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Product focus

HUB™

Conveyors, Elevators & Drives/ Bulk Materials Handling & Storage

Part of the Fuel Handling Conveyor System of one of the UK's largest Biomass Power Station's being built in the UK

Canning Conveyor lend a hand with the redevelopment at Guernsey Airport

Canning Conveyor has recently supplied an aggregate conveying system for construction work on the redevelopment of Guernsey Airport.

With planning approval granted in October 2011 the £80 million contract, which is part of the Guernsey Airport Redevelopment Project, predominately includes the rehabilitation and reconstruction of the existing airfield pavements including the runway, apron and taxiways and the installation of a new surface water drainage system.

Commenced in January 2012 the project will take approximately 2 years to complete.

Bespoke System

The bespoke system which has been supplied on hire was designed and manufactured by Canning Conveyor for the sole purpose of conveying incoming aggregates from ships at Guernsey Docks.

Designed to accept 200tph of -20mm aggregates the system includes a conveyor mounted receiving hopper fed from a barge mounted 360° grab. Mounted centrally this hopper feeds material onto a 16 metre long, ship to shore conveyor.

This conveyor incorporates many unique features that deal with the rise and fall of the tide. The tail end of the conveyor is fitted with a pneumatic tyred wheel bogie which runs on the hatch cover of the ship; the head section being mounted on a support trestle para-bolted to a new concrete pad on the sea wall. This support trestle is fitted with a slewing and pivoting arrangement which allows the conveyor to rise and fall at the tail end with the tide. A further feature allows the tail to be lifted by the ship mounted grab and slewed around to rest on the sea wall at times of high wind or gales.

All aggregate is delivered from this conveyor onto a 50 metre long ground conveyor which runs horizontally on the quay side which then feeds into a receiving hopper on a 12 metre long stockpile conveyor. This stockpile conveyor which elevates to a height of 4 metres discharges into waiting dump trucks, or alternatively stockpiling material onto the ground.

Canning SuperDrive™

The ground conveyor is powered by a Canning SuperDrive™ motorized 22kW single drive drum which is designed specifically to power ground conveyors operating in these applications, having the motor, gearbox and bearings totally enclosed and hermetically sealed inside a steel shell drum.

With an impressive track record the Canning SuperDrive™ offers many benefits which include extremely low maintenance costs - (none, other than recommended synthetic oil change after 30,000 running hours) and a higher efficiency (97%) compared to approximately 85% on conventional drives.

The Canning SuperDrive™ single drive drum which provides a belt speed of 1.6 metres/sec to the ground conveyor is fitted with ceramic lagging and includes a high tension bend pulley, jib discharge drum, loop bend drum and a primary and secondary belt scraper. Complete with a discharge chute with integral crash box and hinged inspection hatch the entire unit is mounted on a substantial skid mounted frame with cantilevered jib discharge.

Along with a loop take up unit, heavy duty tail end loading section the conveyor structure is made up of Canning intermediate bays and Cannoflex belting throughout.

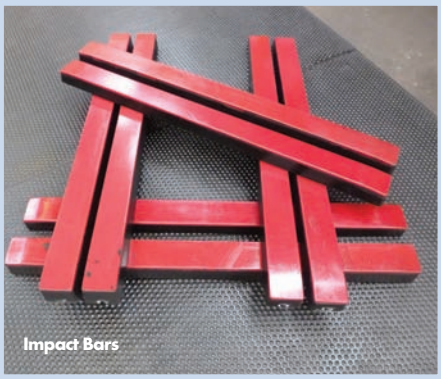
Designed and manufactured in the Canning workshops the system is providing an effective and reliable system for the construction of the airport in the handling of the incoming aggregate for this huge project.

Coming Soon

Canning Conveyor are currently involved in the design, delivery and commissioning of bulk handling equipment for part of the Fuel Handling Conveyor System of one of the UK's largest Biomass Power Station's being built in the UK. The project in Fife, Scotland which commenced in 2011, will be commissioned in March 2013.

The new biomass energy plant will be the largest of its kind so far in Scotland and will reduce the annual carbon emissions of Tullis Russell Papermakers by some 250,000 tonnes.

Canning Conveyor introduce new products to their current ranges....


Impact Bars


Impact Bars


V6 Chevron Belting


Baler Belting

Impact Bars

The new Canning Heavy-Duty Impact Bars feature a solid design that prevents belt damage. Manufactured with our highest quality materials these provide exceptional impact and wear resistance, ensuring our impact bars offer superior belt support, significantly longer life, and lower impact bed maintenance requirements.

Featuring a new innovative design with 'increased shock absorptivity' this allows them to absorb more impact through the high tensile low friction UHMW Polyethylene.

The solid construction absorbs and cushions the impact load, whilst providing a contact surface that allows the belt to slide freely, resulting in less wear and tear on your conveyor belt.

- Available ex-stock
- 2 sizes

You will benefit from lower belt and bed maintenance costs.

