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ScrapWastePorts





HUB-4 launches a brand new website

At the beginning of February HUB-4 will launch it's all new website, which will include:

- A Fresh layout
- More effective advertising options
- A stronger divide between the 3 industries
- Clearer categories
- More efficient used equipment section

For further information or to take a look at the new website please visit www.hub-4.com or get in touch now.

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WCL Quarries

Washing screen to Norway

Winter 2012

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The push on recycling is set to increase to new levels throughout 2012. With the Welsh government targeting 50% waste recycling across the board and new MRFs opening up all over the United Kingdom creating higher efficiency, we can only predict great things for the coming year.

2012 sees many alterations and changes to recycling as it currently stands, including proposals for tougher packaging recycling targets for businesses, new domestic recycling schedules and the additions of new and highly advanced MRFs from companies such as Shanks and Casepak.

The tougher packaging targets for 2012 will make UK plastics recycling a key focus for the year ahead. With the UK currently close to a 50% recycling total for plastic drinks bottles, the new targets should push us into far higher levels of plastics recycling. Recent advances in sorting technology such as the specialist deinking screen I recently saw in action at the new Casepak facility will also reduce waste further through more efficient processing.



An increase in waste recycling is a positive both for the environment and for the economy as recycling produces 10 times the number of jobs per tonne than sending waste to landfill. With industry growth at an all time high and newly opened facilities creating thousands of jobs every year, we can only hope for the continued success across the industry.

The additional objectives for 2012 will ease pressure on the UKs unrealistic use of raw materials and make higher levels of recyclable and recycled materials available for businesses. There are events and seminars being held throughout 2012 to create more of an interest in recycling, particularly through National Recycle Week from 21st - 27th June, this years focus is on electrical recycling.

Appointment of the Blue Group as Terex® Fuchs **UK distributor**

Waste processing equipment specialists Blue Group are delighted to be unveiled as the new distributor of Terex® Fuchs materials handling equipment in the UK. Since 1999, the Hydrex Group have acted as a hirer and as a distributor for the German made construction and loading machines in the UK. During this period, they have developed the UK market into one of Terex® Fuchs most important globally. As part of their marketing strategy for further developments, Terex® Fuchs began searching for a new dealer and service partner to support existing market segments whilst exploring other potential avenues.

With Blue Group's strong presence in the waste sector and planned expansion into metals recycling, and port handling applications, the synergy between the two companies was immediately seen as mutually beneficial for both parties. As a result, Blue Group have taken over the dealership for the UK and Ireland with immediate effect. "The Terex" Fuchs material handling machines are perfect to integrate into the wide variety of products and services offered by Blue Group for the recycling industry", emphasised Mr Ron de Vries, Managina Director of Terex® Fuchs. Commenting on the appointment, Ron de Vries added "We are grateful to Hydrex for all services and work performed to date and look forward to expanding our presence together with the Blue Group in the UK recycling market."





Cover Story

Blue Group is a total solutions provider, offering the waste management industry a wide range of materials recovery facilities, shredding, composting, screening and crushing equipment for the efficient and cost-effective processing of all waste streams. The Group has also developed and invested heavily in after sales product support with an impressive off-the-shelf stock-holding for spare parts and a team of fully trained technical service engineers giving UK wide coverage. This ethos will be carried over to support the Terex® Fuchs range, thus ensuring machine owners can rely on the product to perform to its maximum ability at all times.



Increased recycling possibilities on Lewisham's doorstep

Last month Sir Steve Bullock, Mayor of Lewisham celebrated the start of Lewisham's new household recycling contract with a visit to Bywaters Materials Recycling Facility (MRF) at Lea Riverside. Lewisham's new household recycling contract marks the start of a valuable relationship with more materials, than ever before, now being accepted for recycling.

On 5th December 2011 Bywaters began handling all of Lewisham's household recycling in a contract that will run until at least 2014 and will see Bywaters processing circa 17,500 tonnes of Lewisham's household recycling per annum. Increased recycling reduces waste and therefore emissions, as well as being more cost effective.

Bywaters is a local operator with a proven track record in increasing recycling rates in London Boroughs. Their state-of-the-art MRF,



located in nearby Bow E3, processes a wide range of materials and produces high quality outputs for re-processing. Bywaters supplies a complete recycling solution which includes community awareness support and training of their staff.

By increasing the range of recyclables Lewisham residents can now reduce their non-recycling volume as Tetra Pak, mixed plastics and aerosols, shredded paper, bubble wrap, perfume bottles and CDs are now accepted.

Councillor Susan Wise, Cabinet Member for Customer Services at Lewisham Council says: "The Council wants to raise the profile of recycling to reach more and more of its residents, schools and voluntary groups and is pleased that Bywaters is able to meet this challenge".

John S. Glover, Bywaters' Managing Director continues: "It is a pleasure to have delivered a best in class proposal and qualified through a competitive process. Bywaters delivers tailored solutions to London Boroughs and will work in partnership with Lewisham to increase overall recycling rates".

Where possible, Bywaters applies the proximity principle, which leads to materials predominantly being reprocessed in the UK. This not only helps the British economy and reduces transport miles and therefore carbon emissions.





Hi-Force Daventry bags 2011 EEF Midlands Region Environmental Efficiency Award!!

On Thursday 17th November 2011 representatives of Hi-Force Daventry were specially invited to the 2011 EEF Midlands Region Future Manufacturing Awards Celebration lunch at the Heritage Motor Centre in Gaydon, Warwickshire. Attended by representatives of over 40 companies, that had been

shortlisted from an original list of over 800 entries, Hi-Force Daventry was selected as a finalist in four categories, namely The Outstanding Export Award (5 finalists), The Business Growth Award (8 finalists), The Innovative Operating Practises Award (7 finalists) and The Environmental Efficiency Award (5 finalists), which saw Hi-Force receive a well merited Runner Up Award Certificate. Whilst presenting the award to Hi-Force Group Managing Director, Kevin Brown, the judging panel comments were: "The judges felt that the Hi-Force entry conveyed an integrated method for reducing environmental impact. By encouraging a hybrid approach towards environmental initiatives, Hi-Force has worked hard to improve environmental efficiencies and to increase productivity. The judges look forward to seeing how the Hi-Force story continues to develop over the coming year."

Commenting at the event Kevin Brown enthused: "Given that this is the first year Hi-Force has entered the EEF Awards competition, we are delighted to have been shortlisted in four categories, more than any other finalist. Hi-Force is delighted to accept the Runner Up Award in the Environmental Efficiency category as this clearly demonstrates our Company desire to be an environmentally conscious manufacturer and employer. We certainly look forward to next years' event and to hopefully going one step further and picking up a winners award, which would take us through to the National Finals in London. To be recognised alongside such major companies as Rolls Royce and Caterpillar is indeed a great honour for Hi-Force. Our facilities here in Daventry, UK are indeed "state of the art" and I would like to thank Daventry District Council for their tremendous support of Hi-Force in Daventry. Through the efforts, of Daventry District Council, to design and build Hi-Force a highly efficient and environmentally conscious facility, which has been rated BREAM very good by The UK Environmental Agency."

Accompanying Kevin at the awards ceremony were Group Finance Director, Mrs. Lin Whaymand, Sales Manager, Adam Turnbull and Human Resources Manager, Julie Preston. Kevin also expressed his gratitude to Adam and Julie for all their hard work in preparing our entry in the four categories that Hi-Force was shortlisted to win.

For more information about Hi-Force Hydraulic Tools please visit www.hi-force.com



News



Habasit Rossi Ltd. is an affiliated company of Rossi SpA situated in Modena Italy, one of the largest manufacturers of Gear Reducers and Gear motors in Europe. Rossi UK a division of Habasit Rossi UK LTD continues to restructure its operation in the UK in line with its growth objectives for the future. The underlying reason for this restructure has been to ensure that through every process and activity, the customer needs are fully understood and acted upon by talented individuals.

Rossi geared products have a strong reputation for excellent quality and the group has recognised that customers continue to demand greater value for their money. As such the focus is to ensure a greater competitive position is achieved through the improvement of the Operational structure as well as the development of a local Technical department in order to provide complete technically designed solution tailored specifically to each customer's application within the time constraints set by our customers.

The Company has established a strong track record in providing tailored technical solutions for a wide range of applications, such as Material Handling Conveyors, Mixers & Agitators, Quarrying, Mobile Aggregate Machine, and Recycling centres and believes that it is well placed to develop the market through investment in key areas.

Habasit Rossi UK has embarked on a campaign of Creating "ROSSI FOR YOU" specifically focused towards our customers.

This campaign is underwritten by investment into key areas within the organisation. The first phase of this investment started with the recruitment of 5 new members of staff in 2011 in order to enhance the skills base of the company in areas such as the Supply chain, technical support and Stock management. The company will continue to invest in the training of its entire staff in order to be the most competent and efficient in its industry.

Further investment will continue through 2012 and beyond with the development of customer portals such as the "ROSSI FOR YOU" portal and the re-launch of a new simplified and updated website. These tools will enable our customer to review the status of their orders in real time along with 3-D drawing download capability, order history and many more tailored functions. The launch of this portal is expected in Q3 of this year.

The group has also invested in a new modern operating computer system and has chosen the Oracle JD Enterprise One system, that will also go live in the UK in Quarter 3 2012. This investment is to ensure that Rossi can meet the growing demands and customer expectation more rapidly, efficiently and control delivery parameters more accurately. The group believes that moving from a unix based system to the ultra-modern Oracle system, further improves in the dependability the group achieves with its customer.

In UK we have an inventory value in excess of £1.0 million comprised of the Company's comprehensive range of electric motors, brake motors, gear reducers and gear motors. Our stock profile includes more than 10.000 assembled gear units and electric motors allowing for immediate dispatch throughout the UK and Ireland. Habasit Rossi can offer gear units with a torque capacity of 20.000Nm from stock in the UK and gear units up to 400.000Nm from stock held in Italy.

The UK subsidiary was established in the Midlands nearly 25 years ago, the UK Company has set ambitious growth objectives for the future. This growth objective has been fully supported through Rossi SPA, Italy where over the last 5 years the company has invested Euro 75 million in new machinery, production facilities and staff to meet the growth trends as the group expands its global foot print.





Complete Utilities Beat Blue-chip Companies to Win National Award with DUO Wash Plant.

National Joint Utilities Group (NJUG), the UK's only Trade Association for street works issues, have held their annual awards ceremony in House of Commons Members Dining Room, hosted by Louise Ellman MP (Chair of the Transport Select Committee). The awards were designed to recognise, promote and reward instances of best practice within the street works industry, with all winning entries to be used as examples of best practice and distributed throughout the industry.

Complete Utilities were one of four companies shortlisted for the NJUG Sustainability Award. The award recognises the company's work in maximizing the sustainable use of materials with its recycling wash plant which was supplied by DUO Equipment.

The Gloucestershire based firm, who provide excavation, backfilling and reinstatement services to the

utilities industry, made the decision to begin washing having previously dry screened their material. The driving force behind this decision was that the required standard of product is only available for six months of the year due to the weather when dry screening and even then the quality could not be guaranteed.

The Recycling Wash Plant

The two main components of the installation are the Powerscreen Aggwash, which is an award winner in its own right having picked up the Series Innovation Category Award at the 2010 World Demolition Awards, and the DUO Mobile Water Treatment Plant. The Aggwash provides for the first time rinsing, screening, scrubbing and sand washing capabilities on a single transportable chassis. Complete Utilities are running the Aggwash at 50-60 tph to process their material for backfilling and remediation purposes. DUO's mobile water treatment solution perfectly complements the Aggwash, eliminating silt and water being dispatched to a lagoon. The system, which is based on a centrifuge, is of

compact size relative to its production levels which was a necessity in the design of the installation due to space restrictions on-site. This closed circuit system produces a very manageable material, the low moisture content of which is vital to Complete Utilities in ensuring it is workable for blending as clean soils as well as any surplus being transportable to, and accepted by, landfill and tipping sites.

Winning Washers

Complete Utilities, who were shortlisted alongside Balfour Beatty Utility Solutions, Laing O'Rourke and North London Gas Alliance, won the award with their wash plant which delivers a recycling rate of almost 100%. The benefits of this project, which were the backbone of the win, are financial, legislative and environmental.

Taking into consideration landfill costs, the cost of replacement primary aggregate for trench backfill and including the high capital investment of the new plant system, the company can still match the landfill and replacement aggregate costs when recycling trench spoil back into a high quality aggregate product.

