



RWM
Media Partner

**Global News &
Information** on the Bulk
Materials Handling,
Recycling & Quarrying
industries

RWM Recycling Edition 2013



Check out the very latest industry news at www.hub-4.com

See Bell at
RWM
Stand OA196
10-12 Sept

Bell Wheeled Loaders.

Exceeding your expectations by the bucket load.



BELL

0800 915 7700
sales@bellequipment.co.uk
www.bellequipment.co.uk



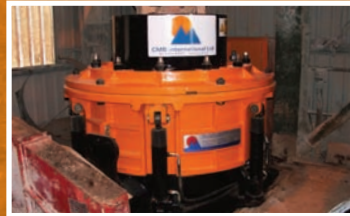
**Strong Reliable Machines
Strong Reliable Support**

Leading Edge Crushing & Screening

The philosophy of CMB International has always been and remains customer driven. Continually evolving, CMB aim to meet and exceed your requirements and expectations.

Recognising inerrant weaknesses in plant prompted CMB to design, develop, manufacture and provide a heavy duty range of static and mobile equipment. The CMB range of crushers, screens, feeders and mobile plant offers substantially improved robustness and build quality to maximise production.

Providing a comprehensive on-site service, maintenance, repair and spare part service for your existing plant.



HARTL CRUSHER

www.hartl-crusher.com

Introducing the Hartl Bucket Crusher and Screener range.
An innovative and profitable way of recycling materials rapidly on site.

HARTL Crusher and Screener exclusive distribution for UK.



CMB International
The complete solution to quarry plant
www.cmb.uk.com



Little Alton Farm, The Altons, Ravenstone
Leicestershire, LE67 2AA UK
Tel: ++44 (0) 1530 563600

In this issue

Europe's leading waste management conference at RWM in partnership with CIWM 4

RWM – Middleton Engineering re-launches SCAPA balers. Mogensen at RWM 2013. 6

The year of breaking boundaries for waste shredding experts UNTHA UK. 7

Bell Advises RWM: Use QuadCool to Avoid "Dust-Ups". 9

Earth Mover Tyres – the best environmental option available! 10

Eriez releases video showing eddy current separator removing nonferrous metallic from PET flake. 11

Weighing Solutions for the Waste and Recycling Market. The latest S+S VARISORT COMPACT sorting system to be shown at RWM 2013. 12

Safe operation of fork lifts within MRFs 13

Rossi synchronizing asphalt batch mixing. 15

Fercell - the solution. 17

Alpha Waste Solutions set to promote commercial recycling excellence at RWM 2013. 19

New shredder will revolutionise SRF market. Forth Resource Management purchase three Neuenhauser Star Screens for Composting Sites. 20

Bruce Washing 24/7 In Russia - "the clearer solution to washing". 21

Greenbank Group UK - Protective lining systems, feeders and weighing equipment. 23

History Repeats Itself for Rapid. 25

Firstgrade launch new Chinook air separator at RWM 2013. CMB are appointed the UK dealer for the Hartl Bucket range. 26

Angry Bear launch a new range of compact machinery. 27

Are replacement components wearing away your company profits? 29

Conveyortek's streamlined manufacturing process has them ready for European markets. 33

4B expands Forged Chain. Accurate waste management. 35

Glen Creston - Leaders in Size reduction. 37

Tomra Sorting set to share its expertise at RWM 2013. 38

Max X Tract Density Separator reduces waste disposal costs whilst maximizing material recovery. 39

Kingfisher provides the ultimate solutions for recycling plants. 41

Europe's leading waste management conference at RWM in partnership with CIWM



**Edward Davey MP,
Secretary of State for Energy
and Climate Change
is keynote speaker**

www.rwmexhibition.com

10-12 September 2013, NEC, Birmingham

This September, RWM 2013 in partnership with CIWM (supported by the Environmental Services Association) will provide the perfect platform for visitors wanting to gain insight into the industry's most pressing issues. In addition to hosting the sector's largest free CPD-accredited conference program - with more than 160 waste experts poised to share their knowledge - RWM 2013 will also showcase the latest solutions from more than 750 exhibiting businesses and organisations. Here, Hub-4 brings you a snapshot of what's in store at Europe's leading resource efficiency and waste management exhibition.

RWM 2013 in partnership with CIWM is delighted to welcome the Secretary of State for Energy and Climate Change, Edward Davey, to the stage this year. Speaking in the Energy from Waste Theatre, sponsored by Advanced Plasma Power, Switzerland Trade and Investment Promotion and Osborne Clarke, Davey will assess the ever changing landscape of the UK's energy needs as well analysing the role energy from waste will play in supporting security of supply.



HUB

Hub Digital Media Limited
27 OLD GLOUCESTER STREET, LONDON WC1N 3AX

RWM Recycling Edition 2013

Sales & Advertising Enquiries: 0845 680 0024

Sales Manager
David Roberts
david@hub-4.com

Senior Account Manager
John Edwards
john@hub-4.com

Editorial & Marketing Manager
Sophie Morgan
sophie@hub-4.com



RWM

RESOURCE EFFICIENCY AND WASTE MANAGEMENT SOLUTIONS

10 – 12 SEPTEMBER 2013 NEC BIRMINGHAM

IN PARTNERSHIP WITH  CIWM

Europe's leading waste management conference at RWM in partnership with CIWM

Industry leading speakers

From a private sector perspective in the Commerce and Industry Theatre, Dr. Anne Roulin will explore Nestlé's journey to zero waste, focusing on the challenges and opportunities for reducing food waste across the value chain.

Many other inspirational speakers will be appearing across the conference including Lord Robert Winston, whose inspirational talk will consider why humans are motivated to continually improve the world around us. Another fascinating talk will be delivered by eco-adventurer Andy Pag, who drove around the world in an old school bus powered by used cooking oil. Ethical living newspaper journalist, Lucy Siegle, will explore how to get householders to recycle and Professor Dieter Helm, Independent Chair at Defra Natural Capital Committee, will consider where current legislation is leading us and how we can do the best for the environment and the economy.



Communications at the forefront

Good stories will take centre stage at the Communications Hub, delivered by Copper Consultancy in partnership with SLR Consulting and APSRG, which offers a detailed look at 'positive communications' with three days of engaging and thought-provoking sessions. Using positive news stories and innovative practices within the industry as a springboard for discussion, each day will be organised around a specific theme, including leadership, investment and communities.

These two theatres are supported by three others: the Leaders Arena, sponsored by Dentons and the Local Authority Theatre, sponsored by Kier, AmeyCespa and SKM Enviro and supported by LARAC.

All your recycling needs covered

Returning to RWM 2013 in partnership with CIWM again this year is the always-popular Materials Village. The show feature enables visitors to gain invaluable advice on the recycling and reprocessing of a wide range of different waste streams. It's a one-stop shop for information on collection, sorting and end markets for recovered materials, including the recycling of everything from glass, textiles, scrap metal, WEEE, paper and more.

ers Theatre



M+W GRO



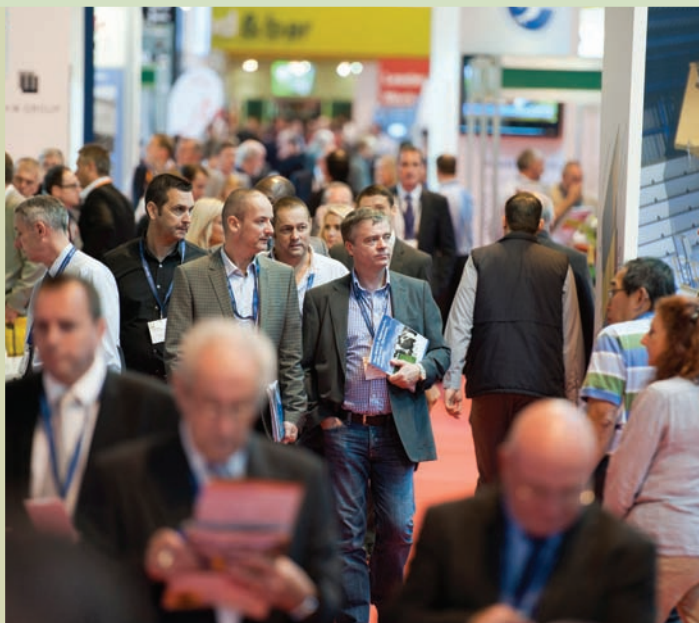
Key exhibitors

Exhibitors returning to RWM 2013 in association with CIWM include industry leading reprocessing and vehicle manufacturers such as Dennis Eagle, Faun Zoeller and NTM, some of Europe's largest Refuse Collection Vehicle (RCV) manufacturers, along with Geesink Norba; Europe's largest provider of RCVs and waste compactors.

One of Europe's fastest growing RCV and Tanker producers, Farid Heil, will also be exhibiting, as well as Mercedes and Isuzu, the truck manufacturers, JCB, construction machinery, and Norbert Dentressangle, the freight and logistics specialist.

With many professionals embracing a wider sustainability remit, RWM in partnership with CIWM 2013 is co-located with three complementary exhibitions - The Energy Event, The Renewables Event and The (new) Water Event. These free to attend events offer answers to the range of business sustainability challenges affecting water and energy management and efficiency.

Registration, sponsored by P&L Software, is currently open. To register for your free ticket and to get more information, visit the show website at www.rwmexhibition.com.



RWM - Middleton Engineering re-launches SCAPA balers

Announces remote service diagnostics & 15% show discount for new service contracts

Leading baler manufacturer and recycling equipment engineers Middleton Engineering will re-launch its baler division under the celebrated SCAPA brand at RWM 2013 in a move to differentiate this growing area of its operations from other heavy engineering projects.

SCAPA balers from Middleton Engineering will continue to offer the same high quality engineering solutions to the waste recycling sector and will operate out of the company's manufacturing centre in Somerset.

To further improve customer service, the company is also announcing an innovative remote diagnostics feature. In future Middletons will equip all new balers, as standard, with an integrated modem enabling engineering staff to check baler functions remotely; alert customers early to potential issues; assist in clearing jams and even reset system software. Middletons believe this will significantly reduce down time.



Owner and founder Ashley Middleton commented: "We acquired the rights to SCAPA balers in 1988 and have sold and serviced the machines ever since. With the strong growth in our baler business the time seems right to rebrand and improve our complete baler range under the SCAPA name. Synonymous with quality, it also helps to make a clearer distinction from other areas of our business including conveyors, refurbishing balers and conveyors and one-off engineering projects." Under the SCAPA brand Middleton Engineering will be highlighting both its Twin Ram and HB60 series of balers at this year's RWM show, with the emphasis on baling RDF waste and the company's new dual tying head. In addition, the team will be showcasing a range of precision components and spare parts, highlighting the firm's strength in manufacturing as well as its strong service offering for all makes of recycling equipment. Middleton's will be offering new customers a 15% discount for the first year on service contracts booked at the show.

RWM 2013 - Stand 6532



Mogensen at RWM 2013

The Mogensen stand at this year's RWM Show will feature a Type SRSL 1500/1000 -A114 single-deck vibratory screen

(screen deck 1500mm x 1000mm), an inexpensive machine widely supplied to the recycling industry for relatively small throughput scalping and "policing" duties such as the removal of bulky, low-density materials, e.g. paper, cardboard, plastic and fibrous matter, from heavier, smaller-size feed components. The screen is driven by a 675 W Invicta rotary electric vibrator, Type BLz24-11/4, offering a maximum centrifugal force output of 10790 N. The vibrator may be rotated either forward or in reverse in order to vary the speed of travel of materials over the screen surface. The angle of decline of the screen deck may be

easily adjusted through an arc of 0 to 30° to provide further control over the screening action.



Mogensen screens, feeders and conveyors in both standard and custom-designed versions are in widespread use in the recycling industry. They are handling various materials including used tyres and scrap rubber; miscellaneous scrap glass; wood waste; bone meal and other biomass materials; compost; aerosol cans, other scrap metal; recycled concrete and aggregates; plaster board and mixed textile and plastic waste.

RWM 2013 - Stand 19R08



www.hub-4.com/directory/583

The year of breaking boundaries for waste shredding experts UNTHA UK

With a brand name that is synonymous with innovation, it is perhaps no surprise that waste shredding experts UNTHA UK have some exciting things planned for RWM 2013.

Visitors to stand H39-G38 will get an exclusive look at the new UNTHA S25 compact shredder, when it is revealed in the UK for the first time. Operating as a complete CE-certified system, this two-shaft machine has an incredibly small footprint, making it perfect for businesses with restricted site space. It is cost-effective too, dispelling the myth that industrial waste shredders represent significant capital outlay.