V6 Chevron Belting

V6 Chevron belting is a special oil resistant belt. The patterns are designed to convey materials at inclined angles. The V-shaped 6" width chevron cleats have integrally molded cleats - overlapping 6" width cleats which maintain a smooth travel over return idlers.

- For handling materials containing light oil (MOR), heavy oil (FULL OIL), flame, heat,etc.
- Applications include aggregate, grains, sand, bark and wood chip.

Avaliable now - 1600mm, EP400/2 3+1.5 200mtr V6 MOR

Baler Belting

Canning Conveyor offers a comprehensive, top grade range of baler belting specifically manufactured to suit all makes and models of round balers.

- Bamfords Model Nos - 1000/1000HD/1100-1100HD
- John Deere Model Nos - 550/590 - 540/545/570 - 580
- Farmhand Model Nos - 540E/804
- Gehl Model Nos - 1460TDC
- Hesston Model Nos - 5640/5650
- Greenland Model Nos - RV136/136L/156/156L/156LOC/186/186L/186LOC
- Massey Model Nos - 1440/1450/1455 - 822/828
- New Holland Model Nos - 640/650
- Vermeer Model Nos - 5031/504 Super I/504 Silage I/505 Super I/604 Super J/604K/605 Super J/605K
- Vicon Model Nos - RP1201/1250/1281
- Welger Model Nos - RP400/150/150S
- John Deere Diamond profile belting - supplied in roll form or pre-clipped to suit exact size requirement.
- Baler Belting - our general purpose baler belt with textured profile top on a heavy duty 3 Ply construction, suitable for all other balers.
- Class
- Vicon
- Massey Ferguson
- Welga

All ranges available from stock - immediate delivery

www.canningconveyor.co.uk

www.hub-4.com/directory/1715

TECDOS conveyor technology for the transport of packaged goods & bulk materials

RUD Chains ltd is a leading manufacturer of high quality round steel chains, systems and components. For over 140 years the RUD group has been producing top quality chains and applications in accordance with their group wide slogan "Tradition in Dynamic Innovation".

Experience, diligence, ambition and passion are the virtues RUD manifest in order to remain the best. RUD is ISO 9001 certified and is renowned for its expertise in heat treatment methods - delivering high performance chain products to suit the most demanding applications.

RUD offers an extensive range of conveyor and elevator systems for the transport of packaged goods and bulk materials. The Trough chain conveyors offer a complete system for the smooth transport of your materials. Equipped with round steel chains or forked chains, RUD trough chain conveyors provide the ideal conveyor solution for both horizontal and inclined conveyor sections.

The RUD drag conveyors offers maximum durability in feeding and ash removal for coal fired power plants and bio-mass plants. The strength and versatility of the drag conveyors are remarkable especially when used in harsh conditions.

The Apron conveyor uses round steel link chain as a pulling element which is driven by pocket wheels. The apron conveyor possesses many advantages from its robust simple construction to its lower construction height due to smaller diameter wheels. The round link chain system used is self-cleaning and works well in wet, corrosive and dirty environments. RUD Apron feeders are ideal for the transport of bulk and unit bulk loads in applications such as power stations, recycling and construction.

RUD'S product portfolio offers conveying solutions for conveying projects in any direction, horizontal, inclined or vertical. Screw conveyors are an example of conveyors that can be used in any direction and are suited for conveying abrasive high temperature materials. Bucket elevators are used for conveying at heights and under high performance conditions, an area where RUD has a lot of experience and extensive product range.

RUD retains a high level of technical experience in conveyor and elevator systems for the handling of bulk materials. Supplying standard and specialised solutions across all conveyors, drive and elevator applications, RUD have the expertise and engineering capability to help in even the most demanding of projects.

www.hub-4.com/directory/743

New transfer chutes clamp down on coal dust at Westar Energy

The largest electric utility in Kansas has announced completion of an upgrade program to redesign transfer chutes and load zones on the coal handling conveyors at its biggest coal-fired facility, drastically reducing dust and spillage. Worn chutes and skirtboards at Westar Energy's Jeffrey Energy Center (JEC) were replaced with custom-designed components from Martin Engineering, employing special geometries that capture and concentrate the material stream as it travels. The result is a cleaner working environment, less maintenance and reduced waste, as material is better contained.

Westar currently has 19 energy centers in Kansas, providing 7,100 MW of generating capacity to serve more than 689,000 customers. The firm employs about 2,400 people and operates approximately 35,000 miles of transmission and distribution lines. Situated on 10,500 acres of land, JEC is the largest coal-fired power plant in the state, with three generating units producing 1,857 MW. All three burn low-sulfur coal (as much as 33,000 tons per day between them) and take advantage of some of the most advanced emission control technologies available.

Fugitive Material Challenge

Over time, operators at JEC began to notice increased dust and spillage around transfer points on four of its 42-inch conveyors. The problem was traced to worn chutes and skirtboard liners, which no longer contained the coal fines as they did when new. A worn-out skirtboard liner plate was found to be exacerbating the problem.