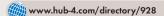
Regarding legislation, the recycling operations exceeds the targets of 'Halving Waste to Landfill by 2012' and also can realistically achieve Zero Waste to Landfill.

From an environmental perspective, the operation mean less landfilling of trenching spoil, less demand for primary aggregate and a reduction in carbon emissions as haulage distances are reduced; the carbon savings on the type 1 alone in the first 6 months would be in the region of 6 tons.

Speaking after receiving the award Steve said "It is great to get national recognition for the work we do - we're committed to environmental issues, minimising our waste and recycling as much as possible. This award shows how the hard work of my team and how our recycling plant makes a real difference. I'm delighted particularly given how tough the competition was. The investment in the Aggwash has definitely taken our business to the next level."

Lucy Binnie of Land and Mineral Management who advise Complete Utilities on environmental matters commented after the award was announced "This is testimony to the way that Complete Utilities have consistently striven to be the best in their field and do so in a way that is friendly to the environment. Steve and the team are real professionals who care for the environment and thoroughly deserve to be recognized in this manner."

DUO Sales Manager - Luke Talbot, who worked on the project added "It's great that the efforts of Steve and the rest of the Complete Utilities team have been recognized. We're pleased to be associated with their success and look forward to helping other customers achieve similar success in the future."





Top Safety Accreditation for Alchemy Metals

Alchemy Metals is one of the latest successful companies to join a leading edge scheme, designed to help industry improve its safety record.

The Stevenage based firm recently received accreditation from SAFEcontractor, a programme that recognises very high standards of health and safety practice amongst UK contractors.

Specialising in the purchase of ethically sourced non ferrous scrap metal, the company's application for SAFEcontractor accreditation was driven by the need for a uniform standard across the business.

SAFEcontractor accreditation is expected to enhance the company's ability to attract new contracts and its commitment to safety will be viewed positively by its insurers when the company liability policy is up for renewal.

SAFEcontractor is applicable to most sectors although it is particularly relevant to UK manufacturing.

John Kinge, Head of Risk at SAFEcontractor said, "Major organisations can no longer run the risk of employing contractors who are not able to prove that they have sound health and safety policies".

"More companies need to understand the importance of adopting good risk management in the way that Alchemy has done. The firm's high standard has set an example, which hopefully will be followed by other companies within the sector".

Under the SAFEcontractor system, businesses undergo a vetting process, which examines health and safety procedures and their track record for safe practice. Those companies meeting the high standard are included on a database which is accessible to registered users only via a website.

Employer-organisations who sign up to the scheme can access the database, enabling them to vet potential contractors before they even set foot on site. These employers agree that, as users of the scheme, they will only engage with those who have received accreditation.



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A drive towards competitive advantage

The modern production environment demands reliability and flexibility from plant equipment, allowing it to cope with the wide range of variables which may occur. This is essential if high productivity is to be sustained and profit levels to be maximised.

Rexroth puts you in touch with leading engineers in heavy systems engineering incorporating hydraulic drive systems and controls, servo drives and controls, pneumatics, linear and factory automation. The scope of Rexroth products for heavy engineering projects is unrivalled and thanks to its expertise in applications, provides a comprehensive service and unique solutions to all heavy industries.

Bosch Rexroth is renowned in heavy industries with its hydraulic systems technology and other products, enhanced now with unique Hägglunds direct hydraulic drives. This brings significant benefits such as starting with full load, low inertia fast response and accurately controlling torque to prevent overloads. This wide range of products and its formidable engineering knowledge, ensures the best drive and control solution for your plant.



▲ A typical drive consists of a Hägglunds motor which will provide the torque required. A power unit with a variable displacement pump/motor set and necessary tank, filters and instrumentation is also included in addition to a control and monitoring unit and the inter-piping. The arrangement is versatile and flexible which enables customisation to suit the exact requirements of the application and environment.



■ Belt conveyor for coal at power station

This Amco Birtley belt conveyor at Tilbury Power Station in the UK is 200m long with speed range up to 2.5m/sec and capacity of 3000 tonne/hr of coal from the ship unloaders. Smooth dynamic acceleration and braking enables the loaded conveyor to stop quickly and prevent flooding the downstream conveyors.



◀ Autoclave processing household waste

This Joseph Rhodes autoclave is a large rotating drum with doors each end processing household waste under pressure with steam. A Hägglunds motor drives a single pinion against a girth gear in both directions and the drum has to be stopped accurately to engage a shot bolt before the auxiliary hydraulics opens the doors for loading and unloading.



■ Agitators or mixers in process industries

Direct hydraulic drives are very suitable for agitators either top or bottom entry. They give excellent overload protection to the impeller arrangement with a wide speed range. They are far more compact and weight saving than the traditional gearbox which makes attending to the agitator shaft sealings much quicker and easier to maintain.



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MRF Equipment Product Focus







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A Complete Package of **Products and** Services for the **Waste Industry**

During the current economic climate it makes sense to source reliable and efficient bulk handling equipment for waste processing. Canning Conveyor has supplied many solutions for waste processing sites in the UK, consistently providing top quality equipment backed by top class service, which as MD - Andrew Canning says, "In this economic client it is important to offer a full package to the client" This package includes being able to offer customers a single component part to full turnkey packages, from design concept to full installation and commissioning of a complete plant.

With the expertise and experience from over 45 years in the bulk handling industry Canning Conveyor Canning has successfully adapted to customer requirements as the industry changes." Customers want products that work efficiently in arduous conditions at a very competitive price, he says. "At Canning we have successfully installed an extensive amount of plant and equipment to the full satisfaction of the client. Furthermore we also offer the back-up of a full after sales service supplied by our skilled engineers, including site surveys of existing plant to cover belts, idlers, rollers and drums.

Viridor Waste Management

Designed, installed and commissioned at Century Wharf in early 2007 Canning installed a fully integrated conveyor system across the 10 acre site which are part of the paper and plastic line of the MRF

With an initial order for three transfer conveyors and a screen feed conveyor Canning subsequently supplied two quality assurance stations complete with structures to carry the new conveyors which included picking chutes, floors, stairs and hand railing. A third contract



involved the supply of two troughed belt conveyors and a 90 metre feed conveyor which handles mixed plastics at a height of six metres which runs parallel to an existing building discharging directly into the new sorting plant feed hoppers.

To complete the project a further supply of seven conveyors included Canning 'SuperDrive' motorised drums and modifications to three existing conveyors. All the 'SuperDrive' drums are fitted with extra, external non-regreasable steel labyrinth seals to eliminate the ingress of cassette tape, glass, plastic thread and steel or copper wires that can become trapped and wind themselves around critical areas such as shafts and seals. These seals ensure that the pulley can operate without constant attention consequently fulfilling its life potential.

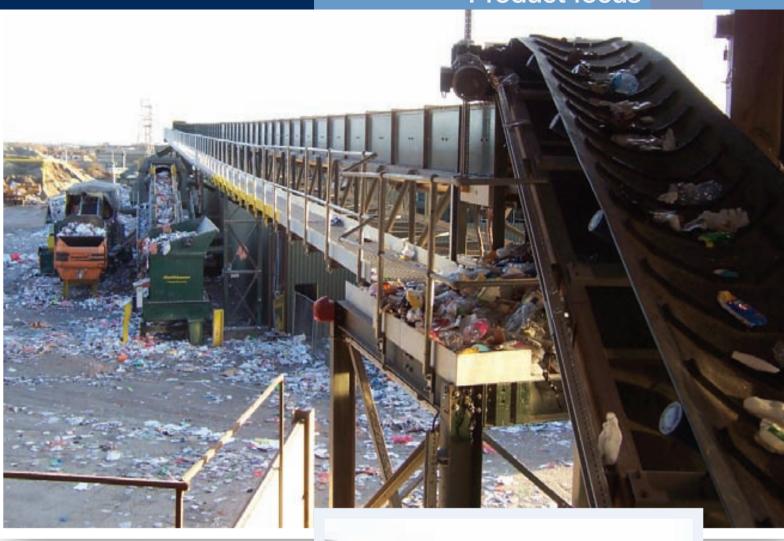
Reuse Glass UK Ltd

A recently completed project in the recycling Industry for Reuse Glass UK Ltd at Knottingley, West Yorkshire involved the supply and installation of a new transfer conveyor and associated equipment. Reuse Glass are glass recyclers who manage a daily incoming mixed stream of waste glass. Needing to upgrade and modify their existing processing system the company contacted Canning Conveyor to supply a new transfer conveyor.

Canning Conveyor were tasked with the supply of a 3.5 metre long transfer conveyor which was supplied with a crown and lagged drive drum with scraper, tail drum and adjustable 3-roll idlers. Canning also designed manufactured and supplied a new two way head chute complete with hood and associated chutes.

Further work involved modifications to an existing elevated conveyor which involved splitting and then raising the back of the conveyor. Canning then fitted a new discharge end (complete with magnetic drive drum) to feed onto a repositioned 'eddy current' separator. The existing eddy current discharge chute was then modified to feed the glass stream onto a new tail end/feed unit which was fitted onto the other half of the split conveyor allowing any non-ferrous metals to be fed by chute into an existing mobile skip. To ensure the ferrous removal the back end of the conveyor was fitted with a chevron belt, and the front end fitted with a wide plain belt.

The equipment for the whole project was subsequently installed on-site by Canning engineers.



John Witheford - Production Manager of Reuse Glass, commented, "The Canning team were very professional and completed the project within the allotted time frame which left no room for error due to tight production schedules. Furthermore they were also very competitive with their pricing."

Magna Engineering

A third project in the Waste Industry involved the supply and installation of a conveyor system at the laminated glass recycling site at Burn near Selby. Magna Engineering who are based in Wakefield are a member of the MAGNA Group plc. who are specialists in recycling. The group has developed an effective system to handle laminated glass and separate the glass from the PVB, to enable recycling of both glass and PVB for commercial use, The project has included the supply of conveyors for the laminated glass processing and recovery line with the first phase involving the supply of modular feed and discharge conveyors for the first MAGNA separator. Five more modular conveyors were supplied for the second stage of separation into



different product streams. Further modular conveyors will be supplied to fulfil the need as the process and the plant expands to achieve its full potential.

As one of the country's leading specialists in the supply of bulk materials handling technology Canning expertise covers a diverse range of industries including: Power, Waste, Marine, Quarrying, Food and Agriculture.

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A DUO MRF was an 'Easy' decision

Dartford based waste and recycling company Easy Load are now operating a new waste sorting plant manufactured and supplied by DUO Manufacturing, part of the DUO (Europe) plc group.

Easy Load is a family run business that has been working in the waste industry since 1968, have upgraded their facilities to increase the efficiency of their waste sorting. Receiving waste through their skip business which operates across Kent, South London and Essex, Easy Load provide their waste removal services to individual householders, schools, government contracts, local builders and national construction companies.

The new waste sorting plant, which is designed to handle up to 50 tph, will be processing a variety of material types, although a sizable portion will be construction and demolition waste. Prior to the commercial and domestic skip waste being fed to the MRF it is pre-sorted to remove the +600mm material, +25kg material and any combustible or corrosive materials.



It is after this pre-sorting stage that the business reaps the reward of their investment. Once separated the waste material is sold to local business which reduces the waste to landfill. Prior to the installation this was a time consuming exercise that, apart from the use of a mobile screen to remove oversize, was done entirely by hand.

The Plant

The process is very simple with incoming waste materials being fed by wheeled loader into a feed hopper, which was designed and manufactured in-house by DUO. Materials then pass through a vibrating feeder and onto an inclined conveyor which subsequently feeds into a 6 bay trommel screen, which was also



designed and manufactured in-house by DUO. The heavy-duty, 9.4m x 2.4m trommel mechanically grades the fines fraction into two sizes by further screening. DUO Director - Dudley Lloyd commented on the trommel selection "The right size trommel is key to the efficiency of any installation; we looked at Easy Loads application and rather than trying to compete purely on price we've made sure they have the right equipment for the job".

All oversize material exits the trommel and is fed onto a link conveyor to the 10 man picking station. This link conveyor is fitted with an air knife blower, situated just below the head drum this blower separates any oversize lightweight materials which are then transferred to a lights cage through a totally enclosed steel

All heavy materials then move onto a 1200mm wide picking belt within the picking station which conveys the material past a team of operators, each operator manually selecting and rejecting specific materials not required in the end product via discharge chutes into the bays below. Any unpicked material then passes under an overband magnet to remove any ferrous metals before going on to be stockpiled via a discharge chute at the end of the belt.