Continuing the fiscal theme, attendees can also find out more about the newly-launched lending service - UNTHA Finance. A range of flexible asset-based finance packages have been devised to make waste machinery accessible to all organisations, regardless of their balance sheet, credit history or length of trade. It is hoped that this new division - the brainchild of managing director Chris Oldfield - will alleviate some of the financial constraints currently preventing firms from improving efficiencies, expanding operations and better supporting the UK's resource agenda.

Without a doubt, the most exciting on-stand activity will be UNTHA UK's revolutionary demonstration zone. One by one, RWM attendees will be able to get up close to the highly-acclaimed waste to energy pre-shredder, the UNTHA XR. However, at first glance the machine will be nowhere to be seen. Details of this unique opportunity are being kept strictly under wraps until the event, but crucially, cutting edge technology will allow visitors to experience the XR like never before.

Talking about the team's excitement for RWM 2013, UNTHA UK's managing director Chris Oldfield said: "We are well known for our commitment to innovation, hence the launch of the UNTHA S25 - our most compact shredder yet - and UNTHA Finance. But with this year's demonstration zone, we are really breaking boundaries.

"We've devised a way to make the RWM visitor experience much more interactive and worthwhile. It will show how forward-thinking UNTHA UK is and also how much we care about our clients and enjoy working with them."

With a multi-disciplined team manning the stand across the three day event, visitors are of course welcome to ask questions about any shredders or services that UNTHA UK provides.

To arrange a one-to-one appointment with a member of the UNTHA UK team or for your own exciting demonstration, please email katie.mallinson@untha.co.uk or call Katie on 07751 615110.

RWM 2013 - Stand 17H39-G38



www.hub-4.com/directory/14972

THE WORLD'S FIRST COMPLETE MODULAR WASHING SYSTEM

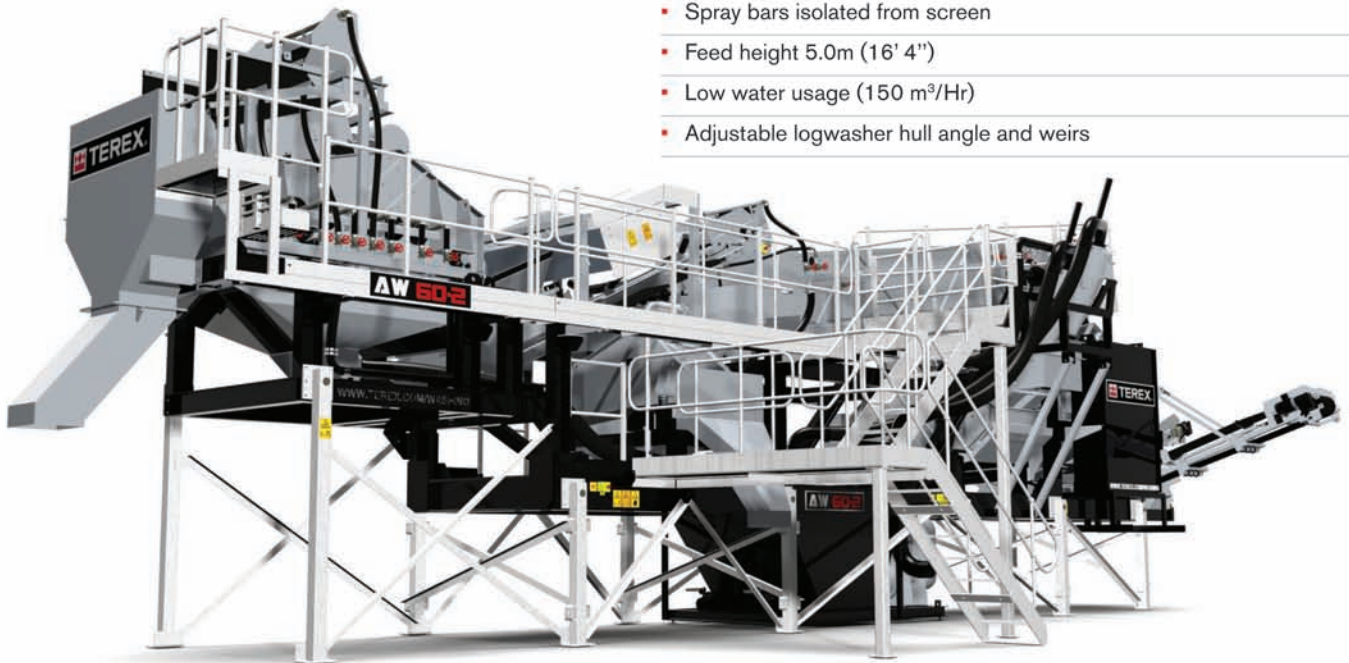
Terex® Aggwash 60-1/60-2 Washing System

Terex Washing Systems offers an extensive product portfolio to work in many applications supporting customers in the mineral and material washing industry.

The **Aggwash** is a new mobile wash plant that brings together for the first time rinsing, screening, scrubbing and sand washing capabilities on a single portable chassis. Primarily designed for the processing of construction and demolition waste but equally suited to virgin material applications.

FEATURES

- Produces 4 grades of aggregate, one to two grades of sand at up to 70tph
- Fully modular, pre-wired and pre-plumbed
- Removal of trash and ferrous metals
- Fully electric powered, complete with PLC control panel
- Heavy duty robust construction, ideal for rugged operating environments
- Quick set-up time (approximately 1 day)
- Remote greasing to all bearings
- Modular Polyurethane screen decks
- Spray bars isolated from screen
- Feed height 5.0m (16' 4")
- Low water usage (150 m³/Hr)
- Adjustable logwasher hull angle and weirs



Contact us to find your local distributor

Terex Washing Systems, 200 Coalisland Road, Dungannon, Co.Tyrone, N.Ireland, BT71 4DR | Tel: +44 (0) 28 87 718 500 E: TWS.sales@terex.com

www.terex.com/washing



WORKS FOR YOU.™

Terex is a registered trademark of Terex Corporation in the United States of America and many other countries. Copyright 2013 Terex Corporation

Bell Advises RWM: Use QuadCool to Avoid "Dust- Ups"

Bell Equipment is returning to RWM to highlight how its wheeled loaders, fitted with innovative QuadCool technology as standard, can help the recycling and waste management industry to "avoid a dust-up" with their environments.

The company will be showcasing two wheeled loaders - the L1506E and the L1806E - on outdoor stand OA-196. Featuring long arms and Hi-Tip buckets, the machines are specified to work loading high-sided recycling bulkers.

Both models, like all Bell wheeled loaders, also feature QuadCool, an industry-leading cooling system - unique to Bell loaders in the UK - that Bell believes is the best available solution in the market. QuadCool is proven to combat the risk of dust build-up, in order to prevent the engine from overheating, reduce downtime and significantly reduce the frequency of cleaning routines.

Dust remains a major problem for machinery working in waste sites, especially given the migration towards indoor facilities where high levels of airborne debris can affect the performance of wheeled loaders.

"Radiators can quickly become clogged with dust, causing them to overheat. This not only requires extensive downtime to clean out the radiator, reducing productivity, but over time the dust becomes inextricably stuck to the radiator to reduce overall cooling capacity and reduce performance further," explains Nick Learoyd, managing director of Bell Equipment UK.

By compartmentalising radiator technology, incorporating fine mesh pre-filters and wide core radiators, debris bypasses the radiators to avoid build-up and thus extend the intervals between cleaning for increased up-time. At the same time, QuadCool incorporates an automatic reversing fan, which blows any accumulated debris away from the radiators at intervals determined by the operator, for further improvements in efficiency.

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

Alongside QuadCool, Bell will be showcasing the highest "as standard" specification of any wheeled loader in the market. Machines are factory-fitted with items that other manufacturers typically include only as optional extras. Examples include the reversing camera and reverse radar detection system, embedded payload system and keyless start with lock-out codes for added security.

This is the third time that Bell Equipment has exhibited at RWM, after positive experiences on its previous visits. "Our loaders have attracted huge interest from many potential customers and we have forged significant partnerships, having sold machines on each prior occasion," confirms Nick Learoyd.

"Visitors to previous RWM shows have confirmed that QuadCool is a major selling point, as there is nothing as comprehensive or effective in the UK market. We urge visitors to come and speak to us about their requirements, so that we can arrange on-site demonstrations to highlight just how good our offering is."

RWM 2013 - Stand OA-196



www.hub-4.com/directory/107



Earth Mover Tyres - the best environmental option available!

Dewar's Earthmover Tyres was established in 1969 buying scrap tyre casings. Since then, the business has expanded into the UK's leading specialist of environmentally friendly tyre disposal.

We specialise in the mine, quarry, & plant sectors of oversized tyres, where we buy scrap tyres removed from loader shovels, articulated and ridged dump trucks. We buy tyres that are worn or prematurely removed for damage. We are also interested in tyres rejected by re-tread and repairer companies. We have established overseas markets for these tyres and export to companies globally who will recondition or re-manufacture tyres that are unsuitable in Europe.

We make your tyre disposal issues as easy as possible for you! We arrive on your site and give you a decision on the tyres, and the value, there and then on the spot. Tyres are then transported quickly to our facility where we prepare the tyres for export directly from the docks.

The average tyre disposal company can't do anything with your oversized scrap tyres and they might want to charge

you for disposal. We on the other hand are specialists at buying these sort of tyres, we are SEPA licensed and all appropriate documentation will be issued where appropriate.

We will travel anywhere in the UK to buy scrap mine & quarry tyres wherever they are, and there is no limit to what we will potentially buy, we also travel to various continents for larger mine tyres.

Considering the only option available in the UK for disposal is landfill which is expensive, we are the best environmental option available, and this is what our customers tell us.

We have been in the business for 44 years and don't argue with our customers, we are a 'wee bit' old fashioned and still think the customer is always right..!

For more information please call William Dewar on 07831 153247

We buy tyre casings

Run down, cuts & damage.. ok, tread or no tread.. ok !

YOUR SCRAP TYRES - £100 A TONNE

LOADER SHOVEL & DUMP TRUCK TYRES ONLY

We also buy rejects from retreaders & tyre repairers. We DO NOT want exploded, run flat, green or sooty black!

Call us for more information:

T. +44 (0) 1324 473555 M. +44 (0) 7831 153247

E. emcasings@yahoo.co.uk

DEWARS
EARTHMOVER TYRES

Eriez releases video showing eddy current separator removing nonferrous metallic from PET flake

Caerphilly, South Wales, UK- High speed and close-up images of the newest Eriez eddy current separator in action have been captured in a video released by Eriez. The video has a running time of about five minutes and can be viewed on Eriez Europe website <http://en-gb.eriez.com/Products/Index/Eccentriceddycurrentseparatorrevxe> or at the company's YouTube channel: www.youtube.com/eriezeurope.

Eriez RevX-E eddy current separators provide superior nonferrous metals removal in post-consumer PET bottle recycling and regrind recycling applications. The video showcases how the eddy current separator removes aluminum, brass, bronze, copper and other metallic from the post-consumer PET stream. Viewers can see the high launch speed and trajectory of the eddy current separator as it efficiently removes nonferrous materials from the bottle recycling process.

The stronger eddy current fields plus the use of rare earth permanent non-electric rotor elements help create clean PET yield up to 98 percent. Eriez offers rotors in various widths and style to suit the requirement in terms of separation capacity, purity and particle sizes. A high precision splitter design efficiently separates small nonferrous material.



Eriez eddy current separators consist of an external drum, internal permanent magnetic rotor, drive and belt conveyor. The external drum shell of non-metallic composite material rotates at conventional belt conveyor speed. The internal concentric full diameter RE alternating polarity rotor turns at much higher RPM than the external shell. Through the induction of eddy currents and the resulting repelling forces, the alternating magnetic field selectively repels the nonferrous metals and physically separates them from other materials with minimum product loss.

Eriez Europe will be demonstrating the RevX-E on its stand 19P19-N18 at the RWM show in Birmingham, United Kingdom - September 9-12, 2013.

RWM 2013 - Stand 19P19-N18

www.hub-4.com/directory/280

FERCELL

THE POLLUTION CONTROL ENGINEERS

Fercell Engineering Ltd T:+44 (0)845 130 4014
Unit 1 Old Mill Lane F:+44 (0)845 130 4015
AYLESFORD, Kent ME20 7DT E:info@fercell.com

UK-based Fercell Engineering offers five leading global technologies; Fercell, Weima, Imro, Heger and Bomatic for the recycling and recovery of a wide variety of waste resource streams. With more than 36 years experience and engineering know-how, Fercell is your ideal partner for turning waste materials into valuable secondary resources.

