven by the relatively lower capital costs of such machines compared to the more advanced generation of rotating tilted pan mixers of the type manufactured by Eirich. However, with the development of speciality concretes it has been proven that this modern mixing technology is key to the manufacture and future development of these materials.

Mixing process

In a mixing process all raw materials should be mixed with one another in such a way that they are evenly distributed in the final product. Three factors are of essential importance for achieving the best homogeneity:

- Mixing time
- Mixing tool speed
- Mixing tool

The mixing time will be determined by the design of the mixer so that sufficient mixing can take place. This equates directly to the amount of energy that is transferred into the mix. Too little energy will result in an incomplete mix diminishing the properties of the composition that would otherwise be possible. This is particularly relevant to UHPC concretes, which require a longer mixing time compared to normal concretes. Equally over-mixing would



have similar negative consequences.

As with the mixing time the rotational speed and design of the mixing tool(s) is also dependent upon the type of concrete. As the speed increases so does the energy resulting in better homogenisation. However if the speed is too high the temperature of the mix can be adversely affected. Similarly speed is also a main contributor to wear and consequently wear life of the mixing tool can be compromised by running at too higher tip speed than necessary.

Much importance is given to the speed and design of the mixing tool but these cannot be looked at in isolation to the general design of the machine and in particular the efficiency by which energy is transferred into the mix. As we have already seen there is a direct correlation between speed, energy and homogeneity.

The properties of the concrete are only possible if sufficient homogeneity of the mixture is achieved. In order to control the mixing process and to achieve a good mixture, it is necessary to control the input of energy. With traditional mixers which move the mixing tools through the mix it is difficult to control the energy input due to the need to overcome the friction developed by the tools. Furthermore, with the rotation of the pan all the material is transported to the mixing tool ensuring maximum displacement of the complete mixture every revolution of the pan. A special feature of this type of mechanism is that the transport of the mixture is decoupled

from the actual mixing process. This separation allows speed variation of the mixing tool and hence control over the input power into the mix can be varied.

With the tilted pan mixer it is possible to control the input of energy since very little friction and wear occurs during the mixing process. Thus, the input energy of the mixing tool is therefore directly equated to the energy necessary for mixing.

Summary

With the development of multi-component speciality concretes precise control of the mixing regime is paramount in achieving reproducibility between mixes. Such parameters, which in the past have been difficult to achieve with conventional pan mixers, are now possible with the tilted pan mixer. The prospects for all speciality concretes is enhanced providing that adequate homogeneity of the materials can be maintained using controllable and reproducible mixing processes.

The development in concrete technology has seen significant progress with research into speciality concretes and the tilted pan mixer has provided equally significant progress in mixing technology. The development of these technologies goes hand in hand and the tilted pan mixer will play an ever-increasing role in the future growth of these materials.



Environmental benefits for CEMEX with new machine

CEMEX UK has invested in the first Sennebogen Green Line 870R HD crane, in the UK. Supplied by UK dealer Hassell the new £500,000 crane, powered by electricity as opposed to diesel, is in operation at CEMEX's Battersea wharf adjacent to the River Thames in London.

Painted in its resplendent CEMEX livery the crane offers several environmental benefits being exceptionally economical to run, providing no direct emissions and is extremely quiet compared to a mechanical diesel engine.

Weighing in at 87 tonnes this new generation Green Line machine features a robust, very service friendly design with high handling performance and incorporates a state-of-the-art load sensing hydraulic system.

The new crane, as well as being the first of this model in the UK, is the first to be used in an inland water operation, the other four Sennebogen machines have been placed in UK ports. All have the capability to handle 450 tonnes of aggregates an hour.

CEMEX is transporting between four and five barge loads of sand and stone every week from its Northfleet plant which processes marine aggregates and is located near the Thames estuary. The barges have a capacity of 750 tonnes and have to be unloaded within a 2 hour 'window' with the rising or falling tide of the Thames.



The discharged aggregates are used at the adjacent modern ready mixed concrete plant providing materials for local construction projects in the city.

"Sustainability is an integral part of our business. This supply chain using barges, as opposed to trucks on busy London roads, is one of many examples of how we are reducing the impact of our materials within the construction world" comments Andy Spencer, CEMEX Sustainability Director.

The crane was manufactured in Straubing, Bavaria with the final part of its delivery journey from Erith to Battersea on a 53 m barge up the Thames. The timing of the loading at Erith and off-loading at Battersea required exact planning to catch the point of the tide changing course during the Spring high tides.



New vibrating screen for CEMEX Salford ensures future production

BG Europa (UK) has recently installed a Finedoor Ritescreen Multideck Vibrating Screen on the Barber Greene BA2250 batch plant operated by CEMEX UK, building materials provider, at Hope Street, Salford, Manchester. The five and a half deck inclined vibrating screen measured 5.0 m long x 1.70 m wide with specifications including:

- 10mm thick rigid side plates with heavy duty bolted in decks
- Single shaft vibrating unit with two self aligning spherical roller bearings
- Oil bath screen bearing housing including oil cooler unit
- Removable imbalance weights
- Alloy steel shaft for reliability and strength.

BG Europa designed and fabricated the screen dust housing, which features bolt on panels and a discharge hood with folding division plates to allow access to screen meshes. A replacement screen base frame was also designed to suit the existing hot stone bins and included a single 22.0 kW EFF1 electric motor drive.

The screen was assembled on its base frame within the housing prior to delivery to site to speed the installation process. In addition to modifications such as the installation of an extra section of hot elevator and ductwork alterations required to fit the screen BG Europa also modified the surrounding platforms, walkways and handrails to ensure that safe access to all equipment was provided.

Installation was performed and completed ahead of schedule within a short time frame to minimise disruption to CEMEX customers. Commissioning was undertaken in co-operation with Finedoor and full plant production resumed on schedule.