The picking belt is enclosed within a 17.5m cabin and is equipped with a continuous, centrally positioned tensioned pull wire above the belt for emergency stop situations creating a safe and hospitable environment for sorting waste.

An 'Easy' Decision

For Easy Load, DUO Manufacturing stood out in what is a highly competitive market.

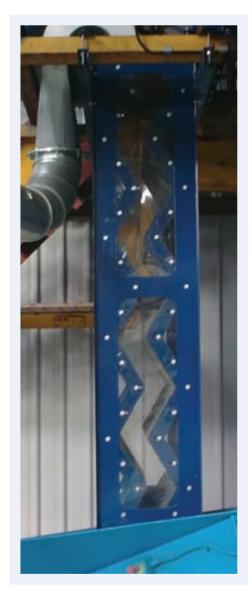
"We've developed a good relationship with DUO, they have helped us a great deal from our initial discussions through to the support they continue to provide." commented Easy Load Owner - Tommy Lee. He added "We've been looking to invest in this type of facility for a couple of years now and in that time we've visited several sites to view similar operations and the specification and build quality of all of DUO Manufacturing's plants has been very impressive"

Tommy commented further "Every element has been designed to last and the maintenance requirements are very simple."

Tel: 01373 836451, www.duoplc.com



Impact's Zig-Zag separation system - Seeing is believing!



Impact Air Systems' recycling solutions are slowly becoming a global phenomenon within the recycling industry.

Impact offer a number of air based solutions to separate, clean and transport recyclables including air knives, glass cleaning systems, plastic granule cleaners and film handling systems as well as solutions to improve the working environment and cleanliness of materials such as dust control and LEV thorough examination and testing.



Impact Air Systems' most recent success has been their Zig-Zag separation system. The simple but highly effective system pulled crowds onto the stand at the Recycling & Waste Management exhibition in Birmingham and at the Recycling exhibition in Poland. They used a demonstration unit to show how they could remove lightweight contaminants from recyclable materials thus improving their quality and value.

Although they showed how they could separate paper from ping pong, golf and tennis balls, it was the glass, rubber and plastics samples that really wowed the visitors.

Since the exhibitions they have had requests for over 30 samples to be put through their test facility at their headquarters in Leicester in the Midlands and are now processing many of those samples so that potential customers can see the results for themselves.

Customers have been so impressed by the improvement in quality that they have even asked Impact not to tell their competitors about their solutions!

The most recent installations include removing paper, label, wood and dust from shredded and granulated rigid plastic, removing paper and dust from plasterboard nuggets and also systems within various glass processing plants.

Due to unprecedented demand, Impact have established trade partners in USA, Canada, Mexico, Poland, Russia and Japan.

Impact Air Systems' solutions come with the benefit of support from their sister company Impact Technical Services who have a team of highly skilled engineers who pride themselves on their technical knowledge and reputation for a quality service. Impact Technical Services provide everything from contract maintenance, breakdown response and spare parts through to specialist on-site services such as LEV testing, noise and air quality monitoring.

For more information about how Impact can help you, call the sales team on +44 (0)116 2448855, visit the website www.impactair.co.uk or look at their videos on YouTube.



Mogensen in the recycling industry

Most recycling plants find it essential to use vibratory equipment somewhere in the process to loosen, carry out a preliminary separation on, spread and/or size the incoming materials. Examples of processes, which would not be able to operate effectively without this

sort of assistance, include magnetic, eddy current, ballistic, opticalelectronic and air separation, all of which are to be found in the recycling industry. Mogensen, as a specialist manufacturer of vibratory screens, feeders, conveyors, Sizers and the open-ended, non-dogging grizzlies known as Divergators™, has experienced a steady increase in business from the recycling sector over the past decade. This development was recently confirmed at this year's RWM show, which was marked by an encouraging improvement in the volume and quality of enquiries compared with the two previous exhibitions. Within the recycling sector the processing of waste materials from the construction industry has shown the most marked increase in recent years. This includes not only the dewatering and sizing of sand and recycled aggregates, the sizing of wood products and glass but also, notably, the screening of waste plasterboard following upon the banning in the EU of consigning such material to

Mogensen has supplied numerous machines for processing shredded plasterboard, ranging from small single deck screens to 3-metre wide, 5-deck Mogensen Sizer/spreader feeder combinations. These units have been used to perform simple duties such as the removal of paper and production of coarse grade recycled gypsum, and also the more demanding duties such as the production of multiple fine-grade fractions compliant with British Standard PAS109:2008. Mogensen equipment is used, for example, to process shredded plaster board at rates of up to 80TPH performing separations down to below 1 mm.

When it is considered that more than 500,000 tonnes of scrap plasterboard are already recycled annually in the UK alone, the environmental benefit is very clear, especially as clean, recycled board is about 97% re-usable in the manufacture of new plasterboard, cement manufacture, the production of bricks and building blocks for internal use and for soil improvement.





Axion Consulting launches new analysis service for **MRFs**

Axion Consulting, one of the UK's leading resource and recovery specialists, has expanded its range of services for Materials Recovery Facilities with a new Material Analysis and Sampling Service (MASS) for mixed material streams.

MASS has been developed by Axion's process engineers to combine common-sense, practical measuring methods with the correct application of statistical formulae. The collected composition data is processed on-the-job, so exactly the right sample size can be taken to remove background variability.

This means that optimum sampling can be carried out in the minimum required time, yet still gives the customer high confidence in the validity of the results obtained.

Providing a rapid and factual analysis of mixed material streams, the MASS service can be accessed as a standalone package; or it can follow on from the more comprehensive MRF Health Check that helps managers get the best from their waste sorting operations.

Axion's extensive experience over the past decade encompasses sampling and analysis techniques covering diverse waste streams, from plastic pots and trays to mixed bread, cakes and doughnuts.

"We believe many MRF operators and owners are not carrying out statistically valid sampling and analyses of their infeed and output streams," explained Axion Director Keith Freegard. "As their main task is to recover valuable materials at high purity from comingled waste, it is essential to know exactly what they're dealing with to gauge precisely their plant's overall performance.

"The composition and volumes of these complex material waste streams changes over time. That's why accurate and representative measurement is vital to identify any necessary responses to optimise operational efficiency - and maximise profits," he added.

Axion Consulting, part of the Axion Group, develops and optimises processing and collection methods to recover value from waste resources for a wide range of clients within the recycling and process industries.

Axion designs and builds innovative process plants for companies in the recycling sector, advising on plant design and equipment selection. Its specialist teams have particular expertise in mixed waste plastics and biofuels.

For more information, contact Axion Consulting on 0161 426 7731 or visit the website - www.axionconsulting.co.uk.



Getting to know the UNTHA VR series shredder

After 40 years in the industry, many organisations would find it difficult to maintain an innovative edge. Yet renowned for pioneering developments within the shredding technology marketplace, UNTHA has managed to continuously design and manufacture new and exciting machinery throughout the decades.

The key driving force behind the invention of all UNTHA shredders is, 'what do clients want'? This was certainly the case when UNTHA introduced the TR series for RDF shredding in 2009. Yet the beauty behind this most recent innovation - the VR series shredder - is that UNTHA has not only listened to industry requirements. The team has also created a piece of engineering that some clients would have never even considered, simply because they didn't think it was possible.

UNTHA UK managing director Chris Oldfield explains: "Designed purposefully to satisfy the need for high-quality precision shredding, the VR is able to achieve incredibly accurately-sized particle reduction thanks to a number of configurable screens. Suitable for low-volume RDF, clean and dirty wood, plastics, film, mixed rigid plastics and even carpets, the VR can handle large volumes of waste that can be reduced to a particle size of 15-80mm depending upon application requirements.

"Consistency of particle sizing is incredibly important if the shredded waste is to be used in alternative fuel production, as biomass burners or gasification plants need small yet equally sized particles to get the best charge.'

With five models available from a VR60 through to a VR160, the shredder is capable of achieving throughput of two to eight tonnes per hour depending upon the application and required particle size.

Such impressive throughput is possible due to the VR's unparalleled new drive mechanism. This has not been used in a shredder before but is more commonly seen in heavy-duty applications such as mining and road-planning machines.

UNTHA's head of engineering management Christian Lanner explains: "The gearbox sits neatly inside the shredder's rotor - what is now the largest in the UK's marketplace - and drives through the full 700mm diameter as opposed to only a small diameter stub shaft. Because the rotor diameter is so great, the rotor speed can be reduced without compromising the cutter tip speed. Even with reduced RPM there is an unparalleled rate of throughput. Clients could expect to shred up to 7 tonnes of plastic bottles per hour, or 5 tonnes of wooden pallets per hour for example."

Operational simplicity is achieved by using touch screens, plus all clients' shredding data can now be digitally logged and sent to UNTHA's Austrian headquarters for interrogation. Ongoing assessment of running conditions not only prevents things going wrong but it also helps to ensure continuous efficiencies for the client long after the initial installation.



Other features include better foreign object detection, a maintenancefree ram device and interchangeable and indexable cutters. All of this combines to ensure outstanding reliability and consistently high results even under the most difficult conditions.

Considering its positioning in the marketplace, Chris believes that the VR really does represent the next generation of shredding technology, commenting: "It illustrates the evermore intelligent nature of waste management solutions. Clients continually want more and more from their machinery. The VR has therefore been developed to closely fit the requirements of modern waste applications - to achieve greater efficiencies and encourage smarter working."

Whilst not essential, the VR looks the part too. It's somewhat ironic that a machine which deals with materials that other people and organisations discard as rubbish, is so technically and aesthetically so sophisticated.

Contact UNTHA UK on T: 0845 450 5388 or visit www.untha.co.uk for more information.



Blue Group Presses On With The Ne Marathon **Gemini-Xtreme Baler!**

Blue Group is the appointed European distributor for the successful range of Marathon 2 RAM, horizontal and channel balers. Having launched the new Gemini-Xtreme model at this year's RWM Show, the company reports considerable success with this versatile closed end horizontal baler, confirming eight models sold, seven of which are already installed. Blue Group is so confident of the continuing success of this machine that they have placed stock orders with USA based Marathon to ensure off-the-shelf availability throughout next year.

New owners of the Gemini-Xtreme baling presses cover a broad spectrum of waste management expertise from waste processing to demolition and baling a wide variety of recyclable materials.

Commenting on their recently purchased Marathon Ğemini-Xtreme baler, James Nolan. owner of Nolan Recycling,

Bridgend, Glamorgan said "Our new baler has exceeded all expectations. It is extremely versatile, enabling us to bale a wide range of materials including cardboard, paper, polythene, hard plastics, bottles and cans." James added "The quality of bale produced is fantastic, especially those of the rigid plastics which weigh around 460kg, enabling us to transport this awkward material more easily, thus opening new doors for our recyclables back into the market.

Tom Paterson, Managing Director of Patersons Waste in Glasgow, stated, "To supplement our recent MRF installation, we purchased the Marathon Gemini-Xtreme baler to enable us to handle and transport our recyclables more efficiently. We are delighted with the baler's performance both in terms of throughput and versatility. All products recovered from our MRF are now baled including papers, films, cardboard and rigid plastics, ensuring a more efficient and profitable operation"

Other Gemini-Xtreme baler installations in the past two months include specialist companies such as F. D. O'Dell & Sons and Hawes in London, Armstrong based in Bolton, DRS Demolition in Cornwall and TOM Waste in Scotland.

The Gemini-Xtreme is a mid-capacity, closed-end, multi-material baler with a vertical tie system, which is ideal for baling light alloys, paper, plastics, PET and similar waste stream materials, producing a standard 762mm X 1219mm X 1524mm bale with an average cycle time of 34 seconds. The full penetration ram ensures optimum compaction and full bale ejection. The programmable controller allows both manual and semi-automatic operation and the twin cross cylinders have power to spare from the 20HP motor. Wire guides ensure quick and efficient bale tying and the guide design allows easy clean-out. The Gemini-Xtreme also features a reversible and adjustable bolt-on shear blade and is also available with an optional hydraulic bale door release system and variable speed conveyor. The Gemini-Xtreme can be installed with an above floor or pit conveyor as required.



Kenburn installs fully automatic baler in third Shred-it branch

Kenburn Waste Management Ltd has recently completed the installation of a fully automatic Avermann Horizontal Baler and Conveyor system at the Leeds branch of Shred-it, a world leading on site document destruction company. Kenburn has previously supplied the Glasgow and Bristol branches of Shred-it with similar equipment to meet their waste handling requirements.