Our input is key to your output.

Five leading global technologies – one brand: Fercell.

www.fercell.com/rwm





Weighing Solutions for the Waste and Recycling Market

Avery Weigh-Tronix will be showcasing a range of weighing solutions suitable for the waste and recycling market at this year's RWM show, which takes place at the NEC between 10-12th September.

Visit stand 20C75 to learn more about the crucial role weight data plays in waste management. From tracking the amount of waste collected and monitoring inputs and outputs during materials

recovery, through to extracting energy and disposing of waste, weight information is key to legislative compliance and operational efficiency.

Avery Weigh-Tronix weighbridges and axle weighing offer a complete vehicle weighing solution, while forklift trucks allow operators to simplify processes and access real-time information by weighing on the move. Additionally, the Sureweigh skip weighing system gives operators the option to maximise profit by charging by weight rather than volume.

The company, which is one of the world's leading suppliers of weighing equipment, also has 200 technicians nationwide, offering unrivalled calibration and maintenance services throughout the British Isles and beyond.

To find out how Avery Weigh-Tronix scales and software ensure compliance with health, safety and environmental regulations, visit stand 20C75.

RWM 2013 - Stand 20C75



www.hub-4.com/directory/6127

The latest S+S VARISORT COMPACT sorting system to be shown at RWM 2013

The latest version of the widely used VARISORT COMPACT multi-sensor sorting system from S+S Inspection (www.sesotec.co.uk) will be demonstrated on Stand 18J69 at the RWM Show 2013. The flexibility of the compact, modular design has made this sorting system the first choice of many recycling organisations due to the ease with which sensors may be changed and upgrades installed quickly and economically as needs change. The specially adapted vibratory feeders provide homogeneous material feed across the full width of a fast running conveyor belt. This eliminates any problems due to the weight, shape and abrasive characteristics of the material to be inspected resulting in a high throughput and excellent separation prior to inspection.

The Near Infra-Red (NIR), colour camera or metal sensing technologies and advanced evaluation technologies guarantee precise detection accuracy that can analyse 500,000 individual parts per second. The S+S segmented high speed air ejection nozzles, operating at up to 500 cycles per second,



provide very high contamination ejection rates allowing material with high levels of contamination to be processed to the highest level of purity. The modularity and feed system make the VARISORT COMPACT especially suitable for recycling irregular and difficult bulk materials.

Typical applications include:

- Plastic Re grind and Granulate
- Metals
- Wooden Pellets
- Auto Shredder Residue ASR/ELV
- WEEE Electronics Scrap

The VARISORT COMPACT can be supplied or retrofitted with the VISUTEC data management software for on-line performance monitoring and remote fault diagnosis and maintenance when networked through a PC. The VARISORT COMPACT is designed to be fitted with a range of inductive and optical sensors used in concert or individually. The flexibility of the design means that future sensor developments can be fitted ensuring an exceptionally low cost of ownership and future proofing.

RWM 2013 - Stand 18J69



www.hub-4.com/directory/14335

Safe operation of fork lifts within waste and recycling facilities



The changes in waste management operations in the UK have resulted in an increase in the number of Materials Recycling Facilities. These facilities are home to fast paced operations utilising large items of mobile plant equipment and fork lift trucks. Team these with limited space, pedestrians, conveyors, dust and noise and the accident potential increases.

Between 2004 and 2011 there were over 200 reported incidents in the water supply; sewerage; waste management and remediation industries involving fork lift trucks. Mentor Training is asked more and more to deliver training to those operating materials handling equipment within the waste recycling industry, in particular MRF's.



Steve Baldwin, Mentor's Technical Manager, explains "Fork lift operation in a Materials Recycling Facility poses a whole set of different operational and observational issues from those experienced by someone operating the machine in the conventional warehouse environment. It is important that operators are trained to use their equipment appropriately for the tasks at hand and the environment in which they work and are aware of the particular hazards that the environment imposes".

Mentor provide 10 safety reminders for the safe use of fork lift trucks to those operating, supervising and working within a MRF.

1. Ensure that there is clear segregation between pedestrians and forklifts

Pedestrian walkways and restricted areas should be established. More importantly, employees must be made familiar with the particular areas in which they are permitted to operate to ensure these are adhered to. All employees on site should be briefed on the dangers of working in close proximity to fork lift trucks.

2. Be observant of other plant (fixed and mobile) operating within the working area

MRFs often have multiple equipment types operating in different ways in the same space. To limit the chance of incidents, ensure appropriate visual aids/cameras are present and in good working order, and that all staff are trained to use the correct observational techniques.

3. Be careful when handling non banded products

Non-banded products such as tyres may present a hazard due to their varying condition and size. Their load centres have the potential to shift if they move during transportation; to limit the risk, make sure the load is secure before moving off and drive at a speed appropriate to the ground conditions and the load. Never carry a load that obscures your vision.

4. Handle un-palletised products with caution

Un-palletised products, such as drums and baled waste, could also present risks with regards to condition, size and load centre. Drummed waste should be handled with care to avoid punctures. When dealing with baled waste, operators should be aware of the material contained within the bales to aid them in estimating load weights etc.

5. Careful stacking

Non-banded and un-palletised products should not be stacked too high as their uneven weight distribution can cause them to become unbalanced far easier than palletised loads.

6. Use suitable attachments

Many sites have fork lifts which carry out a multitude of operations using various attachments. Always use the correct attachment for the task required e.g. rotating forks for tipping bins, bale clamps when handling baled products, and standard forks for palletised loads.

7. Take extra care when operating indoors with little natural light

MRFs are often large structures with little natural light available. If switching between operating indoors and outdoors, be aware that your eyes may take time to adjust. 80% of FLT accidents occur due to visibility issues; take extra care.

8. Account for the ground conditions

Always adopt a safe travel position, accounting for the terrain; this should ensure that your forks avoid scraping the floor. If the ground is wet/greasy, don't over-rev the engine as this may cause wheel spin. You should always endeavour to move any dangerous debris out of the way of moving vehicles, but in this type of environment it is often impossible to remove all waste from the floor. Take care, driving slowly and carefully over it as you would over any uneven surface. Pre and post-operational checks are vital to ensure no plastic strapping/waste is trapped around wheels etc. Report any problems to your supervisor.

9. Adhere to speed/directional restrictions on site

Most sites that use fork lifts have speed restrictions in place. It is especially important that these are adhered to on busy waste sites due to the high risk nature of the environment. Many MRFs operate a one-way system to facilitate the flow of traffic on site; ensure you follow this to limit the risk of collisions between the various vehicles operating simultaneously in the MRF.

10. Follow the correct procedure for loading vehicles

Ensure that operators are familiar with the safe methods of loading/unloading vehicles (curtain-sided lorries, for example) including operating on access ramps, if required.

To download a free copy of the ten reminders for fork lift safety in MRFs please visit "Safety downloads and posters" under the Useful Information section of the Mentor website. For any further guidance on the safe operation of fork lifts on waste sites or at recycling facilities, please call Mentor on 01246 555222.



Seeing the big picture.

To offer the perfect gear unit
you have to build the plant first.

As a leading drive technology specialist, we also develop powerful industrial gear units. For this purpose we now have completed construction of a state-of-the-art, efficient plant with a unique modular production concept. And what's the good news for you? Optimum logistics, highest accuracy and speediness in fulfilling your specific orders, just to name a few examples. This is what we call Drive 360° – Seeing the big picture: From problem-solving competence to system availability, low operating costs to energy efficiency up to the overall system that handles all your tasks.

Rossi synchronizing asphalt batch mixing

Rossi have developed innovative geared products for synchronising drives. One such application is used in mobile and fixed asphalt mixing plant. The synchronising drives are used in hot asphalt and bitumen batch mixing process. The batch mixing machine has two contra-rotating horizontally paddles, driven by a pair of Synchronised identical ratio Rossi bevel helical geared motors.

In this application it is vital to have both paddles synchronised to prevent one paddle driving into the other or for one paddle to take more load than the other, to ensure a proper mix of product and prevent failure of the expensive mixing paddles.



In previous designs of this application, the synchronisation was achieved with the addition of large open gears on the opposite side from the gearboxes. These gears ensured the paddle shafts were mechanically synchronised to avoid interference with one another. However, these gears needed lubrication and external guarding, which increases the cost of the machine and added additional maintenance cost to the monthly running of the plant. This environment is usually also



one with significant dust and this can lead to contamination of the open gearing lubrication system, compromising service life.

Some machine designs also make use of a 1:1 right angle drive on the motor non drive end shaft with couplings and spacer shafts, to synchronise the two units through the non drive end of the motor, but this also adds additional maintenance, weight and significant cost to the offered product. With both these options spares availability has always been an issue in particular the 1:1 bevel unit as these need to be rated for the full motor torque developed and these are usually on long lead times. The older designs also used worm gearboxes which compared to the new bevel helical are very inefficient and raise the running cost of the plant.

The present design removes the need for the external open gears or special motor designs and couples the two bevel helical gearboxes directly using standard catalogue product. This is achieved by the gearboxes being supplied with a standard option external shaft, known as Rossi U02H or U02Hsin option. The geared units are supplied as a pair, and mounted with synchronizing shaft shafts end to end, allowing easy coupling of these shafts. The coupling only needs guarding and avoids the cost of gears and additional lubrication system.

The Rossi bevel helical cast iron single piece housing geared products are ideal for these applications. Their rigidity and strength allows for an extremely long service life in these arduous conditions. The modular design allows for many optional shaft and accessories to be supplied.

This synchronising design is now used by a number of worldwide asphalt plant manufacturers for a variety of sized batch mixers with powers typically from 18.5KW to 55 KW. And end users are now retrofitting their existing batch mixing equipment with Rossi bevel helical products, to benefit from this new design.





WASTE SYSTEMS SEPARATION MADE **EASY.**

THE PLANT MACHINERY SOLUTION

SEPARATION/CRUSHING/MIXING/WASHING/SCREENING/RECYCLING/DEMOLITION

T: **01606 83 55 44**

W: **www.worsleyplant.co.uk**

Worsley Plant, Road Beta, Brooks Lane Industrial Estate
Middlewich, Cheshire CW10 0QF



“DON'T WASTE **WASTE!**”

There are **resources** hidden in our communities.

RWM 2013 //
NEC Birmingham, UK
10–12 September 2013
Hall: 17, Stand: H19–G18

Live demonstrations of
TITECH autosort 4 in the
show's outside area (OA151).

Commercial and industrial (C&I) waste contains recyclable fractions such as plastics, paper and cardboard as well as ?lm. Recovering them is worthwhile as you obtain a saleable product and the market for these materials (compared with primary resources) is on the increase.

Using sensor-based sorting technology it is now possible to sort even highly variable streams with very high recovery and purity rates.

You name it – we sort it.



Scan QR-Code via
smart-phone-app and
watch C&I-Movie.

Fercell - the solution

A wealth of know-how and experience, Fercell has been established for more than 36 years and has built a nationwide presence in the environmental sector. We continue to be highly successful in bringing about solutions to numerous industrial and environmental problems.

We offer an extensive range of products, professional services and co-branded solutions, all from our modern manufacturing plant and offices in Aylesford, Kent, UK.

FERCELL - KWIK-FIX

Ducting systems, Fans, Extraction Plant, Fume Extraction solutions and Biomass burners.

The company has been highly successful in bringing about solutions to numerous industrial environmental problems. Fercell are entirely flexible in their ability to design, manufacture and install systems which can be individually tailored to suit customer's particular requirements.

Personal supervision by highly-qualified Fercell personnel ensures that each project is processed smoothly and that our customers are fully satisfied with the final result.

Fercell place particular emphasis on after sale service. Replacement parts and modification of equipment is carried out with care and attention to detail and efficiently, and in this way, any loss of valuable production time is kept to a minimum.

Renowned for their KWIK-FIX brand of ducting and now widely used in industry, and equally as innovative, fan, extraction filter system and biomass burner solutions.

FERCELL WEIMA UK

Single and four shaft shredder technology, Briquette press solutions (up to 6000kg/hr)

Weima is the leading specialist in innovative briquetting and shredding solutions with nearly 35 years experience, with over 1000 installations in the UK and Ireland alone and more than 25,000 installations worldwide. There is a WEIMA machine to suit every requirement and of a build quality to ensure a future proofed investment. Proven technology with a high level of operating efficiency, low energy consumption output ratios and designed-in low maintenance.