Commenting on the project, site manager Bryn Williams says: *"We were highly delighted with the screen. The BG Europa installation team worked in a safe and efficient manner and completed the installation in the timescale allotted."*





Wilson James delivers savings and environmental benefits through its approach to construction logistics, which has been deployed on major projects such as Heathrow Terminal 5

Optimising the supply chain

Aggregate Industries gains a high performance managed transport platform

www.hub-4.com



Aggregate Industries (AI), produces a range of aggregates, ready-mixed concrete, asphalt and pre-cast concrete products as well as construction and surfacing services. Environmental responsibility is high on the AI agenda. As part of its commitment to reducing environmental impact, the company knew it needed to optimise supply chain management processes. Their existing supply chain involved approximately 500 hauliers and a variety of local processes and systems. With lengthy journey times, inadequate service performance and rising costs, change was clearly needed but proving difficult to deliver.



AI needed a company-wide solution to maximise operational efficiency, reduce empty miles travelled and cut logistics costs from £48 million per year.

AI was aware of TDG's existing transport management platform (4PL) with Corus, and approached TDG for a similar solution. The 'fit' between TDG and AI was good and the two agreed to build a 'true' 4PL transport management solution, that is one where TDG would take purely a management role, with no assets of their own deployed.

In July 2008, TDG and AI entered into a partnership with the aim of saving over three million road miles per year and cutting carbon emissions by 12%. The eight year contract covers the entire UK road transport operation for AI and is being rolled out to 69 sites nationally.

In order to give AI the confidence to enter into this arrangement, the two businesses worked together to develop a business plan. This involved site visits, process mapping, modelling and many other cross business workstreams each undertaken jointly.

These gave TDG the confidence that it could have a significant impact (base line savings of 10% were agreed), and allowed AI to see TDG staff in action.

After a two-month exercise, the business plan was signed off by the AI CEO in June 2008.

In November 2008, a new transport platform, managed by a TDG team, opened at Linby in the Midlands. This was an incredibly tight schedule and required a great deal of collaboration from both sides. However, the programme was implemented on time, on budget and to plan.

AI preferred hauliers, all of whom remained in place, were contracted to work for TDG, who co-ordinate their day-to-day activities using TDG's specialist IT infrastructure in order to maximise delivery efficiency. Drivers now have their own laptops, giving them access to up-to-date information and enabling them to view jobs in realtime. In addition, all the warehouse systems are linked, giving both the transport and warehouse teams access to the most current information. The new state-of-the-art technology, which had already been trialled within TDG, gives greater business clarity for AI.

With access to key figures, order information, customer and supplier details, TDG are now able to oversee the entire operation from end-to-end and deliver a completely optimised solution.

TDG is now operating to four KPIs, including on time delivery, Health & Safety measures, customer service and continuous improvement. TDG and AI have set performance achievement targets, which TDG looks set to achieve. Should any results fall below the agreed levels, TDG take on the associated costs – which means minimal risk for AI.

Since the initial platform implementation and launch, TDG and AI have identified many areas for future development. Projects include production management developments, stock management initiatives, streamlining supplier operations and a pallet management programme.

Further integration projects are also being considered with other companies to deliver even bigger reductions in CO2 emissions. AI is keen to push forward with industry-wide initiatives involving both customers and competitors, to reduce carbon emissions and costs. Through collaboration, they can see opportunities streamline the supply chain and reduce empty miles travelled. TDG's 4PL platform is a model that enables collaborative programmes such that shared benefits become a reality.

"Aggregate Industries were open with us from the start. They were keen to share any issues with us and we were quick to unearth any potential problems from the outset. In that respect, we were ideal partners – both teams were really driven to make this work," says Paul Hayes, 4PL general manager at TDG.



Bridging the knowledge gap

Conservative estimates suggest that the UK construction industry could achieve efficiencies in excess of £250 million by rationalising its approach to logistics, but transferring best practice from retail and manufacturing is a highly complex task. TDG's new strategic partnership with construction logistics provider Wilson James seeks to bridge the knowledge gap by combining TDG's Fourth Party Logistics (4PL) capability with Wilson James's expertise in construction consolidation centres and site logistics.

TDG already works with more than two hundred hauliers on behalf of Corus and Aggregate Industries and its 4PL approach has led to massive savings with the elimination of a million miles worth of unnecessary journeys each year.

"We want to replicate a similar step change in the construction sector," says Mike Branigan, CEO at TDG. "4PL is the ideal methodology for construction, because it works by synchronising logistic solutions across different organisations within the supply chain."

Wilson James deliver savings and environmental benefits through its approach to construction logistics, which has been deployed on major projects such as Heathrow Terminal 5 and Bart's Hospital. The company adapts proven logistics solutions from other industries to meet the needs of the construction sector. Its consolidation centres deliver programme certainty to projects, which would otherwise be vulnerable to delays. Combined with the focused handling of material deliveries and waste removal, the efficient flow of construction goods from a supplier to the building project workplace is optimised, taking goods onto site on a 'just in time' basis.

"Our experience is in supporting construction in demanding operational environments such as central London," says Gary Sullivan, managing director of Wilson James. "We've proved that by smoothing the flow of materials over the last few miles to the work-face, we reduce project costs, risk and congestion. This also improves the carbon footprint of a project. Through TDG, we now have an opportunity to apply the same rigour to the rest of the supply chain."

TDG and Wilson James will maximise the efficiency of the pre-consolidation supply chain to give an end-to-end construction logistics solution.

"Our centralised system creates a live window on logistics throughout the UK," explained Mike Branigan. "We currently use the information and tools to ensure optimum transport plans are created to reduce cost, improve service and give considerable environmental benefits. Working with Wilson James will allow TDG to expand this solution to more suppliers and determine the optimum method to deliver either direct into construction sites or through a consolidation centre"

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Service field management software launch



Linatex has launched its new service management software, Tesseract into the business. This web-based system will provide Linatex with enhanced and easier access to customer records, providing increased knowledge of its customers and their equipment.

The system will provide a register enabling Linatex to track the location of all equipment sales and the lifecycle of wear parts, which will reduce the timescale in identifying which piece of equipment we need to supply the spares for.