Leeds General Manager, Doug Badger said that the decision to use Avermann equipment was based on the success of the previous installations, where the quality of the equipment and the after sales support offered by Kenburn had already been proven. Shred-it invests heavily in the security of customer information, and baling shredded documents so they are sent straight to the mill for pulping is part of this secure process.



Kenburn has been the UK distributor for Avermann Baler and Conveyor systems since 1997. Many solutions, including fully automatic and semi-automatic balers with bin-lift or conveyor feed options have been installed within the UK.

The company is totally committed to provide bespoke customer solutions to specification, on time and at a competitive price. Key Account Manager, Martin Slough, believes that this commitment explains why a significant proportion of sales come from existing customers.

Kenburn has a National Service Team, with the capacity to install and support all the supplied systems. Additionally, Kenburn can repair and maintain any make of baler or compactor and supply a full range of consumables. They are also UK distributor for the Bramidan and Bergmann ranges of waste handling equipment.

For more information, visit Kenburn at www.kenburn.co.uk, email info@kenburn.co.uk or call 01727 844988





SPLITTER - wide range spiral shaft separator

Powerful recycling technology with individual solutions from Anlagenbau Günther

Wartenberg. Whether residual waste, compost, bulky waste, organic waste, old wood, woody biomass or stones, soils as well as mixed building waste - the SPLITTER handles almost everything. The unique, patented spiral shaft separator for separating extremely difficult materials is always at hand, even for treating mono charges such as old tyres and scrap steel. It ensures perfect screening without blockages and wrappers. "The secret of such extreme screening performance over a minimum area is the simultaneous axial and lateral spread of waste materials", says Bernd Günther, owner of Anlagenbau Günther GmbH in Wartenberg, the company which developed and successfully sells this innovative screening system on the international markets.

Mr. Günther explains that the wear resistant SPLITTER with its low energy consumption is available in mobile and stationary configurations, because "last but not least, flexible customized solutions are our field of expertise". The particularly powerful receiving dosing unit TAKER for forwarding and dosing material onto downstream conveyor units surely also belongs to the range of best-sellers from Anlagenbau Günther. "This system convinces with large capacity and application related flexibility", the owner of the company explains. No question: With its comprehensive product portfolio and its own sales activities covering the fields of receiving - dosing - conveying separating Anlagenbau Günther is the ideal partner for the entire process.

And this for a good reason, because this German machine and plant manufacturer already looks back on 25 years of experience - last but not least also in the development and production of star screening machines with selfcleaning system. At Anlagenbau Günther 120 employees stand up for our customers, work out individual and economical recycling technologies to suit man and environment. "We are your self-reliant partner from A to Z", Bernd Günther emphasizes, "from consultation through planning, execution and assembly, all the way to our highly professional After Sales Service - worldwide."

Private independent disposers, local authorities, waste management companies and energy producers and heating plant operators are among the clients of this third generation family enterprise. "They appreciate our modular concept plants, which seamlessly fit into their existing production processes", says Günther. The high number of possible modifications also convinces the customers. The screen gap sizes on the SPLITTER can e.g. be matched to the actual requirements "and thus ensures highest efficiency".



A fast and **Efficient Way to** Recycle

As the price of raw materials continues to rise and energy costs remain unpredictable, recycling in all areas of industry is becoming more important.

Mike Redmond of Bosch Rexroth discusses the machines and hydraulic systems that are providing a fast and energy efficient way to make the most of the materials that are available now.

In the last few years, the price of raw materials and the cost of energy have risen significantly due to the continued imbalance of supply and demand. The rapid development of technology and the standard of living in Asia, Eastern Europe and South America has also undoubtedly contributed to this situation and is not expected to change. We must therefore use the resources we do have more efficiently, not only reusing raw materials but avoiding waste. Recycling technology is already becoming a more readily accepted way of cutting costs and making processes more efficient. The demand for machines, such as Fragmentizers, scrap shears and presses continues. The need to keep improving the efficiency and the performance of this technology is where hydraulic systems offer such powerful and attractive solutions.

There are many applications in metal recycling that take advantage of the shear force and flexibility of hydraulics to handle the moving, cutting, squashing and lifting needed. From simple shears that cut metal into shorter lengths to massive shears and

There are numerous hydraulic products on the market and each one differs in terms of performance, quality and function. One such piece of technology is a scrap press, which is used to compress scrap into the smallest possible volume, forming a single block for ease of transport. In order to compress the scrap as uniformly as possible it is pressed from the side, from each end and from above. After pressing, the gate is opened and the compressed scrap is pushed out. Typically four hydraulic cylinder axes are used. In order to reduce the total cycle time these machine are often fitted with a 'skip'. During compression of the material, a crane fills the skip with the next charge of scrap. At the beginning of the next cycle the previously prepared charge is simply tipped into the press. The skip also functions as a measuring device so that the press is always filled with the optimum amount of scrap. By employing this process, transport, storage and disposal are made easier and more efficient.

Another option is a scrap shear. This is where the scrap is first compressed as in a scrap press, but rather than being formed





into a block, the material is pushed out in small steps by means of an end pusher and cut into sections. In order for this cutting process to be as efficient as possible, the scrap is pre-compressed directly at the shear blade and firmly held by a 'hold down cylinder'. Cutting scrap into small equally sized pieces makes it suitable for further recycling processes.

The need for high forces, robustness, reliability and short cycle times means that scrap shears must usé hydraulics. The hydraulic system is key to the overall efficiency of the shear and it is the hydraulics that makes the difference in performance.. A high performance scrap shear requires hydraulics that allows shockfree switching of large flows and shock-free decompression. Cutting shocks must be avoided with low energy consumption and first procurement costs ensured.

Hydraulic systems are also used in preshredder Fragmentiser technology which further improves productivity, efficiency and safety. A pre-shredder uses low power and speed to pull pressed materials to pieces, effectively 'unbaling' them to produce a lighter material that is ready for fragmentation. This makes the hammermill more productive and reliable, not just in the shredding operation but also in the feeding process stream where the conveyor can be fully loaded. Also, further down the process line, it enables better sorting efficiency due to the better fragmentation. The hammers and other parts will also have less wear providing longer life savings on maintenance costs. By using a pre-shredder, capacity can be increased, allowing transport journeys of feedstock to be reduced to ultimately save fuel costs and reduce emissions.

A pre-shredder works by simply dropping the material, whether a car or bale, into the top where two rotorspull them in and then pull them apart. The loose material that has been created then drops out at the bottom ready for the fragmentation process. The two horizontal rotors with direct hydraulic drive can be geared together or independently driven and the speed is controlled and it necessary reversed. A hydraulic push plate is added to press the material against the rotors, preventing slippage. The direct hydraulic drives produce full driving force (torque) in forward and reverse and no gearboxes are needed to keep the drive arrangement simple and effective. Although it's a low speed process, the force needed for this type of operation is incredibly high, making a direct hydraulic drive system an advantage...

The use of a pre-shredder can also be useful in exposing fraudulent attempts to increase the weight of feedstock bales. Should there be any fuel in a flattened car, the slow process of a pre-shredder will expose the problem and by tearing the tanks apart carefully, will virtually eliminate the threat of explosións.

The fragmentiser where all our cars, light scrap and white goods end up usually has an inclined steel belt conveyor driven hydraulically which is fully loaded with scrap metal. The scrap drops down a chute to the roll feeder, also driven hydraulically, which feeds the scrap into the hammermill at the optimum rate, holding it so as not to get pulled in too quickly to ensure the best production in relation to the power of the

Other functions of the mill are also hydraulically operated such as the raise/lower of the feed rolls, the reject door and maintenance functions like hood lift, pin puller etc. The main rotor lubrication system is also hydraulic.



Whilst all hydraulic systems need to be designed properly with reference to pressures, temperatures, filtration and oil grade issues, environmental concerns are an increasing concern. The larger the plant and hydraulic components, the more consideration is needed in regards to the massive forces involved and the power of the fluid forces and how to control them. Most products are designed for a specific application and it also needs to be remembered that using it outside these areas might not be appropriate. This is true for instance, in the case of mobile equipment as opposed to industrial equipment. The best way to ensure the products used are well matched and fit for purpose is to order the complete system from a well-respected manufacturer which can provide a complete system design, including controls. This will give you an efficient, workable solution which meets the appropriate standards.

The larger hydraulic companies have been addressing these issues for many years. Rexroth, the market leader in hydraulics has the knowledge and experience to draw on when supplying hydraulic systems as well as rules and procedures to control inherent risks. My advice is that all customers need to be able to satisfy themselves as to the reliability and security of the technology including its efficiency. All round performance is required short term, but the reassurance of quality service and ongoing support will be needed in the long run.



Recycle Direct wins creative design award at the Inaugural Made in Wales Awards 2011

The first Made in Wales Awards were held at the Mercure Holland House in Cardiff on 20th October and we are delighted to have been amongst the winners picking up the Creative Design award for the development and manufacture of our new BM60 fully automatic baler.

Established over 12 years ago, the company has been refurbishing, servicing, repairing and supplying parts for all kinds of recycling machinery, but despite moving into mainstream equipment design and manufacture for the first time, such is the innovative nature of the design, we fought off challengers including global multi-national GE Aviation to secure the honours. The main feature that makes the new baler so impressive is that the baling capacity of the machine can be increased without changing the chassis, by way of adding more cylinders and motors.

With recyclers and waste management companies often uncertain of the eventual volumes of waste to be recycled when purchasing the necessary equipment, more often than not, levels are exceeded well before they had budgeted for, with the result that the baler has

to be replaced. Clearly a very costly situation, but with our new baler, we can increase capacity on the existing chassis, taking the capacity up to 80 tonne, then 100 tonne, if required. There is nothing like this in the market, hence we are particularly proud of the research and development that has taken us to this level.

Commenting on the Award, Managing Director Nigel Davies said "to have beaten off so many excellent entries from some of the world's leading manufacturers is testament to the hard work and determination from all our staff. It is a fantastic achievement and we are naturally very proud of the achievement.

The company is now embarking on a significant growth programme and is in the process of identifying new markets where this technology will be sought after. We are already servicing clients in the UK/Ireland, as well as New Zealand and the US, but we are only scratching the surface in this growing sector. We are also pursuing India as a potential, so clearly these are exciting times".



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Almost gone are the days where a baler is bought to processes a certain tonnage of a certain material for a specific number of shifts per day. Nowadays customers are requiring far more flexibility, of variable tonnage, variable materials and not only the ability to scale up tonnage but also the ability to scale 'up' or 'down' according to the season or even the time of day and remain efficient.

Jeff Jones, MD, of the UK company. Autobaler looks at this new trend and discusses how they have changed to cater for this new model.

Whether in normal times or current, businesses should be looking at ensuring the best return on their investment when considering any purchase of capital equipment. At Autobaler we have found that clients seldom have a constant volume of material to process and often have considerable seasonal changes to manage.

Whereas previously an automatic baler might be purchased for doing a specific job, we're getting more and more enquiries about balers being able to swap material grades and types with minimal disruption.

The important factors are scalability and energy efficiency.

The vast majority of our clients have peaks and troughs in their business and need equipment to be as flexible in meeting these demands. With ever increasing operating costs (e.g. electricity and labour) energy efficiency and machine capability are in the forefront of our clients minds. Often Clients need to process higher 'on demand' volumes in the same time frame as they would the lower volumes. Thus, having the ability for the machine to detect an increase or decrease in throughput required and automatically adjust it's capacity, has been invaluable to our clients.

As the markets strive for better and better quality our clients also require flexibility in being able to change from one material grade to another, on a bale by bale basis. This is being driven by their aim to maintain or improve the saleability of the baled material. (e.g. 'white office' is valued more than 'mixed office' paper).

When selecting an automatic baler, it is also vitality important to understand how the client intends to operate their plant. This simple but vital step is often overlooked but is essential to ensure a robust and flexible solution.

Flexibility = Efficiency = ROI

As economic times get tough, flexibility and creativity are paramount. Being able to provide better utilisation of equipment has never been more necessary. The old saying 'Use it or lose it' has never been more prevalent and baler manufacturers will need to maximise utilisation for their customers in order to grow. It may be a tough time but such times encourage us to be more creative and flexible.