FERCELL IMRO UK

Conveying systems, sorting and separation solutions

IMRO means competence. From the basic idea to the final installation, as a solution leader with our partner, Fercell have gained much knowledge supplying the recycling sector. Our experience and know-how helps avoid mistakes in conveying and separation systems, wins time, creates economic investment, saves on subsequent costs, maintains high quality and provides the invaluable, reliable conduit solution to bring processes together.

FERCELL BOMATIC UK

Twin shaft shredder solutions, Vertical shredder technology, granulator systems

In co-partnership with Fercell, Bomatic's expertise is built on more than 44 years in the recycling sector. The technology is continuously developed to keep abreast of current trends and technology improvements. Bomatic supplies shredder and granulator solutions but we also design complete plant solutions according to individual requirements such as tyre recycling and waste processing solutions. Efficient, competitively priced waste recovery solutions that work.

FERCELL HEGER UK

Foam compaction technology, De-watering systems

Heger Lion & Tiger recycling systems shred and compress (up to 50:01) a wide range of waste materials such as EPS (Styropor®), XPS, EPE, EPP even cross-linked foams into high-quality, recyclable materials. Entry level machines are shipped pre-programmed and are ready for immediate operation.

Crocodile Series de-watering technology reduces weight in wet solids (up to 90%) as a result of draining, resulting in considerable cost savings in further disposal of materials.

Building on existing technology, Heger continues to invest in new and innovative solutions with its co-brand partner Fercell. Since the company's incorporation in 1963 it has continuously developed new systems for the rapidly growing recycling industry.

Our input is key to your output

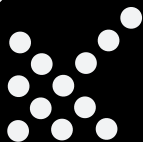
Visit us online to see what is happening at Fercell. Don't forget to join the discussions on LinkedIn, be inspired on Facebook and keep up to date on Twitter.

Fercell Engineering Ltd Unit 1, Old Mill Lane, Aylesford, Kent, ME20 7DT

T: 0845 130 4014 E: info@fercell.com

W: www.fercell.com/rwm





Dealers Wanted
Worldwide

Crushing & Screening Systems



Celebrating
20
Years
1993-2013

Building Quality and Delivering Power

The innovative Portafill 5000CT (pictured above) is a versatile, heavy duty machine that is economical and very easy to transport. Built strong enough to withstand the toughest of material, the 5000CT is perfectly suited to contractors in quarry, demolition, construction and waste applications.



telephone: +44 (0) 8776 9467 email: reception@portafill.com website: www.portafill.com



Alpha Waste Solutions set to promote commercial recycling excellence at RWM 2013

It is an exciting time for recycling products specialist Alpha Waste Solutions, as they prepare to give RWM delegates an exclusive first look at their newest commercial waste management product.

Whilst details of the release are being safely guarded until September, with over 20 years' experience providing premium recycling products to all commercial sectors, Alpha will surely not disappoint.

Looking forward to the event, Alpha's Peter Vernon provides a hint as to what delegates can expect: "We have always steered clear of a 'one size fits all' approach to working with clients, preferring instead to continually expand our product range so that we can offer varied recycling solutions.

"In this industry, innovation is key. This latest addition to our portfolio will satisfy a previously unfulfilled market need for a cost-effective recycling bin that offers all the attributes of a flexible and more expensive product. We will be showcasing a new compostable caddy bag too, in addition to a secure console for confidential paper waste and kitchen caddies manufactured specifically for local authorities. The stand is set to be very busy indeed!"

Education will be another important theme for Alpha at this highly-anticipated exhibition. With a range of brightly coloured 'Kids Zone' products purposefully designed to make recycling fun, Peter hopes to encourage more schools to address waste collection and segregation in the classroom.

He explains: "Children are perhaps the most valuable recycling champions in the UK, and they have the power to change recycling habits within the domestic market too. As an industry we therefore need to

invest more time and effort into education because, if new behaviours are learned in school, the chances are these children will help reverse the 'black bag' approach that their parents adopt at home."

Having recently received financial investment from North American partner Craig Busch, Alpha's market position has perhaps never been stronger. Now the sole UK distributor for Busch Systems, Segezha (Ecosack), Cervic and Stenquist recycling products, Alpha is fast becoming the first name on everyone's lips for commercial waste management support.

Peter concludes: "We now boast a network of manufacturing partners across the globe, meaning we can provide UK clients with access to the world's leading recycling products. Often people suggest that, as a nation, our recycling waste management agenda lags behind that of our European neighbours - we want to do all we can to bridge that gap."



New shredder will revolutionise SRF market



Shredder specialists Mach Tech Services Ltd will be unveiling its latest additions to its Komet range of shredders at this year's RWM Exhibition.

The Komet 7RHP machines are capable of producing cement kiln grade SRF at between 15 tonnes and 18 tonnes per hour. They utilise a 35mm screen and give an output size of minus 30mm. Screen sizes can easily be increased to enhance performance or for very high volume shredding for RDF.

Developed by world-class shredder manufacturers Lindner-Recyclingtech of Austria, the newest Komets have been exhaustively tested for the past two years at a German waste company.

Martin Davies, Sales Manager for Lancashire-based Mach Tech Services Ltd, said: "These machines have to be seen to be believed. Nothing can touch them on throughput."

Mach Tech Services, who specialise in providing the full range of Lindner shredders covering all recycling markets, will be exhibiting the Komet 7RHP 2.2 at RWM, along with another new shredder, the Limator, for anaerobic digestion and biogas.

Find them in Hall 18 on stand M29-L28 or visit www.machtechservices.com for more information.

RWM 2013 - Stand M29-L28

www.hub-4.com/directory/8716



Forth Resource Management purchase three Neuenhauser Star Screens for Composting Sites.

Forth Resource Management is a young, dynamic company based in the Lothians of Scotland who specialise in organics material recycling.

Since 2007, Riverside Machinery has enjoyed a very close working relationship with the team at FRM and in that time we have delivered three Neuenhauser Star Screens to work on their various composting sites throughout Scotland.

What makes the Neuenhauser Star Screen work so well for FRM is the fact that the material being processed tends to have a very high moisture content, and so to try and screen this through a conventional flat deck screen or trommel would result in a extremely low output. The output and separation of materials returned by the Neuenhauser Star Screen is like no other screener in the marketplace. Coupled with the fact that the build quality and workings of the Neuenhauser Star Screen are second to none, this has resulted in the machines having an excellent return on investment.

Aside from being the ultimate choice for screening compost and green waste, the Neuenhauser Star Screen is equally at home screening sticky stone and soils, wood chip, coal, RDF, and other material that conventional screens struggle with.

This latest generation star screen from Neuenhauser now benefits from a JCB 4 Litre Engine which under normal working conditions returns approx 4 - 6 litres/hour fuel consumption. This is achieved by the ingenious electronic system fitted to the machine that will only work the engine as hard as it needs to be. So for example, if the machine is not being fed material for any length of time the engine revs will fall and thus reducing fuel consumption.

If you would like to see the benefits a Neuenhauser Star Screen could bring to you, then do not hesitate to call us on 0800 689 9024 or sales@riverside-machinery.com

Call us on 0800 689 9024 or visit www.riverside-machinery.com

RWM 2013 - Stand 20B59

www.hub-4.com/directory/12459

Bruce Washing 24/7 In Russia - “the clearer solution to washing”

Bruce were approached by their exclusive distributor in Russia, GT Holdings Ltd, to offer a solution to wash a high silt content material in a cost effective way.

The Remit

To provide the customer with a highly productive, cost effective solution that could run 24/7, require low maintenance and obtain another profitable product to sell to the market with a high demand in Russia. With over 50 years experience in material processing and numerous washing modular plants in Russia, Bruce were the first choice for the customer.

Feed Material

The feed material was 0-100mm aggregate with a high silt content which is difficult for conventional dewatering equipment to deal with.

The Plant

After a site visit from the Bruce washing team and analysis of feed materials Bruce proposed a simple modular washing plant.

The plant is fed by a free standing hopper with a belt feeder, conveyed onto a 6m x 2m double deck washing screen producing 2 grades of stockpiled aggregate + 30mm and 3-30mm as finished products. As 80% of the feed was -6mm Bruce decided the most efficient, cost effective and user friendly solution was the BWSRB120.

All -3mm from the bottom deck of the washing screen is fed through a simple sump and pipe system with silty water and slurry fed to the Bruce BWSRB120.



The BWSRB120 unit is an extremely efficient sand recovery machine consisting of a double bucket wheel, centrifugal slurry pump, two hydro cyclones, collection tank and dewatering screens all on one chassis. At 120tph this machine produces an extremely desirable product whilst ensuring less wear on the cyclones and providing a drier material.

Results

To quote Mr Avilov, (customer) "the plant is very efficient and easy to run and I can produce material 24/7 which suits our severe weather conditions (from -18 to +30 degrees) and exceeded all our expectations"

The distributor quoted "Bruce's specialised team specified the correct plant to process this material and offered a simple solution for my customer to run efficiently"

Bruce can also supply a Silt Recovery System for a complete Turnkey Solution which can be adapted to suit or complement any existing plant.

To find out more about our bespoke washing systems or to arrange to visit the site email caroline@bruce-eng.co.uk.

Or Visit www.bruce-eng.co.uk



www.hub-4.com/directory/7470

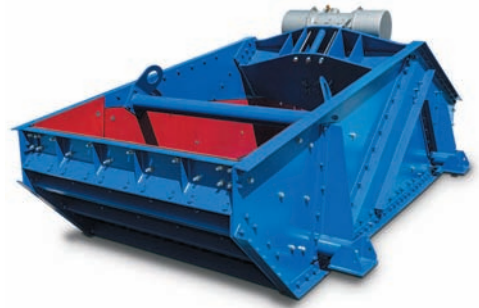
Built to last. Just like our vibrating screens.

Some things are built to last, just like our range of robust Enduron® linear motion screens. Engineered for excellence and tailored to specific needs, our screens combine high efficiency and high capacity with low maintenance costs to deliver exceptional performance whatever the challenge.

So, think long term.

Think Enduron®.

ENDURON® Vibrating Screens



Excellent
Minerals
Solutions



www.weirminerals.com

Copyright © 2013 Weir Minerals Europe Limited. All rights reserved. ENDURON is a trademark and/or registered trademark of Weir Minerals Europe Ltd. WEIR is a registered trademark of Weir Engineering Services Ltd.

rapid



RAPID TRANSBATCH

COST EFFECTIVE MOBILE BATCHING SOLUTIONS

- ▶ Outputs from 40m³ - 100m³ per hour
- ▶ Fully mobile, single load road-towable unit
- ▶ Folds and dismantles for transport
- ▶ Contains powerful Rapid Twin Shaft Mixer

Rapid International Ltd 96 Mullavilly Road, Tandragee, Co. Armagh, Northern Ireland, BT26 2LX
T: +44 (0) 28 3884 0671 E: marketing@rapidinternational.com www.rapidinternational.com

Precast Concrete Retaining and Storage Walls



For All Bulk Material Storage

**Widest Range of Fixed & Portable Walls
Prestressed & Precast
Designed to Eurocode 2
Installation Service Available**

ACP (Concrete) Ltd
Manufacturers & Suppliers
sales@acp-concrete.co.uk

Tel: 01889 598660 Fax: 01889 568160

Part of the Thomas Armstrong Group of Companies



www.acp-concrete.co.uk





Greenbank Group UK- Protective lining systems, feeders and weighing equipment.

The Greenbank Group UK's Terotech business has for the last 60 years led where others follow in designing, selecting, applying and extracting the optimum performance from traditional and sophisticated lining materials thus considerably extending operational life.



In protecting plant and equipment using such as fused cast basalt, zirconia and alumina ceramics, trowel on composites, hardened steels and easy flowing plastics and pipe systems where conditions allow, we know our clients will receive attractive returns on investment.

The Group's materials handling division GMH, offers the Greenbank Pipe Conveyor and the GB range of industrial feeders and weighing equipment.

The Greenbank Pipe Conveyor systems provide considerable environmental and economic advantages over conventional conveying methods by using an enclosed belt design to transport bulk materials.

Being enclosed, Greenbank Pipe Conveyors minimise dust generation, provide maximum protection from external contamination and prevent costly spillages, whilst the flexibility of design enables significant reductions in conveyor footprint and power consumption.

The GB range of feeders can deliver light or heavy duty capabilities in the toughest of conditions. The GB feeders are designed for low



maintenance and quick belt change to ensure minimum down time. Greenbank can also offer heavy duty gravimetric feeders for handling biomass or coal.

Formally known as H&H weighing, the GB range of belt weighers offer choice in simplicity and economy to sophisticated intelligent weighing and feeding operations impressive in accuracy with consistently reliant performance.