With the capability to manage all Linatex service engineers and contracts, Tesseract will provide site engineers with PDA access to customer information and will be able to update jobs in real-time. Engineers will receive scheduled alerts on which sites are due for servicing allowing Linatex to offer guaranteed preventative maintenance servicing to ensure optimum performance of our equipment. Tesseract allows Linatex to record, manage and report on all customer activity including quotations, complaints, prospective customers and non-conformities ensuring that Linatex Customers receive the highest level of service at all times.

New budget account beats recession

Within the current economic climate many companies do not have large amounts of capital expenditure to replace equipment and wear parts.

Recently Linatex stepped in to help a client that needed to replace several items of equipment and replace wear parts in a pump. Installed 6 years ago the high output plant included a number of Linatex pumps, S-type classifier and HK 200 and 125 separators. Serviced annually by Linatex in the last four years the plant needed a new classifier unit and replacement wear parts in several of the pumps. Engineers travelled to site and carried out a full inspection of the plant, and with agreement from the customer carried out a full inspection on each piece of Linatex equipment.

Working with the customer a budget account was then formalised, allowing the customer to spread the payment of the required work across a period of 10 months, at which time the account is reviewed and any adjustments that are required will be made.

Further benefits for the customer include Linatex engineers making a further inspection at the end of the year to agree work to be carried out in the following year. This will ensure optimum, continuous operation of the plant to ensure lowest cost of ownership of the equipment to the customer.

The Tesseract Service Management software makes this a straight forward process.



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Cold Weather Hood System - free sample available

Centurion has launched a new and improved product within its Cold Weather Hood System first introduced in 2008.



The range already included a Fleece Helmet Liner that fits between the Centurion cradle and helmet shell to give total integration and above all, a good and secure fit of the helmet on the wearer's head. Many wearers will wear a stand alone Frost Cape, Hood or Balaclava and then put their helmet on top of it – sometimes the helmet will then sit much higher up on the head and not fit properly, which could be an issue in the event of an accident.

Centurion's Fleece Helmet Liner still allows the helmet cradle and headband to fit directly against the wearer's head, as any safety helmet was designed to and as per EN 397. Centurion has also tested the total hood and helmet combination in its laboratory to EN 397, including to -40°C.

When the weather gets even colder, the wearer can then add a Centurion Frost Cape, either in High Visibility Yellow or Orange (material is to EN 471 specification) with a reflective strip, to the Fleece Helmet Liner. A separate Face Warmer is even available for extreme cold temperatures.

New to the range is a fully integrated Liner with Frost Cape, which is compatible with helmet mounted Ear Defenders – simply reposition the side mesh flaps. In addition, the new integrated Cape can be used in industries where hearing is essential – the mesh flaps will provide improved hearing compared to the standard Centurion Frost Cape while still providing additional warmth during cold Winters.

Centurion is currently offering free samples of the system with their quality Concept safety helmet.



www.hub-4.com/directory/168



Introducing the X-range forklift trucks

Nexen Lift Trucks has introduced its X-Range of counterbalanced forklift trucks comprising seven models with capacities from 2.0 to 3.5 tonne. The FDX diesel 2.5, 3 and 3.5

tonne units are powered by a choice of either Kubota or Yanmar engines whilst the LPG versions in 2, 2.5, 3 and 3.5 tonne capacities are offered with a choice of Nissan or GM power units.

In addition, the X-Range is available in three distinct packages with a multiple choice of drivetrain configurations: Standard, Optima and Optima Plus. Optima offers a split powershift transmission as well as a controlled deceleration system, heavy-duty cooling system and modulated control for fast changes of direction. Optima Plus adds an anti rollback system, oil cooled disc brakes, an advanced inching control and soft-touch electronic hydraulics.

Nexen offers a standard 2 year, 2000 hour warranty which, as an option, can be extended to 3 or 5 years.

There are a number of interesting details on X-Range models. For example, besides opening to almost the vertical position, the entire hinged engine cover/seal assembly can be removed in less than two minutes without tools and the side panels are non-structural and designed to be repaired or replaced if necessary.

The range features a sturdy one-piece chassis and low centre of gravity for good torsional rigidity and stability. They are also equipped with 'Smart Dash', a full engine monitoring system, which triggers both audible and visual advance warnings via a LCD display unit covering all major engine functions. This system will automatically switch off the engine if any problem is not rectified within a specified time in order to prevent damage.

User comfort comes from the use of a fully floating driver's cell, which is attached to the chassis using high quality, anti-vibration dampers. In addition, the machines are fitted with rubber-mounted steer axles.



More applications for new fans

Three new fans have been added to the Air Control Industries' 'Slimline' range, which is intended for enclosure/cabinet cooling and fume extraction. The new fans have been introduced to extend the performance capabilities of the range to expand potential applications into areas involving higher air volumes and pressures.

The new fans (VBL12/3, VBL14/3 & VBL16/3) are Three-phase units and therefore intended for more demanding industrial applications than the existing single phase units. In addition, they are centrifugal fans so they offer high power to size performance.

They are driven by a high efficiency inside out motor with the impeller mounted on an external rotor that rotates around a central fixed stator. This design employs the impeller to operate as an efficient heat sink for cooler running whilst the rotor becomes a high resistance unit to facilitate speed control.

Precision balancing of moving components smooths operation and provides quiet operation whilst ensuring reduced wear on bearings for extended working life.

Air flow rates for ACI's new fans reach up to 8500m³/hr.



www.hub-4.com/directory/12092

New unit for tracking and locating metal on conveyor belts

The SpyMet Metal Locator is the latest new product developed and launched by Eriez Magnetics Europe. SpyMet is an accessory to a metal detector system and is used to track and locate tramp metal on a conveyor belt. It can be operated in two different modes, manual or automatic. Its greatest advantage over conventional rejection/markers devices, which specifically rely on the speed of the conveyor belt to be constant, is that it can track the multiple positions and quantities of metal contaminants on a variable speed conveyor belt.

SpyMet can be operated in conjunction with any metal detector and can be used to operate a third party's device such as a reject arm, ink jet marker or air blast system. The accuracy of the system is plus or minus half the metal detector sensor depth and can track up to twenty separate metal pieces simultaneously.