Profit from Waste

Minimising the volume of material sent to landfill makes good environmental sense but local authorities are reluctant to spend more than is absolutely necessary on recycling, especially in the present economic climate. Fortunately, technology is coming to the rescue by reducing the cost of processing waste and, in some instances, turning a cost into a profit.

The key to making money from waste is to sort the incoming waste stream into separate fractions as economically as possible. Sorting technology from S+S Inspection Limited, part of the German based, S+S Separation and Sorting Technology Group, covers the whole gamut from simple, permanent magnetic devices for removing ferrous material to sophisticated equipment using a range of sensing technologies to sort on the basis of colour or material type. Typically, this approach is being used to sort plastics, metals and glass, which, once sorted, can be sold for reuse or further processing, converting a liability into an asset. Many UK commercial recycling companies already use S+S sorting technology to profitably sort and recycle waste from a variety of sources. For example, the Biffa Polymers plant on Teesside is using a combination of S+S VARISORT bulk sorters to separate plastics from the stream of mixed materials, such as metal, card paper, etc. and Flake Purifiers to process 15,000 tonnes per annum of mixed plastics into high grade, reusable material.

Similar technology can be used to profitably recycle other materials including glass, plastics and metals to meet the demands of a wide variety of recycling challenges, including the WEEE Directive, cost effectively and, in many cases, profitably.

One of the most widely used sorting systems is the S+S VARISORT COMPACT which can be fitted with a range of sensing systems to handle a wide variety of material. In operation, this machine requires little, if any operator input once set-up for a particular material and can be easily reset as the needs of the recycling plant develop.



The input stage at the Biuffa Polymenrs plant where unwanted materials, such as paper, metal and glass are removed to leave a stream of mixed plastics for further processing.

The VARISORT COMPACT can sort a wide variety of materials, but the input stream does need to be pre-sort to remove noncompatible materials, such as paper, card and similar materials. With its extensive experience of sorting waste for recycling, S+S Inspection Limited has the capability to design and supply a combination of technologies to convert an input stream of mixed waste into high purity, high value output streams for sale to the manufacturing sector.



The S+S VARISORT COMPACT which can be fitted with a range of sensing systems to sort a wide of variety of

This approach doubles the environmental benefit by reducing the pressure on landfill and replacing virgin raw materials, often hydrocarbon based, with less costly and less energy consuming recycled materials; a real win-win situation.



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New milling technology opens up recycling markets

By George Ord, managing director of **International Innovative Technologies**

New patented milling technology has the potential to meet the fine grinding requirements of minerals and manufactured materials that were previously regarded as uneconomic.

The new grinding technology developed by the UK based International Innovative Technology (IIT) combines low energy consumption with a compact size and powerful grinding force.

In traditional minerals processing and materials handling applications, this new type of mill is suitable for the fine grinding of a wide range of natural raw materials and other industrial products. However, because of the low energy consumption associated with the new technology, the highly efficient and versatile milling system also has considerable recycling potential by providing the means to convert by-products currently regarded as waste, into commercially marketable powder products.

New patented design

The majority of traditional grinding processes are air swept systems in which the feed materials are introduced into the grinding chamber in a stream of air.

However air swept mills require significant power to maintain flow through the system. In addition, many conventional ball mill and similar grinding systems involve the fairly random application of the attrition force on the material in the mill.

The new vertical mill developed and patented by IIT comprises a technically advanced modular design capable of grinding soft, medium and hard materials to 9.5 on the Mohs scale and with 90% passing 45 microns and below.

Compact and powerful, the centrifugal grinding mechanism of the m-series is extremely efficient, with the vertical material flow path and special roller assembly ensuring that the force produced is translated into maximum particle grinding power.

In the new m-series mill, the product in-feed mechanism and chamber comprises a rotating spreader plate which throws the material outwards (by centrifugal force) against the wall of the grinding chamber and downwards (by gravity) through the grinding module.

As the material descends, it is forced between the rollers and the outer grinding ring on the inside of the mill housing (barrel) and is reduced to a powdered form.

All material introduced into the mill must come into contact with the grinding module. The rotational speed of the rollers (typically 300 rpm) carrying the grinding heads controls the crushing force applied and the diameter of the mill housing determines the throughput volume.

Multi stage grinding is achieved through the incorporation of a number of grinding modules in series with particle size controlled both by the number of modules and rotational roller speed applied.

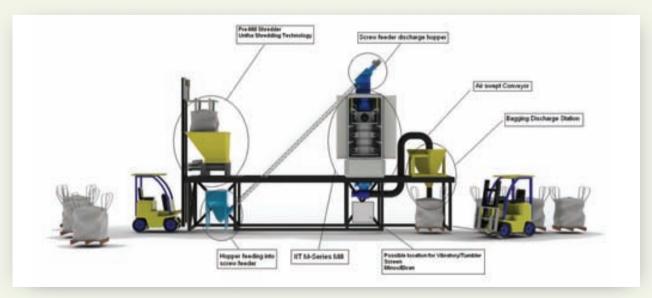
Typically, a standard 600mm mill barrel operating at 300 rpm produces a very fine powder output at up to 5 tonnes per hour and multi-mill configurations are available to meet capacities of up to 50 tonnes per hour.

As a result of this configuration grinding efficiency is maximised with very low electrical energy input being required relative to the fineness and volume of powder produced. For example, depending on the specific milling application, the energy consumption typically associated with the new m-series is between 5kWh/T and 10kWh/T. By comparison, traditional milling process typically utilise between 3 and 10 times higher energy

As a result, material previously regarded as waste can now be economically reduced to powder for recycling applications.

Recycling of plastic waste

Glass Reinforced Plastic (GRP or fibreglass) is used in thousands of consumer and building products. However, because GRP is a notoriously difficult materials to break down, the effective disposal of waste GRP is a significant problem worldwide.



For many years it has been widely regarded that the only viable option for disposing of waste GRP was landfill and in the UK alone it is estimated that around 150,000 tonnes are sent to landfill every year.

To help overcome such problems, during the last 18 months IIT has successfully worked with a UK GRP manufacturer as part of its sustainable manufacturing programme to explore methods of recycling GRP.

As a result of the research and development work undertaken during this period a successful GRP recycling plant is now fully operational - and has overcome concerns that GRP is too hard and abrasive to be recycled cost effectively.

This process involves GRP waste first being converted into flakes before secondary reduction is carried out in an m-series mill which successfully converts the flakes into a fine powder of generally less than 100 microns.

Tests - and subsequent production runs have shown that the inclusion of a percentage of this powdered material back into the primary batch for new GRP products has no detrimental effect on GRP in terms of strength, light transmission, light diffusion or durability.

The company has now incorporated a fully operational recycling plant as part of its primary production facility. As a result of the mill's ability to successfully convert waste into recycled powder, the quantity of GRP going to landfill has been reduced and the costs associated with the use of some traditional batch raw materials has also been cut.

However one of the key benefits for the company involved is that is can now claim genuine 'recyclable' credentials which significantly enhance its corporate reputation and product marketability.

Commercial applications for waste alass

In the glass industry work has been carried out to show how the economic fine grinding of glass waste can also be successfully utilised for commercial applications.

Historically the unfavourable economics associated with the fine milling of glass waste in conventional grinding systems such as ball mills has largely ruled out potential applications in the brick manufacturing industry and in filtration processes.

As part of its work on the economic, practical and technical challenges associated with the recycling of glass waste, the UK's Waste & Resources Action Programme (WRAP) has identified the considerable potential for powdered glass to act as a fluxing agent in the manufacture of bricks.





This work has shown how the addition of powdered glass can successfully reduce the firing temperatures required during brick manufacture - particularly when used with those types of firing clays that demand the highest energy levels.

However IIT has successfully undertaken the milling of glass waste to 50-75 microns to demonstrate the feasibility and cost effective production of powdered glass product.

WRAP has estimated that the UK domestic window replacement sector generates around 90,000 tonnes of glass every year. Until now, all of that glass has gone straight into landfill and these figures are expected to rise to between 160,000 and 250,000 tonnes per year over the next 10 years.

The ability to economically mill and recycle glass powder could therefore significantly reduce waste management costs associated with landfill disposal of waste glass and at the same time provide a completely new income stream from this commercial application.

In addition, similar opportunities for powdered glass are also provided by in water filtration and sports turf applications - both of which have also been researched and developed by WRAP.

With the new mill size and energy costs of converting granular materials into a fine powder no longer an inhibiting factor, volume powder milling applications can now be easily integrated into previously inaccessible

It follows that the energy efficiency associated with the new technology therefore brings new opportunities for the fine grinding of those materials that were previously regarded as uneconomic and regarded as waste.







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So what can a **DISAB truck do?**

United Utilities is the largest water company in the UK, and lan Smith, the Vactor Services Manager looks after the cleaning requirements of its 650 waste water treatment plants, 220 portable water treatment plants and 2,500 pumping stations in the sewer network in the North of England

"We use DISAB trucks because there's nothing else that does what they can do. They've got a blowing as well as sucking capability, airflow of 8,500 cubic feet at 80% vacuum, and with its Boom, frankly you'd have to see it shift wet as well as dry material and the speed at which it can do it, to believe what these trucks are capable of. There's nothing that matches their longevity and reliability either."

As Gotland is part of the DISAB Group, world leaders in low-noise mobile and stationary vacuum systems, we thought we'd take a closer look at these extraordinary machines. The DISAB Group is best known for its unique, high powered truck mounted vacuum systems that are used for sucking, blowing and tipping all kinds of dry and wet material. They represent the ultimate in usable vacuum power for industrial applications.

What are DISAB trucks used for?

lan continues: "We bought our first DISAB truck back in 2006 and it became obvious that we needed another two on the fleet. because with such a large number of assets to look after, there's a constant demand for both the DISAB trucks we have and for those we can hire from our approved contractors. The most recent DISAB truck was purchased in March 2009."

"On a daily basis we're dealing with and maintaining the deep lifting of sludge and grit from detention tanks, storm overflows and so on. One of the deepest we have on our books is 40 metres deep; underneath of all places the car park at Blackpool FC!"

"Maintaining these facilities means they work efficiently. If we didn't do this the sewer and water systems would soon become unserviceable and our industrial and residential customers would soon notice the difference. A 30 metre lift of several tonnes of heavy wet material is very typical of a day's work for the DISAB trucks, but one of the most unusual tasks





was when we used their power to blow pea gravel UP 30 metres into a biological filter plant at Birkenhead."

"We had to shift 1,200 tonnes of this gravel and it took two DISAB trucks two weeks. There was a compliance issue with this particular plant, so we threw everything we had at it. Because we had the DISAB trucks, we reckon it took us half the time it would have done by standard lifting techniques and several operatives on site.'

DISAB's uniqueness and reliability

A DISAB truck's power can work both ways, as lan explains: "It's the DISAB truck's blowing as well as its sucking capabilities that make it so incredibly versatile. Our units were specially made for us by DISAB using stainless steel so that we can handle all sorts of toxic sludge and hazardous liquids, another unique ability for United Utilities."

"I can honestly say there's nothing like these specialist vehicles for their reliability and longevity, let alone their versatility

"All this means we can genuinely be ready for action whenever any part of the United Utilities asset portfolio needs a DISAB truck's capabilities, and keep one of the UK's largest water asset portfolios working efficiently to deliver clean water and waste water removal 24 hours a day, to its millions of customers."



The role of weighbridges in energy from waste sites

Introduction

Love them or hate them, the number of Energy from Waste (EfW) sites in the UK is growing steadily and, with encouragement from the Coalition Government, this trend is set to continue.

Despite continued opposition from resident groups around the country, it is estimated that the UK could be generating six percent of its energy from waste by 2015. This development could play an important role in helping the UK meet its international obligations to reduce the emission of greenhouse gases, in particular carbon dioxide, by replacing fossil fuels as a source of energy. Given the restrictions on land fill sites, burning non-recyclable waste to produce energy is now becoming a necessary evil. Modern waste to energy plants are primarily moving grate incinerators: the waste is slowly propelled through the furnace by a moving mechanical grate. Waste continuously enters at one end and the ash is discharged at the other. Combustion technologies have advanced significantly over the past decade and pollution levels have been reduced significantly. The electricity generated from a typical 100,000 tonnes per annum facility is sufficient to provide power for approximately 10,000 homes, whilst any excess heat produced by the plant can be used in industrial or district heating schemes if appropriate.