In summary, The Greenbank Group UK offer product or project driven solutions proven in the toughest and most arduous of operating conditions, a fact born out from the high volume of repeat business awarded by customers who trust in our knowledge, experience and services from quarries, mines, power generation, iron & steel, waste, renewables, chemicals and food processing.

Rossi proven mobile aggregate and recycling solutions



Rossi Product Features & Services

- * Wide product range proven and tested in the most arduous customer applications
- * Improved efficiency with energy saving as a key design influence
- * Innovative Technical solutions to satisfy customer applications
- * Latest technology employed in the production of the complete product range
- * Web based Comprehensive Customer portal **Rossi for You**
- * Local Customer support, Local service and Local stock holding
- * Now with local assembly for Helical, Bevel helical and Planetary series **NEW**

Rossi UK Ltd
Unit 8/9, Phoenix Park Estate-
Bayton Road, Exhall
Coventry CV7 9QN
Ph. 02476 644646 - Fax 02476 644535
www.rossi-group.co.uk Email: info.uk@rossi-group.com



Screening...

behind every passion there is a driving force – this is ours **WS85**

We aim to offer the most successful screens. Whilst constantly searching for new and better solutions we do not follow short-lived trends, but build on our experience.



TEMA ISENMANN Ltd.

Industrial
Screening Systems

T. 01327 264227 F. 01327 264228 Email: screendecks@tema.co.uk

Customers world wide enjoying world class products

www.temaisenmann.co.uk



- MOBILE SCREENERS



- MOBILE TROMMELS



- TRACKED CONVEYORS

EXTENSIVE RANGE OF QUALITY
PRODUCTS AVAILABLE



- RADIAL WHEELED CONVEYORS

ANACONDA
EQUIPMENT INTERNATIONAL

ANACONDA UK

10 Ash Grove, Stroud, Gloucestershire. GL6 8GZ
M: 07568 568231 E: danny@anacondasales.co.uk
WWW.ANACONDAEQUIPMENT.CO.UK

ANACONDA Equipment International Ltd

Ardboe Business Park, Dungannon, Co Tyrone, BT71 5BJ, N. Ireland
T: +44 (0) 28 8673 7878 E: sales@anacondaequipment.com
WWW.ANACONDAEQUIPMENT.COM

History Repeats Itself for Rapid



Rapid's First Ever Customer is the First to Purchase its Latest Product.

Norman Emerson & Sons Ltd, a leading Northern Irish supplier of construction materials that includes ready mixed concrete and quarry aggregates, were delighted to be the first customer to take ownership of the new Rapid Transbatch, compact mobile batching plant. The investment was in an effort to modernise their existing ready-mix production facilities at the company's site in Ardmore, County Armagh.

Tandragee, County Armagh, June 12 2013 - Rapid are pleased to have supplied Norman Emerson and Sons Ltd with their batching plant requirements for over forty years. The new Rapid Transbatch is in fact replacing the very first batching plant ever built by Rapid, which the company purchased over forty years ago. This relationship serves to highlight Rapid's long term commitment to quality engineering and absolute customer satisfaction.

Commenting on their purchase, Group Managing Director George Emerson stated "Rapid's Transbatch has provided us with an excellent solution for our concrete batching requirements. Its high quality compact design, ease of mobility and fast set up has made it a superb choice. We are pleased to have yet again worked with Rapid and can attest to

their professionalism and customer focussed, can-do approach".

Transbatch is the culmination of Rapid's forty years of experience, and expands its celebrated existing portfolio of mobile batching solutions. Rapid's Transbatch compact mobile batching plant offers outputs of 40m³, 60m³ and 100m³ per hour. Fully mobile, the Transbatch features stairs and access walkways which fold and dismantle for transport in a single load road towable unit. Fast set up in as little as five days with no foundation requirements helps to ensure that project timescales are met.

As standard, Transbatch features four 10m³ aggregate bins with pneumatic discharge doors, a 1000mm weighing belt and a 1750kg cement weigh hopper with aeration and pneumatic vibrator. Transbatch includes a built in control room positioned at the truck loading area and an automatic control system with load cells, starter panel and pneumatics panel. Twin additive meters with two pumps are also included with the plant, with the option to add extras if required.

The heart of the plant, Rapid's powerful in built Twin Shaft Mixer, which includes extra thick long wearing chill cast tiles and paddles ensures a thoroughly homogenized mix. The Twin Shaft includes an easy to operate discharge door with two independent hydraulic rams.

Rapid's dedicated and experienced in house spares department has the ability to provide Norman Emerson & Sons Ltd with all its wearing and replacement parts for the Transbatch, via a fast track service. High inventory levels and same day dispatch from stock on goods ordered before 11am (UK only) will ensure that the company's spare parts requirements are consistently met in a cost effective, timely and efficient manner.

As a result of its ease of mobility Transbatch is ideal for remote location projects and general construction projects such as, but not limited to, road building, wind farm bases and warehouse flooring.

Firstgrade launch new Chinook air separator at RWM 2013

Called the Chinook because it uses two powerful fans, the Chinook gives a 3 way split in one operation. The Chinook air separator is designed to increase both throughput and efficiency in waste recycling plants, while at the same time reducing their labour costs.

Applications for the Chinook include C&D waste, Household waste, co-mingled waste, and many more.



"We developed the Chinook as a response to our customers dissatisfaction with their traditional picking stations which are inefficient and costly to man" says Alan Valentine of Firstgrade. "The main application of the Chinook is to pre-sort material prior to picking. This reduces labour requirement, and improves both the quality and quantity of materials recycled."

Levenseat Recycling in Lanarkshire have recently installed a Firstgrade Chinook and picking station in their sorting line for C&I waste. "I chose the Firstgrade system" says Angus Hamilton of Levenseat, "because it provides a good material separation while being simple, compact, robust and cost effective in comparison to other products on the market."

Levenseat's Chinook provides a 3 way split giving light waste to RDF, mids to one picking belt and heavy waste to another picking conveyor. Prior to installing the new Chinook and picking station, all of this material went onto a single picking belt, which could not cope with the volume of material. Since installing the new system, their labour requirement has been reduce and at the same time, their recycling rates have increased.

Firstgrade design and manufacture recycling plants for transfer stations, to suit individual requirements. Other products include Trommel Screens, Vibrating Screens, Water Separators, Conveying Systems and Picking Stations.

To discuss your requirements, call Alan Valentine on 07771 818 462, or see us at the show, outside area, stand OA204.

RWM 2013 - Stand OA204

www.hub-4.com/directory/6357



CMB are appointed the UK dealer for the Hartl Bucket range

After aiding Hartl with the design of the new and innovative range of bucket crusher and bucket screener, CMB International are proud to have taken on the UK dealership of the Hartl Bucket range.

The Hartl Bucket Crusher range is a robust and aggressive crusher that combines award winning design with crushing essentials. The "Quattro Motion" provides excellent throughput, ensuring that all of the material is being crushed rather than "rubbed" through the chamber. This provides the customer with the desirable cubical shaped material, ready to be re-used immediately.

Applications of the HBC range include:

- Processing natural rock in quarries, mines, gravel pits, river gravel, etc.
- Processing spoil in the form of concrete, tiles, asphalt, ceramics, glass etc.
- Recycling railway sleepers and concrete posts
- Road works and leveling work, excavations, forestry roads

The Hartl Bucket Screener range is a compact and stable structure that ensures a reliable screening capacity with low running costs. This machine enables materials to be classified and separated more precisely. The exchangeable grids allow for sieving and screening in different, variable sizes. The grids can be used for pre-filtering (prior to crushing) and for final classification purposes. These products are used for working with natural rock, recycling and in agriculture.

Applications of the Hartl Screener:

- Processing natural rock in gravel, river gravel, and sand pits, etc.
- Classifying and refining materials for recycling
- Road works and leveling work, excavations, forestry roads, etc.
- Classifying topsoil in the agricultural sector
- Screening chippings, sand in beach cleaning operations, etc

www.hub-4.com/directory/185

Angry Bear launch a new range of compact machinery

Angry Bear are manufacturing a new range of compact machinery aimed at the hire, construction, demolition, landscaping and recycling markets. Even though we are new, we have over 40 years previous design and manufacturing experience within these industries.



This includes our world's first and award winning Combo 6 machine, which is generating a huge amount of interest, as there is nothing on the market like it and caters to a vast range of uses. This is a compact machine that will travel through doorways so is ideal for sites with limited space and access and is light enough to be transported in the back of a van. Our combo 6 machine is made up of 3 main outputs crusher/shredder/powerpack.

Crusher has an input size of 300mm x 200mm and reduces any rock, rubble, bricks, concrete and will even take tiles and slabs unlike most crushers, as the jaws can be hydraulically adjusted down to an output size of between 80-12mm. This produces a usable or salable Type 1 from rubble or decorative stone from rocks. The shredder takes materials up to 300mm wide and reduces sheet materials and other site waste like slates, plastics, sterling board, and plasterboard to a reusable or salable size.

Finally the powerpack will power all your site tools and all of this is on a tracked chassis so can be easily moved about at the touch of a lever. This machine is designed for all site waste to be recycled on site and reused on site primarily, saving contractors money and reducing the amount of material to landfill. In fact the award we won was for waste management product of the year!

These machines will recycle material on site before the waste products are mixed and contaminate one another or simply you can reduce the size of your waste materials for collection. Using this machine has massive benefits cost wise and environmentally. We believe and so do many peers of the media within the recycling industry that this will help to reduce the percentage of materials sent to landfill.



**BULK MATERIALS
HANDLING EQUIPMENT,
DESIGN & SUPPLY
SPECIALISTS**



CONTACT: +44 (0) 1452 725210

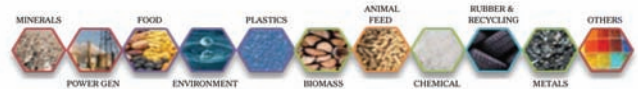
PRODUCTS & SERVICES



**WITH A
GLOBAL
FOLLOWING**



INDUSTRIES SERVICED BY SN ENGINEERING



RWM 2013 - Stand 0A220



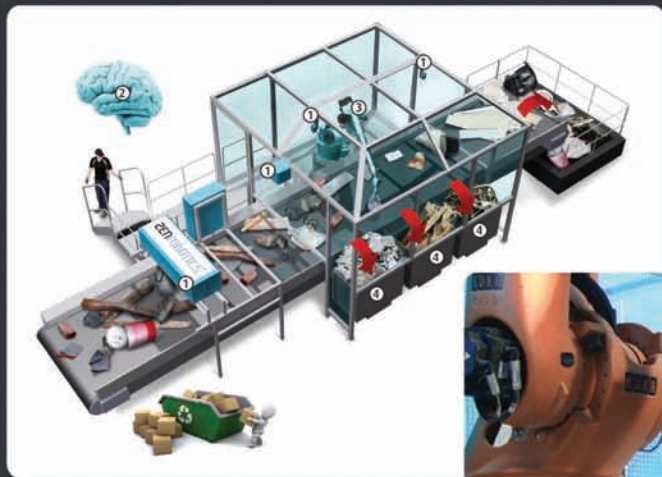
www.hub-4.com/directory/16577

WHO IS MAX INNOVATE?

Originally called Max Solutions (Northern) Limited we have rebranded to promote our new and exciting range of products that we are bringing to the market as well as giving a new fresh feel to our existing product range.

We are the dealers for the ZenRobotics recycler for the UK and Ireland and we are here to help maximise your profits as well as provide full back up service and support.

THE TECHNOLOGY IS NOW HERE! READY TO MAXIMISE YOUR PROFITS AND FUTURE PROOF YOUR MRF!



WHO IS ZENROBOTICS?

ZenRobotics are a scientific research and development company from Finland. The ZenRobotics team have been working tirelessly creating a form of artificial intelligence to allow us to use robotics in picking stations instead of manual Labour.

This technology will not only reduce the manual labour on your MRF but will increase the flexibility and utilisation of your plant. This system is not restricted by time and can work 24 hours a day 7 days a week!

Exciting new owners of the ZenRobotics Recycle

Baetsen Recycling BV Netherlands have recently purchased the World's first robotic recycling system.

Sita Finland quickly followed in December 2012 with the purchase of two Zen Robotics Recyclers. One ZRR Heavy Picker and one ZRR fast picker.