The manual mode is useful for an application where the belt is not able to stop immediately (due to a large volume or high speed) after tramp metal has been detected. The conveyor is divided into 1m wide zones, downstream from the metal detector sensor. Once the belt has stopped, SpyMet will indicate the zone number and the number of metal contaminants within the zone. This enables downtime to be reduced thus improving productivity and preventing the operator from missing any metal. The automatic mode can be used for applications where the conveyor belt does not stop when tramp metal is detected.

SpyMet uses large LED modules to enable the operator to see the indication from a distance and is also visible in sunny environments. This latest development joins the extensive range of optional extras available with Eriez' metal detectors and follows the launch of the higher sensitivity MA3600 Metalarm metal detector.



www.hub-4.com/directory/280

LSM launch their new Value Baler Range

LSM Engineering - Ireland's leading waste baler manufacturer have just recently launched their exciting new Value Baler Range at the RWM Show in Birmingham. This new value range has been specifically designed to compliment their existing baler range and to help reduce the price of quality machines for the end user. Due to the current climate, LSM saw a niche in the market for high quality machines at significantly reduced prices, John Cummins - Sales Director says "As a result of the current climate, we have been running a process known as 'Value Engineering' on each of our best selling products. This method

involves examining each individual product based on manufacturing costs and sell ability over the last 12 months, to bring the end cost down for the customer." As with all LSM balers safety is at the forefront, LSM balers are an excellent choice for multi user sites who want to remove the labour out of bailing and make it more user friendly.

Unique features of the new LSM WR/V50 Value Mill Size Baler:

- 50 Tonne Pressing Force
- Euro Pallet Size Bale
- Simple Electronic Controls
- Positive Action Locking Front Door

- Hydraulic Powered Bale Kicker
- Easy Bale Tie System
- Standard Wire Tie
- Lower Overall Transport Height
- 12 Months Warranty
- Available for Rent or Purchase

The LSM Baler Range includes single, multi and mill sized hydraulic balers with compaction rates from 2 to 65 tonnes. We also design & build horizontal balers to meet specific customer requirements. The range of balers are suitable for bailing a wide variety of materials from cardboard, plastic, steel cans, CRT Plastics, and tyres.



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Efficient drive technology

For a future-orientated energy budget

Abingdon – UK, May 2009: Much has been documented recently regarding the draft regulations that could see mandatory minimum efficiency standards for industrial electric motors being phased in from 2011-2017, which is great news for the industry and our planet. With continually increasing energy costs and the fact that motors account for 2/3 of industrial electricity consumption it makes sense for companies to reduce their operating costs in order to remain competitive. By upgrading your existing motors from EFF2 (IE1) to EFF1 (IE2) you will see an on-average increase in motor efficiency of between 1.5% and 7% depending on the kW rating. Whilst this can save you a significant amount on running costs, if you consider your complete drive system which may include a gearbox and variable speed drive, the potential exists to save much more.

NORD has long-since made energy efficiency a fundamental part of its company philosophy, continually developing the product range to deliver potential cost of running savings to our users remains our greatest challenge. This is not simply achieved with a single product, but by means of a holistic approach which includes the motor, gear system and drive electronics.

Energy-saving motors

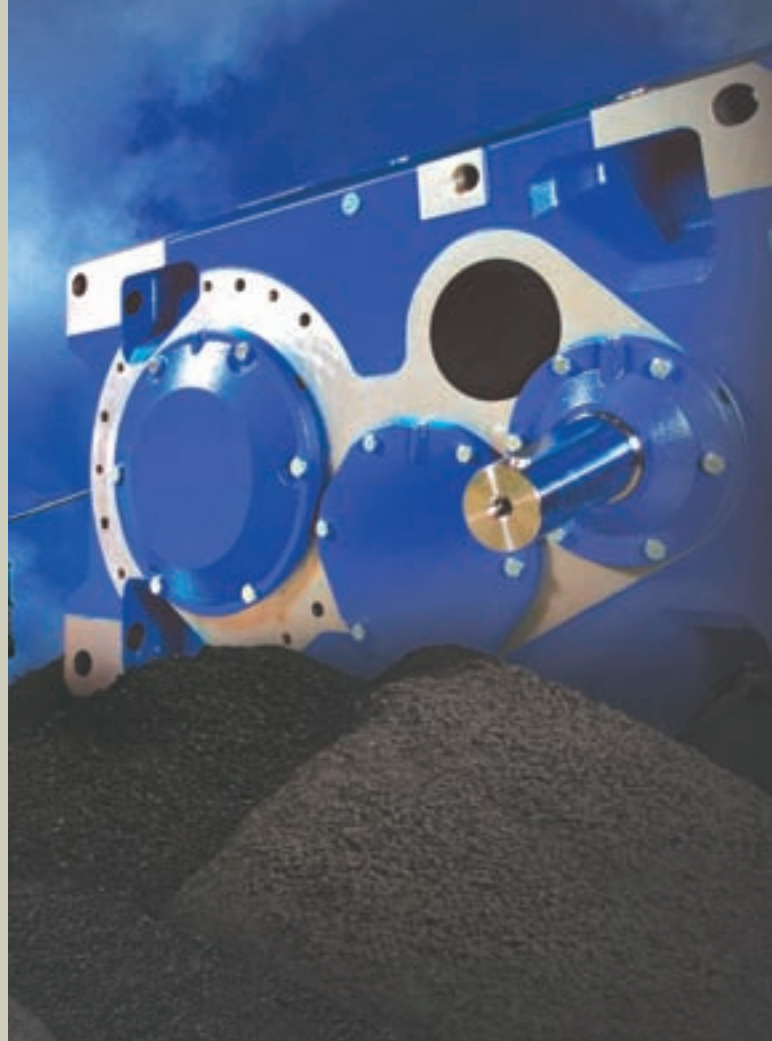
NORD builds energy saving three-phase motors both with and without brakes for the international market. Our motors are available in EFF2 (IE1) and EFF1 (IE2) to IEC specifications, and for the North American market to Energy Policy Act (EPACT) specification. NORD energy-saving three-phase motors allow the reduction of operating costs and our own motor production guarantees that we are more independent from supply bottlenecks and can maintain reduced delivery times.