The role of weighbridge systems at EfWs

Weighbridges play a vital role at EfW plants and, in accordance with the Waste Incineration Directive (2000/76/EEC), provide essential weight data relating to quantities of waste arriving on site and incinerated by-products (primarily ash and residues) leaving the plant. However, as Weightron Bilanciai's Sales Director Emlyn Roberts explains, modern weighbridge management systems provide much more than just weight data, with the weighbridges themselves acting as critical control points for all vehicles entering and leaving site. In this capacity, the weighbridge installations at entry/exit points provide the ideal locations for implementing vehicle check points and installing radiation detection systems.

The weighbridge system can act as an effective site vehicle management system for both weighed and non-weighed vehicles, reducing waiting times and improving site security. Depending on the design layout of the site and any space restrictions, vehicles to be weighed pass across the weighbridges, whilst non-weighed service vehicles may be directed to enter or leave either over the weighbridge itself or via an adjacent bypass

lane. Vehicle access is typically controlled via driver-operated terminals with card readers, barriers and traffic lights.

Versatile weighbridge software

The development of versatile open architecture web-based software packages, combined with the latest security and communication technologies, has brought sweeping changes to weighbridge systems. Weightron Bilanciai's Winweigh IV uses fast client-server techniques, providing the ultimate in flexibility and connectivity. The easy to use database capabilities offer fast data access and extensive search facilities. Winweigh IV can be used for single installations with one weighbridge right through to multi-weighbridge, multi-site installations, allowing centralised remote access for optimum operational control. Winweigh readily interfaces with a wide range of peripheral equipment, including barriers, traffic lights, automatic number plate recognition cameras, unmanned terminals, electronic signature pads and PDAs.

Weightron's latest PC based driver-operated terminals, in conjunction with Winweigh, provide a wealth of features to help guide drivers through entry exit procedures. The user friendly programmable pictograms and graphics, together with the voice activation feature streamline the weighing process. In addition to this, in its vehicle management role, the system can also provide drivers with printed route directions within the site, based on the type of material they are delivering or collecting.

In a typical installation, the weighbridge software not only oversees the vehicle weighing procedures, but also controls the entry/exit of non-weighed vehicles via card readers and processes data from the radiation detection systems. A key feature of Winweigh is its versatile connectivity with plant management software such as SAP, Sage, Oracle (JD Edwards) & Microsoft Navision. This provides seamless integration for operational procedures including administration, planning and invoicing.

A wide range of smart card technologies can be employed, including RFID and magnetic. Using driver-operated card readers ensures access is only permitted to pre-registered vehicles whose details are stored in the site data base; thereby improving site security and speeding up procedures. Dual height card readers accommodate different driving heights of commercial vehicles, vans and cars. Vehicles visiting site can be issued with either permanent or temporary cards: temporary cards are deposited in the card swallower when the vehicle leaves

Radiation Detection Systems

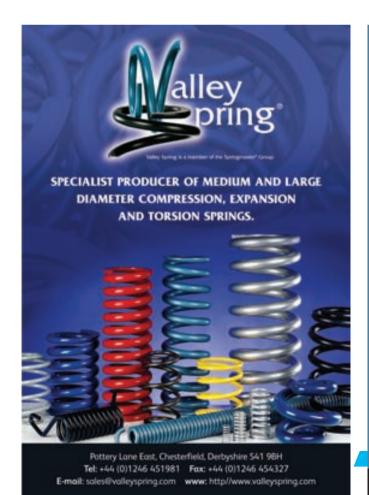
As more and more materials are recycled and as waste sources become more complex and diverse on an international basis, there is a growing need to monitor waste material for traces of radiation before it is incinerated or reprocessed. In parallel, heightened awareness of the possibility of terrorist attacks on soft targets mandates thorough checking of waste for radiation entering EfW plants. If any radioactive material goes undetected, then once it has been processed or burned, the problems can be multiplied many times over. In addition to health and safety concerns, clean up costs resulting from contamination can be significant. By preventing any such material



Recycling









Recycling

Big push to recycle plastic

Cold extrusion is playing an ever greater part in recycling of waste plastic, and the Department for Business and Enterprise is sponsoring research into development of the machinery necessary for such work.

Engineers at Bradford University have built a pilot plant and are running a series of trials with different processes, feed plastics, additives, and final products. Leader of the project, Dr Raj Patel explains:

"We started out comparing cold extrusion and warm extrusion, in which the material is heated prior to processing, and quickly realised that cold extrusion was more suited to recycled plastic. Our process now is to granulate the recycled materials to a consistent size, mix in binders as appropriate to basically, glue the particulates back together, and cold extrude it into sheets or blocks."

"The extrusion process is the critical stage, so we are monitoring many parameters relating to this."

The single most important parameter is torque in the extruder drive. This indicates the force required to process the material and hence both the power requirements of the drive and the viscosity of the plastic. It is measured using a digital ToraSense torque sensor, which uses Surface Acoustic Wave techniques to provide a non-contact method of monitoring continuous rotary torque, allowing accurate modelling of the instantaneous load changes. It is in effect a frequency dependent strain gauge operating at ultrasound frequencies and consists of a transducer mounted on the mixer's rotating shaft to monitor variations



in its resonance frequency as the torsional load varies. An RF (radio frequency) link is used for wireless transmission of signals to an adjacent couple so that rotation is unhindered. It is manufactured by Sensor Technology in Bicester, Oxon, which developed the underlying principles into a practical technology and is now recognised globally as a leader in the field.

"With research work, there is an inordinate amount of dismantling and reassembling equipment," says Patel. "This can be time consuming and therefore expensive, but TorqSense being non-contact does not need to be dismantled. It is also naturally robust, important in the laboratory and critical since it is likely to be used on the full scale plants that we will ultimately develop."

Currently the project is sending its recycled plastic off to be made into acoustic baffles for use in new buildings. "This is a ready market, driven by new Building Regulations and the higher acoustic standards required for high density building."

However it is not the only market open to Bradford's recycled plastic. Their best results are indistinguishable form virgin plastic, so can be used in the most demanding applications, and there are many uses for the standard quality output.

The pilot plant is also being used to work on design and development of full scale plant, which will eventually be used at waste processing and recycling plants across the country.

Click for further information: www.sensors.co.uk/hub

Contact: Tony Ingham, Sensor Technology Ltd, Apollo Park, Ironstone Lane, Wroxton, Banbury, OXON, OX15 6AY. Tel: 01869 238400, webinfo@sensors.co.uk





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Recycling



Recently supplied by the UK distributor, Tamworth based Aggregate, Processing and Recycling Ltd (APR), Oakfield Construction has invested in a new McCloskey J50 Tracked Jaw Crusher for duties within their Recycling Division.

Based in Nottingham, Oakfield Construction was established in 1987, initially carrying out work as sub-contract engineers working for local ground working contractors as well as national construction companies. This led to the company moving into civil engineering/groundwork's working for local and national companies. Today the company is divided into three companies within the Construction, Plant and Transport and Recycling Industries.

Oakfield Recycling is based at Wigwam Lane Industrial Park, Hucknall in Nottinghamshire where the new McCloskey 150 Tracked Jaw Crusher is employed on processing incoming waste feeds. These waste feeds originate from the general public and industry and mainly consist of brick, concrete, tiles, tarmac and topsoil which the company process and recycle into end products.

These end products include 6f2, hardcore, type 1 consisting of concrete and tarmac, road planings, fill sand and topsoil and various size gravels which are then sold back to the general public, industry or used for Oakfield projects.

The 150 has proved to be an efficient and reliable workhorse. Mark Flint - Director,

commented, "Overall we are very pleased with the machine; it has provided us with greater productivity with less fuel usage."

Offering quality, durability, and productivity the 150 provides throughput and capacity for a wide variety of applications. Weighing in at 48,000 kg the versatile performer is powered by a 350HP CAT C9 engine and processes material through a 50" wide Telsmith Jaw incorporating a user friendly control panel with excellent machine diagnostics.

Supplied with several optional features the McCloskey 150 Tracked Crusher specification at Oakfield Recycling includes:

- Side conveyor
- Overband magnet
- Remote control feeder
- Remote control tracking
- Dust suppression spray bars
- Recycling jaws
- Deflector plate
- Hydraulic raise and lower conveyor

With branded components throughout and a high efficiency diesel hydraulic system providing higher throughput and lower fuel consumption the new machine is backed by a professional parts and service package supplied by APR who has an accumulation of over thirty years of experience in the construction industry. This experience has been gained from design, manufacture, sales and servicing of all types of construction equipment, specializing in crushing and screening equipment.

Employing all their own fully trained service staff within an 18,000 sq. ft. workshop facility complete with all the necessary equipment to service, or if necessary manufacture new parts at their Tamworth site, APR maintain full control of their staff and facilities allowing the company to operate at maximum efficiency, offering a total after sales service package.

www.hub-4.com/directory/33

Precia-Molen GeneSYSTM Enterprise System provides total efficiency for Weald Granary.

Following increased demand for wheat tonnage and with a growing membership the Mereworth, Kent based co-operative Weald Granary has installed a Precia-Molen GeneSYSTM Enterprise Software system as part of an on-going development programme.

Owned by a membership of local farmers Weald Granary is a non-profit making organisation functioning as a grain drying, cleaning, handling and marketing facility. Serving Kent, Sussex, Surrey and Essex the facility is one of a number of co-operative stores in the UK and Scotland, being part of the Openfield Store Network (OSN).

A recent further investment of £1.75m in a phase 8 development has provided a 26% increase in storage capacity to 80,000 tonnes. With the impressive facilities currently handling approximately 100,000 tonnes per annum from 192 farmers alongside an annual projected growth of 4-5,000 tonnes from a projected 10-12 new members the Precia-Molen GeneSYSTM Enterprise system has changed the fundamental time resource completely, throughout the stores, administration, marketing and stock control of the products.

Key criteria:

Weald Granary chose the Precia-Molen GeneSYS™ Enterprise Software because it met four criteria:

- To bring the entire vehicle unloading operation, including contract validation, sampling, laboratory testing, weighing and discharge on two Precia-Molen weighbridges under the control of a single PC network.
- To be fast enough to cope with the increased traffic in 'harvest time' and ensure that they have all been tested and accepted for delivery.
- Flexible enough to adapt to any future needs of Weald Granary, allowing new commodities to be added to the database if necessary.
- To be fully supported with technical backup and updates.





A smooth transition

Currently employing seven HGV staff and five store personnel the Weald Granary team are supplemented by casual staff in harvest time (8-10 weeks); when at its peak 3500 tonnes per day is delivered in from farmer members to the facility.

With each member requiring quality confirmation and weight data from the granary, the GeneSYSTM Enterprise Software was installed with the addition of a second weighbridge (VS400). This has smoothly accommodated the transition to phase 8 providing total farm management through the integration of the weighing system with the stock management system, allowing the farmers easy access to their data through the web portal.

An assurance scheme:

One of the major features of the GeneSYSTM Enterprise system is that it maintains the traceability of assured combinable crops after they have left the farm, which complies fully with TASCC guidelines. TASCC was developed because farmers and end users wanted to be sure that crops of grain, oil seeds and pulses were treated responsibly once they left the farm. That includes wheat processed by flour millers and malting barley for the brewers and distillers in the drinks industry. It also provides independent verification that the trade is meeting food safety laws. The scheme is audited and certified by an independent certification body, in accordance with the internationally recognised standard EN45011. This means that the certification body is itself independently assessed every year to ensure that the standard is implemented and administered consistently and fairly. The Scheme is made up of a Scheme Manual and four codes of practice (Storage, Haulage, Merchants and Testing Facilities). The Storage Scheme is operated to a joint scheme with the Grain and Feed Trade Association (GAFTA) covering combinable crops and feed materials.

An achievement:

Since the installation the GeneSYSTM Enterprise software has provided an expandable system which has provided many benefits including:

- Reduction in staffing levels.
- Increased overall efficiency.
- Decreased phone communication, as most communications are now through the web portal.
- Decreased paperwork and decreased management of paperwork.
- System can be accessed remotely by OSN.
- Management of incoming loads, variety, etc.

A simple and effective system:

Gaining access to the site is through a one-way system which directs the driver to the incoming weighbridge where the driver gains access by receiving a card from the Precia-Molen automatic card dispenser. The driver then enters the relevant information including reference number, vehicle registration, and contractor code and commodity type. The GeneSYSTMEnterprise System then retrieves the contract details from the database and checks that the transaction is valid. Should there be a query on a load the system incorporates a search facility (truck/member/quality) which allows the operator to quickly interrogate the database ensuring minimal time delays. Having already unsheeted the load a sample is then drawn off by a remotely operated vacuum spear sampler adjacent to the weighbridge and sent to the on-site laboratory for sampling.