THE ZENROBOTICS RECYCLER:

Benefits

- × More flexibility than humans to identify and sort a greater variety of products
- × Receives a huge amount of analytical data in real time
- × Eliminates inefficiencies caused by manual sorting
- × More accurate reclaiming
- × Non-destructive recycling
- × Upgrades to the robotic sorting by quick easy program download
- × Future-proof your MRF to changes in legislation and commodity prices

Main Features of the ZenRobotics Recycler

- × Automated picking system
- × Can replace up to 4 humans per arm
- × Can be retro fitted in to existing picking stations
- × Can run on a 24 / 7 basis
- × Will identify 3D objects and pick off of a moving belt
- × Can control belt speed to aid accurate "first time" picks

Materials

- × **Plastics** – separate into different fractions i.e Ridged Plastic, PVC, PE, PTT and Colour.
- × **Wood** – A to D grade
- × **Metals** – Ferrous and Non-Ferrous including Stainless Steel which no other machine in the world can pick!
- × **Hardcore** – Stone, concrete, bricks, tiles and gypsum. The ZRR Recycler can further separate into different colours if needed eg separate red brick from concrete etc.

**JOIN THE REVOLUTION
AND MAXIMISE YOUR
PROFITS WITH**

CONTACT MAX INNOVATE NOW... 0844 800 1812

PO BOX 6224, Coventry, CV7 7XP. | info@maxinnovate.com | www.maxinnovate.com



Are replacement components wearing away your company profits?

By: Gilles Gros, Product Manager and Nick Taylor, General Manager, Abraservice Group.

When considering the use of wear resistant steels for the manufacture of wear parts that operate in high demanding environments, such as in the quarrying and mining industry, are companies viewing this option as a positive return on investment or as just a higher cost against limited internal budgets? To prove the cost benefits of wear resistant materials, Abraservice Group has run a comparative test program, based in a Chromium mine in Turkey, with results showing that a 20% investment in higher cost wear resistant bucket edges provided an increase in wear life of the components from +21% up to an outstanding +92% depending upon the size and density of the aggregate being mined, as well as reducing equipment downtime and significantly increasing periods between maintenance.

Background

Mining excavator buckets on earth moving machinery are typically manufactured using high yield strength steel for the body with standard 450 HB or 500 HB water quenched steel wear plates welded into position on the front. The comparative test program run by Abraservice Turkey was designed to compare the use and the component life of bucket wear edges produced in a commonly sourced, industry standard water quenched 450 HB steel from northern Europe against those manufactured in a specialist abrasion resistant steel Creusabro® 8000®. The Creusabro range of steels is produced by Industeel ArcelorMittal Group and distributed across Europe by Abraservice Group. The test program was designed to compare the cost of investment for replacement wear edge components with the wear life achieved from the parts, to establish if wear resistant steels can provide a positive return on investment for companies operating daily in these extreme market sectors.



Testing Process

The comparative test program carried out by Abraservice Turkey was run at the Chromium Mine, in Eti Krom City, in the region of Elazığ in east Turkey. This very harsh external environment provided extremely abrasive conditions under which the test program operated. Identical bucket wear edges were produced in the two grades of steel, each 30 mm in thickness and installed on identical wheel loaders within the quarry. The two buckets were then operated in a side by side comparison program to evaluate the wear life of the components in abrasion testing focussing on the areas of impact, dragging and sliding within crushed aggregate.

The wheel loaders fitted with the manufactured wear edges were operated in two different areas of the quarry. Wheel loader no. 1 was used for the mining of chromite, an iron chromium oxide (FeCr_2O_4) and wheel loader no. 2 for ferrochrome, a chromium iron alloy (FeCr). The size and density of the aggregate being mined in these two areas is significantly different, and the characteristics of the two different aggregates are shown in the table below:

Characteristics of Aggregates Used in Test Program			
	Wheel Loader No. 1	Wheel Loader No. 2	Unit
Stock area:	Chromite	Ferrochrome	
Density:	4.1 – 4.9	7.2	
Hardness:	5.5	7 – 8	Mohs
Aggregate block size:	50%: 15 – 60 50%: 500	100%: 200 – 500	mm

Comparison of Steels on the Test Program

The two grades of steel run on the side by side comparison program were analysed for their chemical composition and hardness qualities. The quality control test results for each steel grade are outlined in the tables below and are shown against the manufacturers specifications. As can be seen, the chemical composition varies quite significantly between the two samples but the hardness of the steel materials on test are very similar with the water quenched 450 HB having a tested hardness of 454 HB and the oil quenched Creusabro® 8000® having a tested hardness of 461 HB.

Results

Wheel loader no. 1 operated within the chromite stock area of the quarry where the test wear parts on the buckets were working with aggregate where 50% was ~500 mm in diameter, and 50% was between 15 - 60 mm in diameter, with an average density of 4.5. The second test that was run on wheel loader no. 2 operated within the ferrochrome stock area of the quarry where the test wear parts on the buckets were operating with aggregate 200 - 500 mm in size, with an average density of 7.2.

The results obtained in the 4 comparative abrasion tests are summarised below. The test criteria was to determine the number of hours worked by the wheel loaders, to reduce the fitted bucket wear edges from the original 30 mm thickness, down to 5 mm thickness, at which point the wear edges would need replacing. The working hours were carefully monitored for each set of bucket wear edges on each wheel loader, including downtime for changing sets of wear edges. The average results based on side by side testing of the wear parts are reported in the table below.

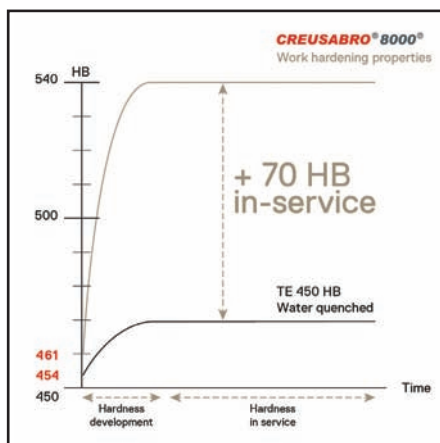


Chemical Analysis of Creusabro® 8000® - Oil Quenched							
	C	Mn	Ni	Cr	Mo	S	P
	%	%	%	%	%	%	%
Test Sample F7534	0.243	1.256	0.466	0.683	0.346	0.0006	0.009
Test Sample F7577	0.249	1.289	0.472	0.668	0.344	0.0008	0.008
Specification Max.	≤0.280	≤1.600	~0.4	≤1.600	≥0.200	<0.0050	<0.015
Hardness (HB) of Creusabro® 8000®							
Test Sample: 71368.011	461 HB (before work hardening)						
Test sample: 71578.011	461 HB (before work hardening)						
Specification: Min. – Max.	430 HB – 495 HB						

Chemical Analysis of Industry Standard TE 450 HB - Water Quenched									
	C	Mn	Ni	Cr	Mo	S	P	Si	B
	%	%	%	%	%	%	%	%	%
Test Sample 090288	0.20	1.09	0.05	0.21	0.146	0.001	0.009	0.32	0.001
Specification Max.	≤0.25	≤1.80	≤0.80	≤1.50	≤0.60	≤0.01	≤0.025	≤0.80	≤0.005
Hardness (HB) of TE 450 HB									
Test Sample: 127480 (tail end)	454 HB								
Specification: Min. – Max.	420 HB – 480 HB								

Transformation Induced Plasticity

The overall conclusion from the comparative abrasion test trial, clearly shows that the outstanding wear resistant properties of the Creusabro® 8000® offer dramatic increases in the working life of the wear edge components, ranging from an increased working life of +21% in the chromite mining area to an outstanding +92% when operating in the ferrochrome area of the quarry. The results seen show the hardness of the two steel grades are very similar with the water quenched 450 HB having a tested hardness of 454 HB and the oil quenched Creusabro® 8000® having a tested hardness (before work hardening) of 461 HB, so the extended wear life and superior performance achieved by the Creusabro® 8000® wear parts must come from another metallurgical property found within this specialist steel. In addition, the lifetime differences seen between the two test environments of chromite (+21% increase in



Results		
	Wheel Loader No. 1	Wheel Loader No. 1
Environment:	Chromite	Chromite
Equipped with:	Creusabro® 8000® wear parts	TE 450 HB wear parts
Steel hardness:	461 HB	454 HB
Hours worked:	549 hours	454 hours
Increase in working life:	+21%	
	Wheel Loader No. 2	Wheel Loader No. 2
Environment:	Ferrochrome	Ferrochrome
Steel hardness:	461 HB	454 HB
Equipped with:	Creusabro® 8000® wear parts	TE 450 HB wear parts
Hours worked:	605 hours	315 hours
Increase in working life:	+92%	

wearlife) and ferrochrome (+92% increase in wearlife) are strongly influenced by the material density, the stone and alloy block size, and the energy of impact within the mining operation.

The metallurgical property observed in the results is known as Transformation Induced Plasticity (TRIP) and such steels have a triple phase micro-structure containing austenite. This phenomenon allows the Creusabro® 8000® material to be delivered to customers with an intentionally limited hardness, specification 430 - 495 HB, allowing the steel to be more easily profiled through many processes including rolling, machining, bending, countersinking, cutting or milling to produce the components required. Then when the material components are in use, the retained austenite within the composition of the metal allows the steel to work harden in service, triggered through impact or pressure, providing enhanced strength and ductility to the steel. The Creusabro® 8000® work hardening properties produce a +70 HB hardness increase in service over the properties achieved by the industry standard TE 450 HB, as shown in the graph.

Conclusion

The investment in producing bucket wear edges in abrasion resistant Creusabro® 8000® is certainly a higher cost, with these specialist steels being approximately +20% higher in cost, plate for plate, compared with a standard 450 HB steel. But with tighter limits on their budgets, companies need equipment and replacement components such as critical wear parts to have a longer performance lifespan. The return achieved by maximising their investment in maintaining equipment not only provides the benefit of prolonged wear life of products and fabrications, but also significantly reduces the on-site downtime of key equipment used in these extreme environments, increases periods between required maintenance and reduces the labour costs associated with fitting replacement parts, proving that the benefits of these wear resistant solutions should truly be seen as a positive return on investment for any company trying to drive down costs.

www.abraservice.com/uk.





Equipment for compost screening, waste recycling, construction, demolition, road maintenance, landscaping and wood recycling.



Watch a video demo of a Starscreener on your mobile now!



Get the free mobile app at <http://gettag.mobi>

THINK **GREEN**, THINK
neuenhauser
SOLE UK DEALER

RIVERSIDE
MACHINERY

New & Used Machinery / Spare Parts / Servicing & Refurbishment

Riverside Machinery Ltd | 26 Greenwood Glen | Belfast | BT8 7WE

Tel: +44 (0) 800 689 9024 | Fax: +44 (0) 800 471 5099 | www.riverside-machinery.com

RUD Chains Leading Manufacturer of

Tyre Protection Chains

Sideflex

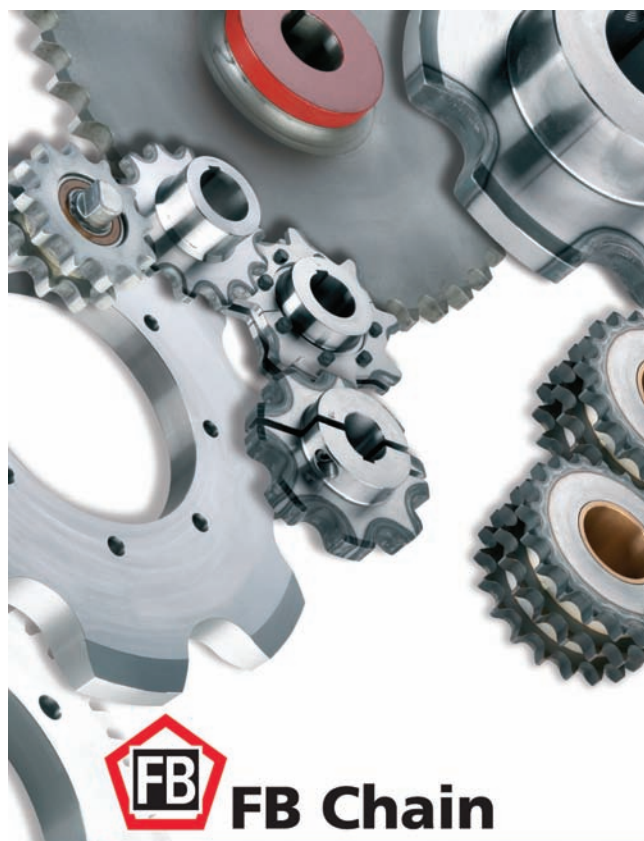
- Maximum sidewall protection for haul truck tyres
- Protect your tyres, increase productivity & reduce damages
- Practical solution to the challenges of tyre sidewall damage
- Lightweight, robust, cost effective side wall protection
- Simple in concept & installation

NEW



RUD® 01227 276611
www.rud.co.uk

katie.crane@rud.co.uk RUD Chains Ltd, Units 10-14, John Wilson Business Park, Thanet Way, Whitstable, Kent, CT5 3QT



FB Chain

SOME SPROCKET APPLICATIONS DEMAND A SPECIAL SOLUTION

FB Chain Limited, Jubilee Road, Letchworth Garden City, SG6 1NE
T: +44(0)1462 670844, E: sales@fbchain.com, www.fbchain.com



Magnet Conveyor ready for quality inspection prior to dispatch

Conveyortek design, manufacture and service conveyor systems which are fully CE marked and compliant to all mechanical and electrical European Safety Standards. The business has been developing steadily in recent years, and has expanded into two additional factories.