High Efficiency Gearboxes

Industrial gearbox designs with optimum meshing of gears, efficient gear profiles, the use of the latest manufacturing technology and techniques ensure that NORD helical and bevel gears reduce frictional losses to a minimum. An average of 98% efficiency per stage, so that the drive is practically loss-free!

All our gear units are produced in the Unicase format, which we first developed in 1981; this design principle ensures that meshing of the internal gears is perfect by having all the bearing journals machined in the same main housing. This results in a more efficient design but also added benefits like extended bearing life, low running noise, high output torque capacity and high axial and radial load capacity are also experienced. These lead to greater machine uptime due to reduced maintenance and longer life, essential for ongoing operational reliability.

High efficiency gearboxes in the form of inline helical, parallel helical, right angle helical bevel and right angle helical worm are available to suit input motor powers up to 200kW.



The inline and parallel gearboxes are inherently efficient as they use helical gears throughout with typical efficiencies of 98% per stage, as is the case with the right angle helical bevel.

When right angle worm or helical worm gearboxes are used there is generally a huge potential for saving money on running costs. The worm gear design principle is inherently inefficient, but is very often used in industry to achieve a simple cheap to buy right angle drive. However with efficiency levels that can be as low as 32% (100:1) and at best 93% (5:1) they may not be cheap to run!

If your application needs ratios higher than 20:1 (on-average 72% efficient), then you should consider using a helical worm gearbox. Manufacturers such as ourselves select the worm reduction that is most efficient and then add a helical stage to achieve on-average 85% efficiency levels. Better still, change to a helical bevel unit where you will see efficiency levels on-average at 96%. Therefore you can see right angle drives utilising helical bevel gears can, on average, save in excess of 40% on running costs when compared to traditional worm gear drives.

In addition to specifying the gearbox type you should also consider the lubrication. If you specify synthetic oil then you will see longer periods between maintenance and the gearbox can be as much as 4% more efficient - a very short payback on initial outlay.

Frequency inverters - the economical components

It has long been known that by installing frequency inverters you can lower your running costs dramatically if you have a variable torque application, as is the case with many fans and pumps. Matching the speed to the application requirements is a sound principle, however if you match the speed but there are also varying loads then you could potentially achieve more savings. ►



Automatic flux optimisation

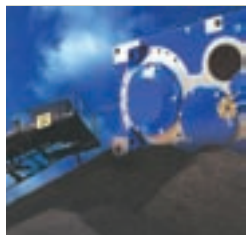
Innovative NORD frequency inverters from the SK 500E series now provide an energy-saving function when running three phase induction motors, especially under light loads. The standard three-phase motor requires a suitable flux to output its full torque. Normally, frequency inverters keep the flux constant over the whole speed range, i.e. under varying loads a high flux level is maintained at low speeds, causing additional heat loss in the motor. Nord frequency inverters automatically adjust the flux level to match the load and thereby as a

result, reduce the motor current and losses in the motor. Especially with very light loads from 10 - 15%, energy savings of up to 30% can be achieved with this function.

The resulting motor current becomes considerably less with flux adjustment, resulting in the corresponding energy saving.

The energy-saving function is suitable for all applications; for example pumps, fans and horizontal conveyors where there are no special demands on the dynamics of the process.

For decentralized solutions NORD can supply the NORD SK200E IP66 compact drive, either directly installed on the motor or wall-mounted, and include full control and programming functions.



About NORD

NORD with its headquarters in Bargteheide, Germany and subsidiaries in 32 countries is a

global company with an extensive range of products and services for electrical, mechanical and electronic drive technology. With a staff of approx. 2500, NORD produces, markets and supports drive technology (electric motors, gear motors and drive electronics) throughout the world. The design of user-specific drive solutions with its customers and their supervision from the planning phase right up to commissioning is what makes NORD a strong and dependable partner.



www.hub-4.com/directory/614

Heavy duty primary trommel screen installed at Fond des Vaulx, Wellin, Belgium

HOLBORNE GROUP LTD. Wem, Shropshire, UK. have recently supplied a new primary trommel screen through their sales agent P.W.Laver Equipment Sales Ltd.

The BT212 Trommel with a barrel 2.1 m. diameter x 8 m. long was commissioned in July 09 at a large quarry in south east Belgium.

The screen was installed to reclaim and clean R O Q limestone, from some of the overburden and areas of clay/soil contamination in the quarry excavations. Sited adjacent to the primary crusher haul road, material from the working face is transported via dumper trucks into the 75 ton. capacity feed hopper to pass over a 1.5m x 4m reciprocating tray feeder into the trommel barrel. The barrel is fabricated in four sections, each constructed with 75mm dia. high grade steel bars, welded to 30 and 50mm support rings giving screen apertures of 100 x 100mm over the first two sections, and 80 x 120mm over the second two sections all driven by heavy link chain and sprocket, powered by hydraulic geared motor.



The reciprocating feeder is powered by a single hydraulic cylinder with both drive units supplied by independent hydraulic pumps coupled to electric motors. With the screen apertures being relatively small for this separation Holborne supplied and installed their patented barrel cleaner mechanism

The 2m length cleaner, constructed of a series of flame cut sprockets mounted on a shaft, is supported above the barrel drum, where the sprocket teeth engage and are driven by the rotating barrel. Any sticky or pegged material is forced out of the apertures, to provide a clear section for new feed. The barrel cleaner can be extended over further sections if required. The screen oversize is collected via loading shovel and dumper to feed back into the crushing plant together with the clean rock feed. The undersize can be utilized in the quarry or marketed as fill material depending on rock content and quality.

The investment of the heavy duty Holborne trommel screen will guarantee higher grades and quality to the quarry aggregate sales, as well as reclaiming material that would otherwise be discarded.



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About BMS Belt Cleaners

BMS Belt Cleaners is one of the leading suppliers of conveyor belt primary scrapers, secondary scrapers and 'V' ploughs and ancillary equipment relating to a belt conveyor in many countries around the world. BMS has its own companies in the U.K, Canada, USA, and worldwide distribution throughout Europe, Far East, Czech Republic, Slovakia, Russia and East and West Africa. Recently we expanded our USA operation to include warehouse and offices in Pittsburgh, Pennsylvania and Macon, Georgia.