By the time the sample arrives at the laboratory, the GeneSYS™ LIMS module laboratory Information Management System will already have printed off a sample document with a check list of the quality tests required for this load. The results of each test are keyed in by laboratory staff and automatically checked against the pass/fail criteria. If the sample passes all the quality tests then the driver is given permission to unload. If the sample fails for any reason then the vehicle is put on 'waiting' status and the test details are flagged up on the screen. This allows staff to contact the supplier to inform them the load has been rejected, or to negotiate acceptance below contract specification. Having received a 'pass' the driver then moves forward to transfer his load into the appropriate silo. When he has completed his delivery the driver then draws away from this area and proceeds to the site exit via the outgoing weighbridge.

Materials Handling



Any incoming load whether dry or wet can be dealt with effectively as the load can be calculated as a dry net weight through weight loss calculations within the GeneSYSTM Enterprise System (through algorithms). The system through its database will automatically calculate the moisture content in any grain type and through this calculation subsequently provide data on the parameters of protein, (example - Hagburg-suitability for dough in bread making), specific weight and screenings (cleanliness).

Outgoing deliveries of grain are handled by the partnership with DHL with trucks entering the one- way system passing onto the incoming weighbridge and then to the appropriate silo for loading. Exiting the site they move onto the outgoing weighbridge for sampling and weighing of the load. Here again a sample is then drawn off by a remotely operated vacuum spear sampler adjacent to the weighbridge and sent to the on-site laboratory for sampling. The results obtained from the outgoing load are then retained by the GeneSYSTM Enterprise System which can be remotely accessed by OSN to check the quality parameters of each individual load if required.

Further added benefits:

Overall the Precia-Molen GeneSYS $^{\text{TM}}$ Enterprise software has provided further added benefits to the marketing of the products to the market:

- Speed of uplift, drying, cooling and total management of the condition of the crop.
- Material availability to the market through OSN to maximise the profit, which would not be available off a farm.
- Vendor assured quality on outgoing loads which enables end users to reduce their own lab staffing costs as they will be assured of the quality being delivered.
- Reduction of rejection levels of delivered grain to a minimum, resulting in major logistical savings (Lorries not waiting for results, etc.)
- Vendor assured grain = big future market!

For the project Precia-Molen installed one surface mounted weighbridge-type VS400, capacity 50,000kg, one RFID reader, ticket printer and a dialogue display.

John Smith-Managing Director - Weald Granary, commented, "The installation of the GeneSYS™ Enterprise System is proving an important part of our ongoing site expansion & development program here at Weald Granary. This IT platform has provided customers & farmer members with all the information they require at the time they want it, it has reduced data entry & double handling of data freeing up staff to focus on other tasks. It has also reduced data inputting errors, improved efficiency and visibility of data on site. The site operation is a lot more organised and less stressful now with staff having easy access to all the information they require to carry out their job roles.

A testament to the benefits of the GeneSYSTM Enterprise System is that we increased storage capacity at the Mereworth site by 26% for harvest 2010 with no additional staffing requirement."

www.hub-4.com/directory/683



"This design was first developed for a coal application," explained DCT CEO Edwin Peterson. "The momentum created while discharging dry coal was propelling large amounts of dust into the air, and the customer was looking for a way to specifically address the material as it came off the conveyor. The solution was simple but effective, and we're finding that it's well suited to conveyor discharge of sand, aggregates, biomass or other traditionally dusty materials,

The DustBoss DB-R is available in five standard sizes, from 17" (43.2 cm) to 100" (254 cm) in diameter. All five can be customized with DCT's Variable Particle SizingTM technology, allowing customers to specify different droplet size ranges to match specific materials.

"The greatest chance of a collision between a dust particle and a droplet is present when the droplet and dust are roughly the same size, avoiding the slipstream effect," Peterson reminded. "If we can increase the chances of collision with a given particle size, we improve the effectiveness of the suppression."



Designed without any moving parts, the intrinsically safe DB-R is intended for elevated mounting. It requires no electrical power or compressed air. The water supply hose is connected directly to male pipe threads on the ring: 3/4" NPT for the 17" model, and 1" NPT for the three intermediate sizes: 22.5" (57.2 cm), 25.5" (64.8 cm) and 42" (106.7 cm). For large applications, the company also offers the 100" diameter model, which is supplied by a 1.5" NPT hose.

Available options for the DB-R include a booster pump to elevate low water pressures, a variety of nozzle sizes and configurations, and a water filter. Customers can also order the units with a 2way valve and/or hose included.

The number and size of the spray nozzles vary by model. The smallest model features 30 brass nozzles that produce 3.25 GPM (12.3 LPM) of water flow. The 22.5" unit is designed with 18 medium-flow nozzles, with a water usage of 11.34 GPM (42.9 LPM). The 22.5" and 42" models feature 30 high-flow nozzles that deliver 18.9 GPM (71.5 LPM), and the 100" size employs 84 nozzles for a whopping 52.92 GPM (200.3 LPM) of water delivery.

www.hub-4.com/directory/11299

New gearbox better than repair for brick maker

When large industrial gearboxes break down and need to be repaired a variety of factors need to be taken into consideration before a decision can be made to either repair or replace. The decision was a relatively simple one for Wienerberger, the world's largest producer of bricks, when a large gearbox manufactured in 1967 recently broke down.

The old Karl Handle gearbox was fitted to an eight tonne hopper feeding raw material into the brickworks. Engineers at Wienerberger contacted SEW Eurodrive to compare the cost of a repair, with a complete turnkey project to replace the old gearbox with a new unit. This would involve the removal of panels from the side of the building to facilitate





installation, engineering the machine to accept the new drive, the design of a new plumber block bearing and support steelwork. Even the walkways had to be modified.

Despite this SEW Eurodrive's quotation to supply and install a new unit was 40 percent less than Wienerberger had been quoted for a repair. Not only that but SEW Eurodrive was able to supply, install and commission the new drive in just four weeks, considerably less time than Wienerberger had been quoted for a repair. This is perhaps not surprising considering the fact that spare parts for the old Karl Handle gearbox were no longer available and would have to be made from scratch, probably involving the reverse engineering of some of the gearbox's components.

After successful installation and testing SEW Eurodrive's engineers measured the energy consumption on another Karl Handle gearbox driving an identical application. This data was then compared to the energy consumption of the new bevel helical gearbox and the current was found to be down from 9.5 Amps to 1.6 Amps. So according to Ohm's Law the new drive is using 3.28Kw less energy than the original unit, equating to a saving of over £1,300 a year.



Filter Press maintenance & refurbishment

As part of Euroby's specialist sludge dewatering portfolio, Euroby supplies, installs and maintains filter press units to meet customer's individual needs.

Our filter presses are supplied to a range of process industries including municipal, waste water, chemical, minerals, quarry, aggregates, recycling and industrial applications.

Euroby Filter press units are available in a range of sizes to suit the customer's specific requirement from small manually operated 500mm units to large fully automated 2mtr x 2mtr systems.

A range of plate types are available with standard recessed or membrane inflation and can be supplied with cloth wash and cake discharge systems.

Euroby is the exclusive distributor for Klinkau polypropylene filter plates and specialises in providing upgrades to existing filter press installations. In particular, by utilising existing filter press frames we are able to provide significant improvements to both throughput and cake dry solids. On most applications we can also provide varying levels of automation.

Upgrading from cast iron plates to polypropylene provides benefits from significantly improved filtration and due to the lower weight of plates, a reduction in the stresses being applied to press closing equipment. Euroby regularly carries out upgrades to filter press installations which lead to extended working life of the equipment by up to 25 years.

In addition to recessed plates, Euroby are also able to retrofit membrane inflation technology into existing press frames thereby allowing significantly reduced cycle times, greater throughput and achievable dry solid production.

On many upgrades we are able to achieve up to 35% improvement on overall press efficiency.

Many existing filter press installations do not comply with current health and safety legislation. Euroby are able to provide a range of modifications to provide a safe working environment for operators.







Cost efficient peak performance goes hand in hand with regular maintenance.

Euroby's Service Division offers a comprehensive service, maintenance and breakdown facility.

Our highly qualified and experienced engineers and technicians are always available to keep your press running at its best. Our engineers are qualified to work on all filter press installations and their associated ancillary equipment including sludge feed pumps, control panels, hydraulics and polymer dosing systems.

Euroby are able to provide a comprehensive service for filter press refurbishment - maintenance and case studies of previous upgrades are available on request.

Visit: www.euroby.com





Weir Minerals Wins Meichle und **Mohr Slurry Pump Deal**

Weir Minerals has secured a two-year contract to supply and service three heavy-duty slurry pumps to Meichle und Mohr - a sand, gravel and concrete producer based in Immenstaad, southern Germany.

Meichle und Mohr operates in numerous locations in the region between the north shore of Lake Constance and the Black Forest, extracting sand and gravel and producing ready-mix concrete and other related products.

The units - all from Weir Minerals' Warman slurry pumps range - will drive wet processing and transportation of gravel.

The win is the first agreement with a German business secured since the launch in September of a new service centre in Essen, providing customers in Germany with a permanent servicing and supply base to enhance service and after-sales support.

Mr. Hansbert Hellstern, technical plant Manager at Meichel und Mohr said: "We selected Weir Minerals based on the proven track record Warman pumps have for product lifespan and ease of maintenance.

"The launch of the new service centre in Essen also gave us complete confidence in the availability of spare parts and maintenance

Marcus Hessling, service manager at Weir Minerals' Essen service centre said: "Meichle und Mohr is a well-known supplier within the German construction industry and this win adds a strong name to our portfolio of Germany-based customers.

"We are continuing to expand our business rapidly in the aggregates production market within the region, and the recent opening of the permanent service base is playing a key role in this.

Meichle und Mohr supplies aggregates, ready-mix concrete and a range of products including paving stones, slotted channels and concrete pipes to the construction sector across southern Germany.

The business was established in 1924 when two family-owned firms merged.
Today it is managed by a fourth generation of both families and the company now employs more than 300 peoble.

Asphalt Burner Services Install Vulcan Burner at Shap

Quarrvina

Asphalt Burner Services Ltd, a nationwide provider of asphalt servicing and spare part products, has fitted a Vulcan Burner in CEMEX Shap, Cumbria. This is a relatively new plant, running since 2009; however a new burner installation was required of late. The results since installation speak for themselves as fuel usage is reduced, emissions lowered and overall plant performance increased substantially. The Vulcan burner range comes with innovated features which raises the standards for asphalt production for many quarry's to take advantage off.

'ABS have spent years on this new range researching on the optimum performance features include excess air control, combustion chamber optimization and air pressure compensation are unique to the Vulcan range. The difference is instantly recognizable in comparison to some of the current burners being used in sites across UK at present'. Asphalt Burner Services Ltd introduces a new range which includes maintenance features having a major impact on the overall efficiency. The design concepts deliver energy savings in excess of 20 %. The high efficiency burner design is extremely compact and easily accessible for servicing which is a major benefit for any service engineer.

Carbon Monoxide (CO) emissions at the dryer exhaust duct have been recorded averaging across three test points at unprecedented low levels of 45ppm with the burner set at 30% output, this is indeed exceptional as the target levels normally experienced on good asphalt plant burners are anything between 200 and 400ppm. Carbon Monoxide in flue gases are an indicator of the efficiency of the burning process, the higher concentration of Carbon Monoxide (CO) present equates to unburnt fuel in the process. The undiluted Carbon Monoxide (uCO), was averaging at 150ppm, again levels of the uCO are normally recorded on other asphalt plant burners at levels of 400 to 900. The Vulcan burner is successfully burning 100% on Nexgen 3 fuel oil; which has been fitted on a four year old Marini 200-280tph asphalt plant at Shap Cumbria for Cemex UK Ltd. Initial tests indicate the fuel costs have been significantly reduced from 9 Litres per ton to just over 6.5 to 7 Litres per ton with an additional saving in carbon tax due to the overall performance of the new burner.

Asphalt Burner Services Ltd headquartered in Northern Ireland and also having another base in Leicester provides many burner related products such as spare parts. The company's success can be contributed to the high quality team of engineers employed and together with the backend office staff we have changed the way burners are now serviced within the industry. The new Vulcan burner range is simply an added bonus feature for the company- to benefit the industry economically.