Conveyor Magnets

One area the company has seen steady growth is their Magnet Range. With a streamlined manufacturing process, Conveyortek's Conveyor Magnets and Suspension Magnets support the crushing and screening industry in expensive plant protection, and also supply into the recycling sectors. The Eddy Current Separator with vibratory feeder has been a valuable device in the recovery of expensive materials separating waste material into magnetic, non-magnetic and para-magnetic materials.

Electrical Division

With the launch of their new Electrical Division last year, Conveyortek have continued to develop their experience in designing and calculating conveyor systems, now offering a full electrical functional specification service with electrical installations, incorporating PLC controls, HMI Visualisation Screens, SCADA

management and WMS storage systems. The management team ensures that when their clients purchase bespoke automated systems they get a complete solution to a process problem.

Quarrying and Mining

Philip Trimble of Conveyortek says, 'the last six months have seen significant growth for us in a range of industries and what's also great to see are new opportunities beginning to open up in some of the core Quarrying and Mining sectors that the company was originally founded on. We are also investing in one or two new key members of the team by recruiting and developing technically competent sales and service teams that can help us to look after our key customers throughout Ireland.'

Development Plans

As part of the company's ambitions to grow the export side of the business they have recruited a new Business Development Executive who will be helping to research and target customers outside of the UK and Ireland. This new role is a big step for the business and it's hoped that in time it will form the foundation for a global product distribution service.

The company also offer fast and affordable modular conveyor systems, tailored to suit individual needs, fully galvanised and ready for fast delivery, a key addition to the Conveyortek conveyor portfolio. The company stock large volumes of quality conveyor belting, impact bars and other conveyor components.

Conveyortek Ltd

Unit 1 Ballinderry Industrial Estate,
2a Glenavy Road, Upper Ballinderry, Lisburn, BT28 2EU
T: +44 (0)28 92 652666 F: +44 (0)28 92 652555
E: sales@conveyortek.com www.conveyortek.com

The Greenbank Group UK Limited

- Protective lining systems
- Gravimetric feeders
- Weighing equipment
- Fuel distribution
- Online measurement

60 years of design and innovation in delivering heavy duty wear protection, bulk handling solutions, optimised fuel distribution technologies and online analysis of material flow in the biomass, renewables, waste to energy, coal, steel, cement and minerals processing industries.



The Greenbank Group UK, comprising of Greenbank Terotech Limited, Greenbank Materials Handling Limited, GAIM R&D, Greenbank [Beijing] Trading Company Limited.

Hartshorne Road, Woodville, Derbyshire DE11 7GT, UK | T. +44 (0) 845 0707 097
E. info@greenbankgroup.com | www.greenbankgroup.com

- ▶ Guaranteed Performance Results
- ▶ Electric or Hydraulic Drive
- ▶ High Strength Magnets
- ▶ Fast Deliveries
- ▶ Competitive Prices

CONVEYOR MAGNET MANUFACTURERS

THE CONVEYOR PEOPLE



- ▶ Conveyor Belting and Site Vulcanising
- ▶ Rulmeca Rollers
- ▶ Full Range of Components
- ▶ Ceramic Lining
- ▶ Hosch Scrapers
- ▶ Conveyor Design Solutions
- ▶ and our **NEW** Electrical Automation Division

ConveyorTek Ltd

Unit 1 Ballinderry Industrial Estate,
Lisburn, N Ireland BT28 2EU

NI: 028 92 652666
ROI: 048 92 652666
E: sales@conveyortek.com

conveyortek
www.conveyortek.com



4B expands Forged Chain

As the 4B Braime Group celebrates their 125th anniversary this year, 4B Braime has just expanded their Chain department.

The company has added a new welding and assembly cell for a quicker turnaround of their chain orders. All CNC machining for sprockets and trailers is done on site at 4B's Leeds headquarters. A new extra sales engineer for chains has also been added to the team.

"Due to increased sales and production demand to satisfy our customers' on-going and changing requirements and needs, we decided to make a major investment in an enclosed chain production and storage cell. This consists of a Robot welder, fabrication, bending and cutting machinery, assembly tables, CNC lathe, packing area, and an enclosed environmentally controlled chain warehouse. This has facilitated better delivery times, exacting quality and a delivery service that our customers deserve. As our range and production increases over time, we now have the method and environment to control this", explains Dave Wolstencroft, group chain manager at 4B.

4B Drop Forged Chains

4B's forged chain is machined to precise tolerances and heat treated to endure high temperature and highly abrasive applications. Made from the best materials, 4B's drop forged chain also maintains the highest tensile test results on a consistent basis.

The main industries that 4B forged chains have been used in are the agricultural, coal, cement, wood chips, biomass, ash handling, sugar, animal feeds, aggregates, gypsum, etc. All these products have been used in conveyors of various length, angles and high capacity applications, including high temperature.

RWM 2013 - Stand 19W44

www.hub-4.com/directory/2281

Accurate waste management



Weightron Bilanciai are using the upcoming RWM exhibition (Stand 19R41-Q40) to highlight their iWM Industrial Waste Management system. The iWM system has been specifically designed to provide comprehensive legal-for-trade records for the management of waste streams at a wide range of facilities including:

- Office blocks
- Hotels & restaurants
- Schools, colleges & universities
- Factories
- Hospitals

The system weighs the waste and records the data directly in the bin storage area prior to collection. iWM offers significant benefits to:

- Facilities management companies
- Landlords
- Waste collection companies
- Hospital management companies

iWM is ideal for multi-tenant buildings where multi-stream waste generation takes place.

The iWM is based around Weightron's low profile LPS floor scales and the Diade DD1050 touch screen weight terminal. The design of the scale, complete with its access ramp(s), allows bins or containers to be easily wheeled onto the weighing area. The touch screen terminal features clear pictograms, providing an easy and intuitive user interface. The terminal can be fitted with an optional lockable housing to prevent unauthorised use.

Bins and containers can be fitted with electronic tags for easy identification via a card reader/scanner. Tags can be programmed with information including:

- Tare (empty) weight
- Client ID
- Location
- Waste type

A special version of the iWM includes a radiation detection module to identify potentially dangerous radioactive waste before it enters the recycling chain.

Also on display at RWM will be Weightron's comprehensive weighbridge and weighbridge software offering. Their weighbridge management systems, which are used extensively in the energy from waste, biomass and waste recycling industries, include a range of peripherals including: radiation detection systems, number-plate cameras, card readers, barriers and traffic lights.

RWM 2013 - Stand 19R41-Q40

www.hub-4.com/directory/2273



Delivering operator training to the waste management and recycling industry



01246 555222 www.mentortraining.co.uk

Quality Used Equipment

- ✓ Quality machines ✓ Peace of mind ✓ Confidence
- ✓ Trust ✓ Manufacturer's warranty



We offer:

- ✓ Waste Handlers
- ✓ Scrap Handlers
- ✓ Timber Handlers
- ✓ Wheeled Excavators
- ✓ Tracked Excavators
- ✓ Wheel Loaders
- ✓ Track Loaders
- ✓ Dozers



For more information please contact...

John Diggins – john.diggins@liebherr.com | Tel: +44 (0)1767 602238 | Mob: +44 (0)7836 243530

Carmen Ihle – carmen.ihle2@liebherr.com | Tel: +44 (0)1767 602157 | Mob: +44 (0)7919 887718

Or visit our Used Equipment section on www.liebherr.co.uk

Liebherr-Great Britain Ltd
Normandy Lane, Stratton Business Park
Biggleswade, Bedfordshire SG18 8QB
Tel: +44 (0)1767 602100

LIEBHERR

MOGENSEN

Feeders | Sizers | Spreaders | Separators
Conveyors | Screens | Compactors

STRENGTH THROUGH DESIGN

COME VISIT US AT RWM ON STAND 19R08
10-12 September 2013 NEC, Birmingham

GRANTHAM ENGINEERING



4B
BRAIME ELEVATOR
COMPONENTS



DROP FORGED DRAG CONVEYOR CHAIN



PREMIUM HEAT TREATED ALLOY



IN STOCK FROM
4B BRAIME, Leeds (UK)

BETTER BY DESIGN

4b-uk@go4b.com www.go4b.com



DOUBLE LINKS



TRIPLE LINKS



SPROCKETS & TRAILERS

Glen Creston - Leaders in Size reduction

For preparation of larger laboratory samples or for light industrial applications, Glen Creston, offers a range of machines that can cope with high throughputs whilst still producing reasonable particle sizes.

From a Jaw Crusher, for primary sample breakage prior to further processing, and a slow speed deagglomerator for de-lumping and coarse crushing to the McCrone Mill, which will grind to analytical fineness, these machines can cope with a wide range of materials from rocks to edible grains.

Glen Creston strives to improve their machines as well as manufacture and design bespoke special machines to customers' specific requirements for grinding and crushing applications.

These machines are suitable for processing a wide range of materials such as chemicals, minerals, pharmaceuticals, soil, cement, coal, aggregates, agricultural products, plus many more.

Several of the machines can be used either as stand-alone machines in the laboratory or incorporated into process lines for in-line processing of material.

Glen Creston will be presenting the following products at RWM Exhibition 2013:

Roller Crusher

Glen Creston has improved the design and function of their Roller Crusher.

It can be supplied with a new control box with PLC which allows remote monitoring and control of the crusher in process applications.

The largest single shaft unit is now 800mm long by 500mm wide internally and designed for crushing lump coal up to 250mm. High temperature versions are available for crushing power station ash at up to 250 degrees centigrade

This rugged, slow-running mill is equipped with either a single or double roller shafts fitted with crushing cams which rotate between crushing and stripping combs. Different shaped crushing elements are available depending on material.

This machine is particularly suitable for de-agglomeration of materials from sacks or silos, pre-crushing softer minerals and for granulating coarse lumpy, caked or compacted materials.

- Compact design allows retro-fitting into existing process lines.
- Parts easily removed for maintenance/repair



Operating principle /construction - The crushing cams of wear-resistant steel are mounted on the roller shaft in staggered positions, accurately spaced so that they pass between the crushing and stripping combs which are mounted laterally on opposite sides of the inner housing. Both sets of combs are identical in design but have different functions.

Swing Hammer Mill

The Glen Creston Swing Hammer Mill is designed for light/medium duty crushing of a broad range of materials in batch, in-line and recycling applications. Available in cast iron/carbon steel, with optional blower discharge, and in stainless steel, this versatile mill is a cost effective solution for process engineers.

Waste glass to cosmetic pigments, the SHM range will tackle many dry materials at rates from a few kilos to up to 1000 kg per hour, depending on material and screen aperture.

The mill features a 180° full width, discharge screen; easily interchangeable once the safety interlocked top half of the mill is hinged back to give unrestricted access to the crushing chamber.

This type of mill will successfully grind Chemicals, Resins, Grain, Clay, Seaweed (dried), Fruit (dried), Wheat, Barley/Oats, Domestic waste, and Glass, but could be applied in any similar situation.

For further details on Glen Creston products please contact
enquiries@glencreston.com

+44 (0) 208 545 9140

www.glencreston.com

Glen Creston also offers Endecotts range of test sieves and sieve shakers for particle sizing.

Test Sieves - Endecotts test sieves are available in different sizes, depths, choice of materials and certified degrees of inspection to meet every National and International standard and virtually every specification, including ISO 3310 and ASTM E-11.

Endecotts test sieves are designed and manufactured to offer qualities that make them extremely precise and accurate whilst offering good handling, nesting and strength.

Shakers - Endecotts shakers are suitable for all types of sieving and samples - shakers designed to produce the optimum sieving action for fast reproducible results.

For further details on Endecotts products please contact

sales@endecotts.com

+44 (0) 208 542 8121

www.endecotts.com

RWM 2013 - Stand 20A59



www.hub-4.com/directory/9239

Tomra Sorting set to share its expertise at RWM 2013

Hall 17, Stand H19-G18

TOMRA Sorting will highlight the latest innovations in sensor-based sorting technology, with a strong focus on commercial and industrial (C&I) waste management at RWM 2013.