Since 1994, BMS Belt Cleaners has supplied conveyor belt scrapers supported by professional and technical back-up to the bulk handling and mineral extractive industries including quarrying, in mining; copper, zinc, gold, diamond etc, cement, fertiliser, power stations, agricultural, recycling MRF Plants as well as fine and delicate material such as powders, vegetable oils, tobacco.

BMS also provide product to original equipment manufacturers (OEM's) and include in the package free scraper selection, CAD drawing for all products and full technical support both at the drawing stage and prior to commissioning the plant. BMS also offer on line product support plus service contracts to ensure that customers retain the long-term performance of BMS products.

The BMS Belt Cleaners 'E' range of metal-bladed scrapers are an improved design based on the original 'paint scraper principle' which has a 20 year track record for efficient belt cleaning recovering even the last 1/10mm of carry-back material from the belt cover maximizing conveyor belt uptime, productivity, safety and lower cost of scraper ownership.

BMS offers three versions of their belt scraper for light, medium and heavy-duty applications, there is also a stainless steel option ideally suited for industries where high standards of hygiene and frequent wash-downs are essential, such as food processing, confectionary, plastics and pharmaceuticals.

BMS Belt Cleaners works closely with every customer to provide practical solutions to their cleaning problems in order to achieve long-term savings whilst realising that combating carry-back is a constant problem for the management (Managers/Engineers) of a bulk material handling plant.

For more information on our products and services please contact us on: BMS Belt Cleaners Ltd
Tel: +44 (0) 01325 483 916
Email: sales@bms-cleaners.com

 www.hub-4.com/directory/9039



Smiley Monroe Ltd was proud to announce that on Friday 12th June 2009, its Quality and Health & Safety Management Systems were audited by a third party accreditor - BM Trada Certification Ltd - and have been upgraded to ISO 9001:2008 and OHSAS 18001:2007, from ISO 9001:2000 and OHSAS 18001:1999, respectively.

This latest upgrade ensures a sustained focus on quality, health, safety and welfare performance, which means that Smiley Monroe's consistency in improving its performance - to benefit all customers, employees, suppliers and sub-contractors - continues to be recognised. So customers can be confident that whether they purchase Conveyor Belts, CNC Cut Rubber & PU Parts, Screening Media, Spillage Control Systems, Chute Lining or On-Site Vulcanising Service, with Smiley Monroe they have full traceability, with approved documented procedures to ensure all products and services conform to the highest possible standards.

Craig McDowell, Quality and Health & Safety Manager, Smiley Monroe, says: "Smiley Monroe is very keen to demonstrate to all its customers, the benefits of its in-house test laboratory - another important investment in quality. Based in our 20,000 Sq ft modernised production facility in Lisburn, the lab allows us to quickly and conclusively, while-you-wait, test the abrasion resistance, tensile strength and adhesion levels of the cover rubber and fabric of conveyor belts and rubber materials, to ensure conformity to DIN and ISO standards. Our in-house laboratory also boasts one of Europe's few dynamic testers, which means - through simulating accelerated life of conveyor belt and splices, especially when used with minimum diameter pulleys, we can test conveyor belt quality to its limits for: flex, durability, adhesion, stretch, joint types and tensile strength."

Smiley Monroe achieved ISO 9001 back in 2000, which operates in parallel with OHSAS 18001 Health and Safety Management - awarded in 2006 - and we remain committed to best practice in all areas of the Company's operations and to raising the overall standards of safety within our industry. Over 300 customers, all exposed to the dangers of modern bulk conveyor systems - including foremen, fitters and design engineers - have already benefited from Smiley Monroe's 'Working Safely with Conveyors' Training Course. The Quarry Products Association, Northern Ireland (QPANI) reports that, here in Northern Ireland, 'the past five years has seen accidents levels more than halved, health and safety become the number one agenda item on many companies management meetings.....and visible felt leadership, not just an idea, but an active pursuit carried out by many of the leaders within the industry.'

Vaughan Monroe, Managing Director, Smiley Monroe, states: "Earning the satisfaction of our customers, through total quality at all levels, remains our highest priority, so we are delighted to be awarded this latest upgrade to our Quality and Health & Safety Management Systems."

Northern Ireland based Smiley Monroe Ltd - celebrating 30 years in business - specialises in the design, manufacture and service of rubber & PVC/PU conveyor belts, screening media, chute lining, skirting rubber & gaskets and conveyor spillage control systems for end users and original equipment manufacturers (OEMs) of mobile crushing, screening and recycling equipment in the UK & Ireland markets, with export worldwide. Industries served range from quarrying, mining, recycling, timber and cement to agriculture, print, packaging and food.

Visit us at www.smileymonroe.com to find out more.

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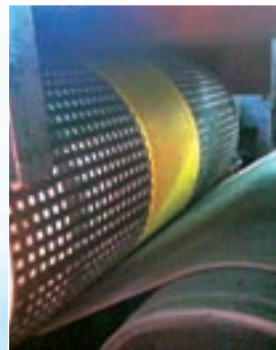


Motorized Pulleys at Clydeport's Hunterston Terminal

Hunterston's impressive dry bulk terminal, with the deepest berth in Europe of up to 26 metres, enables ships up to 350,000 tonnes to berth at all states of the tide to discharge coal to a highly mechanised stockyard of 120 acres.

After initially trialling a 75kW Motorized pulley in one of their most difficult areas, Rulmeca have since supplied to Clydeport, a further 3,132kW drives to replace existing external drives on their stockyard conveyors.

Clydeport have capability to load up 20 trains a day from this facility to deliver to various power stations in Scotland and England. The extreme conditions which can prevail in the area require excellent reliability and on-demand capability. Motorized pulleys were considered and trialled to demonstrate firstly, their performance, their excellent IP67



sealing and minimal maintenance requirements. Their dynamic internal design enables mechanical efficiencies which in turn, bring forth good electrical savings too.