CMB deliver on all levels and help Hanson Aggregates at turn key site Needingworth

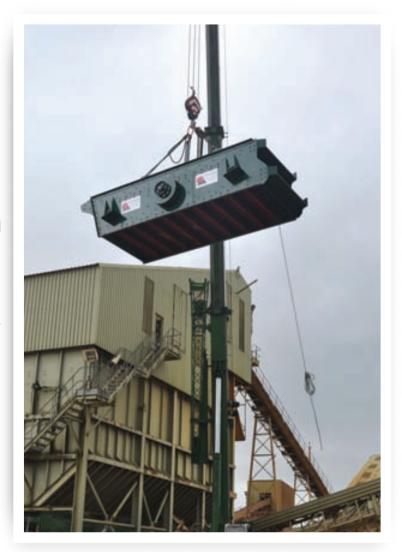
Frank Johnson of Hanson Aggregates Needingworth Quarry is highly satisfied with the design, build, installation and performance of the twin screens supplied by CMB International Ltd. Hanson Néedingworth is a high efficiency, modern sand and gravel plant demanding highly effective equipment throughout, CMB successfully delivered on all levels and provided screens that are proving to be a real asset to the continued successful production of high quality material.

In December 2010 CMB International Ltd were commissioned by Hanson Aggregates Ltd to provide Needingworth Quarry with two CMB VB40 2.4x6.0 Double Deck Screens and during April of this year the screens were successfully installed and are now running smoothly as an asset to the busy production line at Needingworth.

CMB International takes pride in its ability to provide bespoke engineering for all customers and the CMB screens designed for the Needingworth site are no exception. The screens were designed to pick up Needingworth's existing screen footprint and maintain the existing structural integrity by using finite element analysis, to ensure the maximum life of the screen within its structure, providing the best possible return on the clients investment.

The unique design of a CMB screen mechanism maintains that the centre line of the bearing is in direct alignment with that of the screen sideplate, thus ensuring that all of the exciter forces are sent directly where they should be.

All CMB mechanisms are selected on the basis of providing an L10 bearing life of 20,000 hrs, most of CMB's competitors only work on 10,000 hrs; from experience doubling the potential life of the bearings has proven to be invaluable to customers, who appreciate the extra life and benefit from the increase of production time between bearing changes due to the CMB mechanisms. The installation was completed with auto greasers to ensure optimal bearing lubrication.





CMB are always looking at their manufacturing methods and designs, refusing to be bound by old conventions, currently looking at 3D printing as a way of producing CMB's castings. This is an incredible technology, which comes straight out of the science fiction books into science fact, CMB is striving and achieving improvements in products and services to customers and take pride in using British suppliers for the majority of components.



CMS Cepcor provides full support for the asphalt plant spares market.

Following the demise of a competitor and as part of an overall company expansion CMS Cepcor have extended their product range and increased their stock holding of replacement asphalt plant wear parts and spare parts.

Offering a genuine alternative to the original equipment manufacturers CMS Cepcor can supply compatible replacement parts to suit all popular asphalt plants. As well as the usual mixer wear parts, CMS Cepcor have an extensive range of quality replacement spare parts to suit asphalt plants including a range of dryer, elevator and screen section spares.

All CMS Cepcor compatible spare parts to suit asphalt plants are fully UK manufactured and quality assured to be interchangeable with the original parts. The company specialises in supporting asphalt plant, especially in cases where the original equipment manufacturer is no longer able to support the plant; for example ACP Titan, Braham Millar, Bristow's, Gencor, Stothert & Pitt and Via

A comprehensive solution:

This was recently demonstrated by CMS Cepcor with support for a bespoke Stothert & Pitt asphalt plant operated by Aggregate Industries on the south coast. As no alternative supply was available following the demise of their previous supplier CMS Cepcor and their UK foundry partner acquired the original patterns and manufactured a set of replacement parts to facilitate the annual overhaul of the paddle mixer. Without this comprehensive support the only viable solution would have been to install a new modern retro-fit paddle mixer at great capital expense.



A Faro co-ordinate measuring arm being used to measure a complex paddle arm

A large investment:

David Gregory-Sales Director commented; "CMS Cepcor are now the only aftermarket supplier that is committed to offering a genuine alternative to the original equipment manufacturers. Our expertise, stock inventory, manufacturing facilities and technical support ensures downtime is minimised for asphalt plant worldwide".

CMS Cepcor has also recently heavily invested in new CNC machine tooling to enhance their UK manufacturing facilities along with state-ofthe-art measuring technology including FARO portable measuring arms which make measuring complex parts and component assemblies easy. This technology is used by CMS Cepcor engineers to complete alignment, calibration, inspection, product development and reverse engineering tasks within their material testing facilities.



WCL Quarries Continue Expansion Drive With Delivery of Three New Machines From Finlay Central

A leading independent supplier of aggregates, waste and recycling services in the Midlands has taken delivery of three new Terex Finlay machines from Finlay Central at its new site in the region.

WCL Quarries has recently opened Ketley Quarry, a 55 acre quarry, based in Kingswinford.

This new site is the second location now run by WCL Quarries, who already operate Cranebrook Quarry in Staffordshire. The company is also due to open another site in the Midland's later this year.

The expansion at Ketley Quarry has seen WCL Quarries take on eléven new employees from across the local area, to support operations on the

This growth has created a greater business capacity, supported by investment in new equipment, infrastructure and ultimately the local area by creating opportunities for people and businesses to work with WCL Quarries.

In the long term, the company has also announced plans to rehabilitate the site, a move that will benefit the local community for generations to come.

Already a valued customer with Finlay Central - part of the Finlay Group of companies - WCL Quarries already use Terex Finlay machines at Cranebrook Quarry.

LITEREX FINLAY

To support the sustained growth of the Ketley Quarry site, the new additions to WCL Quarries' fleet now include a Terex Finlay 883 Heavy Duty Screener, a 683 Supertrak three way split mobile screen and a J-1160 Jaw Crusher. All three machines have been supplied by Finlay Central.

The plant is being used to process ironstone and engineering clay, which is quarried on-site. The machines are also handling inert waste, of which 70 per cent is recycled to deliver products including single sized recycled aggregates and recycled Type 1 MOT material.

The introduction of the plant has enabled Ketley Quarry to reach output rates of 300 tonnes an hour.

The versatility of the machines also means Ketley Quarry can easily adapt their use from the recycling process to include normal quarrying activities as well.

First fed through the tracked 883 Reclaimer, stockpiles of 75mm, 40mm down and oversize product are created.

The oversized and middle grade materials are then sent for crushing to the J-1160, which incorporates a high performance 1000mm x 600mm Jaques jaw chamber and an advanced PLC control monitoring system, which facilitates an automatic start-up sequence, making the machine more user-friendly.

This material is reduced to 75mm down and fed through the Terex Finlay 683 inclined screen, which creates three stockpiles of crushed 75mm, 40mm and dust.

With a strong focus on service delivery and quality, WCL Quarries need the best plant on site to ensure they continue to meet their high standards.

Quarrying

Simon Winner, managing director of WCL Quarries, said: "We have a good relationship with Finlay Central and now have eight of their machines located across our two sites.

"WCL Quarries' expansion to Ketley Quarry has been a successful set-up and we are very satisfied with the production of all three of the new Terex Finlay machines.

"A Finlay Central representative is also always on hand if needed with advice and support.

"Customers come to WCL Quarries because we know the industry they work in, and it's this experience and partnership they value.

"The larger capacity and coverage we now have as a business means it is more important than ever for us to maintain and even improve the levels of service and expertise we provide to the people and businesses we work with on a daily basis."

Key to WCL Quarries' successful expansion has been the careful selection of plant and machinery equipment.

In the last few years, WCL Quarries has taken delivery of a total of three Terex Finlay 883 Reclaimers, two Terex Finlay 683 Supertracks, two Terex Finlay jaw crushers and a Terex Finlay 390 Hydrascreen.

Working closely with Neil Bailey of Finlay Central, WCL Quarries has built up a fleet that has provided a platform for growth and flexibility across the business's operations.



This has included some machines being purchased second hand and sometimes hired first to weigh up long term feasibility and sales of the material processed - a policy that mirrors the company's desire to expand into new markets under a carefully controlled cost programme in the present climate.

Neil Bailey, sales engineer of Finlay Central, said: "We have focused on delivering the most competitive and economical processing solutions for WCL Quarries.

"We are delighted they have built up their fleet through our company and that they enjoy the reassurance of our comprehensive service and spares offering.

"We've worked closely to ensure every piece of machinery introduced delivers excellent value. For example, the three new machines at Ketley have been brought in under a set up that enables them to work separately, or together, for maximum productivity.

"It's also important that the machines are flexible in their

"This means, that at Ketley, as well as Cranebrook, apart from aiding in the recycling processes, the machines can be used for normal quarrying too in exactly the same way, ensuring a double duty at the sites.





Hewitt Robins supply 1500tph **Washing Screen** to Norway

Hewitt Robins have recently supplied a 3.0m wide x 9.6m long triple deck washing Screen to Norstone's biggest plant situated in Norway.

Norstone is part of the Heidelberg Cement Northern Europe and they recently completed phase 2, upgrade project for a new screen/rinse system at Tau. Tau quarry currently produces 2.3 million tons per year of aggregate and with the new upgrades they look to increase production by 500,000 tons of additional railroad ballast.

The new Hewitt Robins 2QV-14 3.0m wide x 9.6m long Triple Deck Washing Screen allows them to do this. The heavy duty screen was installed by Agdermaskin - Hewitt Robins partner in Norway who also designed and installed the stand alone washing plant which is beside Tau's ship loading facility in order to be able to rinse the railroad aggregates or other products before being transferred into the ship loading system.

The screen is currently handling 1500tph of railway ballast plus over 10.000 liters of water/minute in the feed and from the sprays. The screen is required to wash the material prior to being loaded onto the ship and also take out -20mm waste. The top deck separates at 45mm, 20mm middle deck and 4mm bottom deck using Tema Isenmann WS85 heavy duty modules.

The Hewitt Robins screen is constructed of 15mm thick side plates which include additional 15mm thick doubler plates around the vibrator units. The heavy duty crossmembers are spaced at every 600mm to be able to withstand the large amounts of aggregates and water and the total weigh of the machine is over 30,000kgs.

The 2QV-14 vibrating unit is oil lubricated and consists of 4 pods incorporating 2 off 140mm bearings in each pod (8 bearings in total) giving the customer increased bearing life. The





four Quad-V Pods are timed together using a timing belt on the nodrive side and the pods are coupled together through the centre of the screen using 2 cardan shafts. The cardan shafts take up less space than conventional shafts and vibrator tubes which allow there to be additional access between the decks for easier maintenance when changing modules.

Bjørn Ingvalstad - Technical Manager - Norstone commented: "The new stand alone washing plant incorporating the heavy duty 2QV-14 Hewitt Robins 3.0m wide x 9.6m long 3 deck washing screen allows us increase our production at Tau and supply a higher quality product. The installation went well, on time and on budget. Operationally the screen is handling the required capacities and gives us an exceptionally clean product. We would like to thank Agdermaskin and Hewitt Robins for their commitment and professionalism which allows us to meet our customers needs."



















6100mm x 1830mm (20' x 6') inclined vibrating screen (new) Fully assembled-ready to run!! This Inclined Vibrating Screen is a single Complete with fabricated feed pan and deck, "Ripl-Flo" screen (can be adapted to twin deck!), complete with full set of removable lifting points. HUCK bolted construction for rigidity. springs, inner, outer, side snubbers with Heat treated after manufacture to eliminate friction blocks, complete with upper and material fracture during vibrating action lower fabricated spring mounts. and motion. It has a perforated top deck screening panel If required, we offer a complete installation (40mm), 5-4 eccentric throw mechanism package with all our equipment. Suitable for use in recycling, mining, complete with bearings, housing gaskets and seals (fully assembled). Complete with drive pulley (500mm diameter) including balance weight housings, with weights, to minerals and aggregates. Price: offers in region of £40k each end of eccentric drive shaft.

Green Screen Engineering Ltd offers a range of Inclined Vibrating Screens for Aggregate and Mining industry duties. Our range of screens are rugged in design and build, yet versatile in performance for a wide variety of applications. Interested? Contact Green Screen Engineering Ltd on 01924 892180 or sales@green-screen-engineering.com

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