Visitors to TOMRA Sorting's stand (Hall 17, Stand H19-G18) will find out about the company's innovative approach to some of the key challenges facing the UK's C&I recycling industry, including:

- Separating and recovering valuable fractions from C&I trommel and screen fines
- Identifying a long-term, sustainable alternative to RDF as a waste treatment process
- Recovering high quality, high value end materials from Zorba (shredded non-ferrous metals originating from End-of-Life Vehicles or WEEE)
- Reducing copper contaminants in ferrous scrap (including copper armature known as meatballs)



RWM will also provide a platform for TOMRA to showcase its TITECH autosort 4 solution with specialists Birds Recycling Solutions, Dynamic Handling Systems Ltd and The Compressor Specialists coming together to demonstrate the fully operational kit for the first time at the show. Visitors will be able to see live demonstrations of TITECH autosort 4 in the show's outside area (OA151). The TITECH autosort 4 is suitable for a variety of applications, including C&I and MSW, MDR MRFs and can recover a wide array of high quality, profitable fractions from different waste streams, including packaging, paper, household waste and plastic.

Jonathan Clarke, country manager at TOMRA Sorting, comments: "The UK's C&I recycling sector is really taking off. In the past year, we have significantly increased our customer portfolio in this sector and now work closely with a number of the UK's most advanced C&I MRFs. This experience, coupled with our industry-leading sensor-based sorting solutions, makes us ideally placed to provide guidance to visitors of this year's RWM. We would encourage visitors to come and find out more about the commercial, environmental and operational benefits offered by sensor-based sorting. We're also delighted that delegates will be able to see live demonstrations of the TITECH autosort 4 in the outside area. Its abilities have to be seen to be believed and a video simply wouldn't do it justice!"

For more information on TOMRA Sorting, please visit www.tomrasorting.com/recycling.

RWM 2013 - Stand H19-G18



www.hub-4.com/directory/15083



Max X Tract Density Separator reduces waste disposal costs whilst maximizing material recovery

One year on from the launch of the Max X Tract Density Separator, Worsley Plant are delighted to report that this innovative piece of equipment has helped many of their customers reduce their waste disposal costs whilst maximizing material recovery.

The Max X Tract is designed to separate materials less than 100mm at a processing rate of 100 tonnes per hour. This provides the customer with higher value materials whilst reducing the amount of material going to landfill at significant cost. Valuable materials can be separated from waste, including metals, wood, plastics, paper, bricks, stone and organics.

One key customer, a waste and recycling transfer station, processed over 120,000 tonnes of construction and demolition (C&D) and commercial and industrial (C&I) waste each year. Each day around 120 tonnes of trommel fines were sent to landfill and much of this was above 8mm which would have

incurred the standard rate of landfill tax (then £64 per tonne). Now only 6% of their materials incur the standard rate, and over 60% can be recovered and sold on. Within 3 months they had covered the cost of the installation.

Sean Heron, Worsley Plant's Managing Director said: "The Max X Tract is unrivalled in its ability to extract material with a market value. It uses the latest technology in material separation and is helping businesses who manage large volumes of waste material to extract valuable material including -8mm trommel fines which in turn is reducing the amount of waste sent to landfill, and at the same time boosting environmental performance."

Worsley Plant, a leading UK provider of recycling equipment to the recycling, demolition, construction, landscaping and waste handling sectors, also offers a comprehensive range of excavator-mounted hydraulic attachments. These include crushing and screening buckets, as well as grabs, shears and pulverisers.

To arrange a demo, hire or buy visit www.worsleyplant.co.uk today or call 01606 83 55 44.

RWM 2013 - Stand 17A28



www.hub-4.com/directory/7833

FERRARI™

Fan Technology

High quality reliable fans for MRF applications

Blowers and nozzles for air separation

Suction fans for lifting lights from conveyors

Impellers and cases in wear resistant materials for abrasive dusts

Radial blade impellers for material transport



Ferrari Fan Technology (UK) Limited
 T 0845 634 2174
 E sales@ferrarifanttechnologyuk.co.uk



www.ferrarifanttechnologyuk.co.uk



Dump truck & Loader Shovel tyres

- Any condition considered
- New form of income
- No more disposal charges
- Payment on uplift
- On site examination
- Tyre casings for export

DEWARS EARTHMOVER TYRES

Call us for more information:

T. +44 (0) 1324 473555 M. +44 (0) 7831 153247
 E. emcasings@yahoo.co.uk



MASTER MAGNETS LTD

Incorporating Integrated Recycling Systems Ltd
 & Metal Detection Ltd

See us at RWM on Stand 17F19



Eddy Current Separators



Overband Magnets



Drum Magnets



Metal Detectors

Master Magnets Ltd, Burnt Meadow Road, North Moons Moat, Redditch, Worcs B98 9PA
 Tel: +44 (0)1527 65858 Fax: +44 (0)1527 65868 Email: info@mastermagnets.co.uk

www.mastermagnets.com

We look forward to welcoming both new and existing customers at the RWM 2013 Exhibition and hope to see you there!

Kingfisher provides the ultimate solutions for recycling plants

design, optimising process efficiency through reduced turbulence and improved material flow, at the same time ultimately delivering improved service life.

Recent applications were demonstrated within a materials recycling facility within greater Manchester. A MRF facility refers to mixed materials that are recycled in a single kerbside container. This includes: glass, cans and plastic bottles. It uses a range of state-of-the-art preparation and separation technologies to make sure each bale of steel, aluminium and plastic bottles, as well as glass, which is stored loose in the best possible condition ready for recycling. A series of systems and technologies are used to separate the glass, cans and plastic bottles into single waste streams, and removes all contaminated material ready for recycling.



With both UK and international governments enforcing legislation to increase recycling activity, many recycling plants are now handling high tonnages of recycled material through their plants and equipment, resulting in departments having to invest in replacement parts and equipment to ensure production doesn't come to a halt!

"So why do companies decide to replace plant equipment and processes when wear protection can be employed at any time in the life of process equipment" commented John Connolly MD, moreover, because high conveying speeds and abrasive materials cause wear of varying intensity at different points in handling systems, it is often the case that protection need only be applied to areas of plant that are most vulnerable to wear, further reducing upfront costs and improving ROI for the system user.

However, if a process system is designed with wear protection from its inception, then overall equipment costs can often be reduced as the system chosen to protect the equipment can often alleviate the requirement to manufacture components using heavier grades of material. In addition, involving a wear specialist such as Kingfisher at the design stage of process conveying equipment can streamline the

Due to current systems used the plant was experiencing increased levels of wear amongst equipment such as ducting, transfer chutes, and hoppers. After close inspection carried out by one of Kingfisher's sales engineers it showed a vast amount of inner equipment had worn away as a result of high levels of impact induced abrasion associated with repetition from handling abrasive material such as glass, "our K-ALOX ceramic lining system was the perfect fit for this type of process, all the work was completed on site by our fully skilled workforce" commented Kingfisher Operation Manager Graham Bailey.

Kingfisher will be exhibiting at the RWM exhibition for the second year running, If you are planning on attending or exhibiting there feel free to come over and visit our stand in hall 20 stand number L20 where we will be exhibiting a range of process plant and equipment incorporating our wear protection systems.

About Kingfisher Industrial

Kingfisher Industrial are manufacturers of wear resistant process plants and equipment used to convey, process or store bulk solid materials, in either dry or hydraulic states. Such plant often suffers premature wear due to handling large quantities of materials at velocity in a constant operational cycle. With its range of ceramic, metallic and polymer protection systems, Kingfisher can overcome wear problems; engineering suitable protection systems that can add many years' of life to a plant, and in some cases outlast the design life of a process completely. These solutions cater for the operating criteria, budget and life cycle of either new equipment - particularly when initially installed - or existing equipment, which can be retrofitted with a protection system to add to its current asset value.

Tel: +44 (0) 1384 410777
Fax: +44 (0) 1384 410877
Email: achumber@kingfisher-industrial.co.uk

www.kingfisher-industrial.com

RWM 2013 - Stand 20L20



www.hub-4.com/directory/12641

CRUSHING • GRADING • SCREENING



Mach-Tech
SERVICES

Tel: 01706 838246

SRF/RDF Shredding Equipment



Komet & Power Komet secondary shredders for high volume SRF/RDF production
Used in 90% of facilities producing RDF/SRF in the UK
Highest sustained throughput in its class



Capable • Proven • Reliable

Quality and Innovation, the machine of choice for the Waste to Energy Industry



www.machtechservices.com



The Perfect Combination Diade 2050 Touchscreen Driver Terminal



and Winweigh IV Weighbridge Software

*Together they provide the world's most versatile & powerful
Weighbridge Management System.....*

www.weightron.com

tel: 01246 260062

WEIGHTRON BILANCIAI
BILANCIAI
INDUSTRIAL WEIGHING SPECIALISTS GROUP

VULCAN BURNERS
Efficient Green Performance


- Proven fuel costs and emission reduction
- Raising the standard in asphalt production
- The new burner range from Asphalt Burner Services Ltd

ASPHALT BURNER SERVICES
Where Quality meets Efficiency

Tel: 0044 (0) 2879 469501
Fax: 0044 (0) 2890 950814
Email: sales@burnerservices.net

www.burnerservices.net

A wide range of crushers for processing all types of friable and fibrous materials



BJD Crushers Ltd
T: +44 (0)1226 241 425
F: +44 (0)1226 296 713
E: sales@bjdcrushers.co.uk

www.bjdcrushers.co.uk

SCG SUPPLIES Ltd

Quality Spare Parts for Crushing, Screening, Recycling, Washing & Shredding Equipment ..

www.scgsupplies.co.uk

► Guaranteed Performance Results
► Electric or Hydraulic Drive
► High Strength Magnets
► Fast Deliveries
► Competitive Prices

CONVEYOR MAGNET MANUFACTURERS

THE CONVEYOR PEOPLE

ConveyorTek Ltd
NI: 028 92 652666
ROI: 048 92 652666
E: sales@conveyortek.com
www.conveyortek.com

conveyortek

Rollers and Drives for all Bulk Handling applications



www.rulmeca.com
uk@rulmeca.com
01536 748525

RULMECA

Solutions with a Future

As a partner to the world's equipment manufacturers and plant operators, GUTSCHE develops sophisticated filter media for key industries such as Cement, Asphalt, Power Generation, Waste to Energy, Biomass, Metal, Chemical, Pharmaceutical & Food industries.

Contact us to discuss your filter bag requirements:
GUTSCHE UK Office,
Tel./Fax: 01282 860528

GUTSCHE
Textile Engineering

www.GUTSCHE-mgf.com

HUB

If you would like to advertise in classified
CALL 0845 6800024

Instant Crusher Spares



Leading supplier of quality crusher wear parts

T. 01352 732284

www.instantcrushersparses.co.uk

DUSTECH ENGINEERING LIMITED

162 Chiltern Drive, Berrylands
Surrey KT5 8LS

Tel: 0208 399 9991
Fax: 0208 390 2004

email: airmix@aol.com
www.dustechengineering.com

Custom engineered air pollution control systems

CONCRETE FLOORING NETWORK

Quality Concrete Flooring to Your Specifications

Pre-Project Meetings
Advice on Design

Advice on Concrete Mix
Advice on the Finish

Free Quotations!
john@concrete-training.co.uk

01213 669870
07976 444690

euroby

- Centrifuge sales - Flottweg UK Agent
- Centrifuge trial units 10 - 100m³/hr
- Centrifuge maintenance & refurbishment
- UK agent for Klinkau Filter Platés
- Filter Press rental units
- Mobile centrifuge rental - dewatering & thickening
- Filter Press maintenance, performance upgrades & refurbishment



T - 01903 69 44 00 E - sales@euroby.com www.euroby.com



CUSTOM WASHING SOLUTIONS

With over 50 years experience in the Materials Handling Industry Bruce Engineering can provide a bespoke turnkey washing system to produce high quality products with maximum efficiency and minimum water usage

Bruce Engineering Services (NI) Ltd.
33 Lindsayville Road
Cookstown
Co. Tyrone
BT80 8UH

To arrange a visit from our UK Sales Team contact:

tel: +44 (0) 28 8676 3684
email: sales@bruce-eng.co.uk
web: www.bruce-eng.co.uk
www.hardoxireland.com

HARDOX®
WEARPARTS

BRUCE
MATERIALS PROCESSING SOLUTIONS

> FEEDING/SCREENING/WASHING/RECYCLING/ENGINEERING/STEEL