Motorized pulleys also have advantages with their compact design with no external moving parts, allowing better access - therefore better health and safety.

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Beaufort Conveyors

Beaufort Conveyors, now established for over 20 years, is a name that has become well known and respected throughout industry due to the success of their acclaimed Easikit® trough belt modular conveyors.

Over the years, an understanding of customers' needs has enabled Beaufort Conveyors to focus on the manufacture, supply and support of a core range of ex-stock modular products that deliver quality, reliability and value for money in meeting your requirements.

Attention to detail, a commitment to quality, excellent service and in depth experience are the foundations that have built up a first-rate reputation and complete product confidence with customers.

The Easikit® conveyor system is now a well proven, established method of materials handling throughout trade. The conveyors are especially suited to industries such as recycling and composting, sewage treatment, aggregates, basement clearance, crop and grain handling etc. and will be found in many facilities throughout Europe.

There are numerous advantages of the system that have secured its place as a number one choice within industry. The unique modular simple design is the system's main strength. This puts an end to expensive, bespoke conveyor installations that eat into your budget and waste valuable time.

The Easikit® conveyors are available in widths from 300mm to 1500mm. Available from stock, they are simply joined together on site using a unique coupling system. Any number of sections can be joined together to produce a conveyor of whatever length is required. Once on site should the requirements change, conveyor sections and belt lengths can simply be added or subtracted as necessary.

Part of the unique design is the attention to safety. On all the conveyors the belt travels over the folded edge of the main frame to reduce the likelihood of material dropping down onto the returning belt. Idlers are therefore concealed during normal use which is another safety factor especially where conveyors are used in close proximity to personnel – for example underground or in picking applications.

The Easikit® conveyors can be supplied either in a static, fixed form or as a Mobile or Radial conveyor. These conveyors come with an undercarriage fitted with a hydraulic ram which enables the conveyor to have a variable discharge height. The Mobile conveyor has pneumatic wheels and an optional towing hitch for manoeuvrability on site. The fixed Radial conveyor comes supplied with an electrically powered motor on the undercarriage and is capable of rotating through a full 360° arc, essential when stockpiling.

All products receive the reassurance of a 12 month warranty and the added advantage of ex-stock back up for spares which is invaluable to assist with ongoing maintenance.

In addition to the Easikit® range, Beaufort Conveyors also manufacture Easibelt® a range of flat bed conveyors, and Easitrak® a gravity roller track system.

Whatever your handling requirements, Beaufort Conveyors will be more than happy to help and advise.

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 www.hub-4.com/directory/7453

Wileman Kicks Up Hills New Plant

Wileman Engineers recently commissioned their latest complete Sand and Gravel Processing Plant at Woodsford, Dorset for Hills Quarry Products Ltd. The 150 Tonne per Hour plant was designed and installed by the aggregate washing specialists based at Ashby de-la Zouch in Leicestershire.

The plant comprises a belt feeder system within a 3.1m Dia multiplated tunnel feeding onto a 130m long 750mm wide plant feed conveyor. The 150 tph as dug sand and gravel is then washed and screened through a low level plant via Hewitt Robins Screens and Wileman Contraflow Scrubber barrel.

The 1st screen removes the majority of the sand which then feeds into a Linatex compact plant which produces a soft sand plus a coarse sand to stockpiles. +40mm rejects is also removed on the first screen and conveyed to ground stock.

The +4-40mm fraction is then fed directly into a Wileman 2m Dia x 3m long Contraflow barrel. The barrel has the capability of removing any remaining silts and sands adhered to the stone and also dewaterers before conveying the clean products to the sizing screen. Water and any silts are returned to the Linatex plant via pump. The graded sizes; +4-6mm,



+6-10mm, +10-20, +20-40mm are all conveyed from the Hewitt Robins screen to ground stocks.

Wileman Supply further equipment to Summerleaze

Following on from the recently installed New Sand and Gravel Plant at Denham Buckinghamshire for Summerleaze Gravels Ltd. Wileman Engineers Ltd were awarded the challenging contract to design and install a travelling field conveyor system under the M4 motorway near Bray, Berkshire. Planning demanded the nightly removal of the field conveyor which transfers as dug material from a reserve on the opposite side of the motorway to the existing field conveyor system.

The contract is due to be completed by Christmas 2009. This is another example of the Wileman Engineers taking on challenging jobs of any size.

 www.hub-4.com/directory/2320



REMA TIP TOP INDUSTRY UK Limited Conveying Excellence

In April 2008, REMA TIP TOP INDUSTRY UK Limited acquired the conveyor belt specialists 'Ace Conveyor Equipment Ltd'. The acquisition signalled a major landmark for REMA TIP TOP INDUSTRY UK and marked a statement of intent to become the leading Conveyor Belt specialist in the UK. The company, post acquisition now employs over one hundred and fifty people, across head office sites in Leeds and Doncaster and throughout the multiple service depots and warehousing facilities based in all of the home nations including Ireland.

The REMA TIP TOP INDUSTRY UK team of service engineers have acquired a significant number of years experience working with belt conveyors, and several of the industry's leading specialists in conveyor engineering, belt technology and conveyor design are employed within the company. Many customers have come to rely on this level of expertise and welcome the regular inspection services scheduled through a TCO contract or programme to assess the condition of conveyor components and avoid potential breakdowns. Many of these assignments are scheduled to coincide with shutdown periods.

TCO – TOTAL COST of OWNERSHIP contracts represent a comprehensive and unique service agreement with the client, designed to make significant cost savings to plant and drive the ultimate improvement and development of the plant conveyor system. The service is available as a full technical survey, where detailed information about each component is captured and documented for future reference. This information is held on a database with a copy for the customer to refer to when components require changing or upgrading. Alongside this a detailed condition survey is conducted which assesses the serviceability of each component, and identifies recommendations for action. A full conveyor safety review is also available that highlights any issues that may need future attention.

REMA TIP TOP don't just provide unparalleled service excellence! The company is also a leading supplier of quality 'Belt' and is complimented by a global team of experts involved in pioneering innovation for the design and manufacture of conveyor accessories and vulcanising equipment. Significantly, REMA TIP TOP Distribution depots in the UK and Arnhem in Belgium hold over 10 million euros of 'Belt' at any one time, thus stock availability is always completely guaranteed irrespective of the project size and materials requirements.

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

Gearbox manufacturer awarded OHSAS 18001

Gearbox manufacturer, Hansen Transmissions Ltd in the UK, anticipates additional interest from customers as a result of their BSI Health & Safety OHSAS 18001 certification.



Hansen Transmissions' Industrial Gearbox division in the UK are celebrating after their commitment to promote a safe and healthy working environment was officially recognised in March, meeting the rigorous standards set by the Occupational Health and Safety Management Systems OHSAS 18001.

The achievement acknowledges Hansen's risk management strategy and the company is proud to claim that it provides the same level of health and safety support to their Field Service Engineers servicing and maintaining transmission units all over the world, as they do for those working in its factory and offices.

"Employees' health and safety is the highest priority for Hansen Transmissions Ltd and we want to ensure that we take every step possible to make that a way of life within the company", said Richard Gough, Compliance Manager, Hansen Transmissions Ltd. "The certification process of OHSAS 18001 was an excellent experience for us to go through and benchmark our systems against the world's best."



www.hub-4.com/directory/379



Many industries including power generation, cement and lime production, combined heat and energy plus the glass manufacturing process use fossil fuels such as coal or gas.

Recent understanding of the effects of the fossil fuels on the environment and changes in the control of emissions legislation's has seen a vast change in the type of fuel used in the industries. One of the prevalent alternative fuels has been biomass.

Biomass is derived from waste wood, grain husks, nut shells, and forestry waste and among many other natural materials. Although biomass and alternative fuels are relatively new terms within the home, within industry they were established in the 1980's. Combined with more efficient firing processes the cleaner energy provides a sustainable viable alternative to fossil fuels.

New fuel, New challenges

With the biomass's unique make up from different materials, new considerations for size and consistency had to be factored. Supplied as pellets, shreds, and chips or even in the raw, the biomass could cause problem in the firing or transporting process. Safe guards and material checking are implemented to protect the firing equipment.

Systems for screening the material to ensure foreign material such as steel is removed, and large pieces are separated from the material flow were developed by forward thinking companies.

One such company **Geo Robson & Co Ltd**, based in Sheffield, recognised in the early days that systems had to be designed or adapted for the new fuels, consequently they have been at the forefront of research and development of biomass and alternative fuel conveying systems for many years.

Developing a complete solution to the biomass checking and screening.

The screen house is a automated system of grading screens and metal checking equipment that ensures the material is free from items that may cause damage or problems to system.

The biomass is transported to the top of the building via a belt conveyor or Robson's Airglide Conveyor and onward to a vibratory screen, the screen sieves the biomass to separate the over size material, the vibration effect of the screen helps with the break down of the lumps that could cause blockages further on in the system, over size lumps that don't break down are prevented from travelling any further. Two unbalanced motors, mounted to the top of the robust system, power the vibratory screen, the screen is isolated by springs to ensure the vibration does not affect surrounding equipment or building structures.

Attractive Systems

The screened biomass travels through feed chutes down wards to a vibratory feeder. Mounted above the feeder is an overband magnet, the magnet attracts any metallic objects as they pass on the vibratory feeder; the feeder's construction is very similar to the screen. A robust trough driven by two unbalanced motors, with this design the motors are mounted to the underside of the trough and again isolated by springs. The overband magnet has a ribbed conveyor belt travelling around the central electromagnetic core, which forms a barrier between the attracted metal and the magnet. The motion of the belt keeps the magnet clear; the attracted metal objects are moved by the belt to a non-magnetic part of the overband and are deposited to a reject chute.

Once the biomass is conveyed across the vibratory feeder it is fed to a chute, within the chute is a rotating drum magnet.



Screening for a Greener Future



The drum magnet is constructed from an 180° stationary magnet system within a revolving cover. The magnets are mounted on to heavy-duty back plates, to optimise the magnetic strength directed at the product stream. The rotating drum holds the attracted metal until it reaches the non-magnetic area, where it is directed to a reject chute.

The metal objects are normally residues from the wood biomass such as nails, nuts and bolts but also can be tramp steel or objects picked up along the supply stream. With feed rates in excess of 500 tonnes per hour the screen house ensures the biomass is free from metal objects, for critical systems other scanning and reject systems are added such as inline metal checking. Adopted from the food industry the inline metal check works similar to a airport metal detector as the biomass passes through it is scanned, if metal is detected the slug of material is rejected by means of a flap valve.

The screened biomass material is conveyed onwards to the firing process or to silo storage ready to be used. With Robson's vast experience of many industries the screen house is utilised in various forms for many products including sugar and food processing, the systems used are adaptable and redesigned to suit the customer's requirements.

The biomass and sugar industries require that the conveyor and screening systems are ATEX certified, the dust created from the material can cause a potentially explosive atmosphere. The stringent certification process ensures that all risks of ignition are removed from the conveying or screening system. Robson's core products are certified as Category 1 internal and Category 3 externally, ensuring protection of the system and surroundings. Other systems are assessed and certified to suit the ATEX zone and customer requirements.

With a range of mechanical handling systems that are enhanced by the ability to design and build bespoke systems, plus the in house engineering workforce with mechanical combined electrical skills, Robsons are able to construct systems to relevant industry standards. Having departments for the service and maintenance plus the in house refurbishment of handling equipment, gives Robson the edge over its competitors, providing the customer with the complete package.



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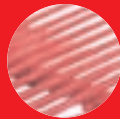
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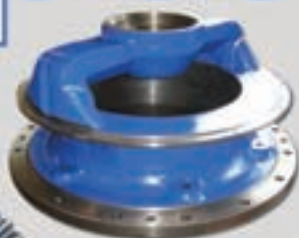
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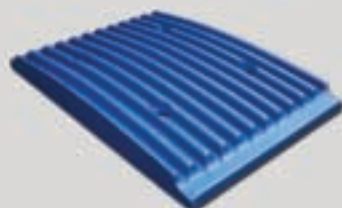
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