"We have two transfer buildings where the yard feeders deliver incoming material to supply the boilers," explained Coal Handling Engineer Josh Olson. *"They were wearing out, and we knew we needed to take action. But rather than patching the existing chutes and liners, we wanted to see if we could find a better design solution."*

The ½ inch thick belts on conveyors 101A, 101B, 301A and 310B travel 550 FPM and have a capacity of approximately 1,000 tons per hour. The load is 4" minus PRB coal, with moisture content around 28-30% and bulk density of 45-55 pounds per cubic foot.

Westar contacted Martin Engineering to investigate its options, and technicians came out to assess the situation. *"Chute design has evolved since this system was first installed,"* observed Martin Engineering Territory Manager Jason Illum. *"Today's transfer point chutes capture and concentrate the material stream as it travels through the chute. Each one of our designs is tailored to suit the specific material characteristics and conveyor systems of the individual customer, rather than using stock products and attempting to make them work,"* he explained.

Before proceeding, Westar engineers visited a nearby facility in which Martin Engineering had installed a similar system. *"We were very impressed by what we saw,"* Olson continued. *"The conveyors delivered excellent belt support, and the material flow was directed to minimize turbulence and maximize dust containment."* Transfer Chutes from Martin Engineering provide the dual benefits of minimizing aeration and preventing buildup within the chute, particularly important when dealing with combustible materials.

To achieve the optimum chute, spoon and settling area, engineers used 3-D computer-based flow and modeling to define the geometry. Martin Engineering included detailed information about the specific material characteristics and the physical parameters of the conveyor itself, such as the feed system, belt properties, support structure and transfer distances.

The transfer chutes built for the Westar facility employ a *"chute and spoon"* design, with the head discharge chute at the top of the system and a spoon receiving chute to place material with minimal impact onto the belt being loaded. *"The head chute design allowed for external mounting of the head pulley bearings, replacing the old design,"* Illum said. *"The spoon provides a curved loading chute for a smooth line of descent, consistently feeding the material at a specific speed and direction to minimize impact in the loading zone."* All four transfer points also received Martin Engineering belt cleaners to minimize carryback.

"One of the features that our operators and mechanics really like is the adjustable skirtboard," Olson said. *"We can get very precise sealing, and the reversible design of the apron seal gives us double the service life. When one side wears out, we can just flip it over. It may seem like a simple idea, but it shows that Martin is ahead of the curve with its products."*

Martin® ApronSeal™ Skirting was the first dual-sealing system on the market, incorporating a primary seal clamped to the steel skirtboard to keep lumps on the belt and a secondary or "outrigger" strip to capture any fines or dust particles that pass beneath the primary seal. The secondary seal lies gently on the belt and self-adjusts to maintain consistent strip-to-belt pressure, despite high-speed material movement and fluctuations in the belt's line of travel.

"Another deciding factor for us was the no-excuses guarantee," Olson added. *"We didn't want to have to spend a lot of time tweaking the system. The Martin Engineering guys are extremely knowledgeable, and they've been out several times to make sure everything is running at its optimum level."*

Since the transfer chute overhaul was completed in 2011, results have been excellent. *"We don't take specific measurements or airborne dust readings, but we can definitely tell that the load is centered, spillage is significantly reduced and dust is being contained,"* Olson concluded. Quarterly inspections and reports are provided by Martin Engineering for one year at no cost to JEC.

www.hub-4.com/directory/534

VEGA measure biomass levels at Drax Power

Drax Power Station in North Yorkshire is already the largest, cleanest and most efficient coal-fired power station in the country.

Already home to the largest biomass co-firing facility in the world commissioned in 2010, in which sustainable biomass is burnt alongside coal to produce electricity, Drax has ambitions to become a predominantly biomass fuelled generator. Not only does their investment in biomass co-firing strengthen their environmental leadership position, but it further enhances their reputation to stay at the forefront of developments to establish effective alternative fuel technologies for electricity generation in the UK. Electricity generation from biomass is a low carbon technology delivering significant carbon dioxide savings compared to fossil fuel generation.

The biomass co-firing facility enables the power station to receive, handle, store and process a variety of biomass materials. These are directly injected into Drax's coal-fired boilers where they are burnt alongside coal. The storage facility for the biomass is a key part of this process, to ensure it is kept at optimum condition before being used.

When compared to coal, biomass is lighter, it has fluctuating handling properties and generally much lower, variable bulk density. It therefore requires larger storage facilities and offers some different process challenges. The feedstock products vary from forestry residues, or cultivated products such as Miscanthus and Willow, to agricultural by-products like straw. The storage capacities for these products need to be large and stock rotation/retention time requires careful management, as the products need regular 'rotation' to avoid any degradation. The construction of the silos can also differ greatly, with taller narrower and shorter wider designs, depending on material behaviour and materials handling schemes.

However, even with large silo sizes, the biomass typically only has a retention time of only 24-48hrs, before being sent to electricity production.

An important area of this fuel stock management is the level measurement. A non-contact technology is preferred on site, to mitigate the potential for fouling and wear. VEGA have installed many non-contact radar level transmitters on biomass level measurement around the world, where they have a proven performance dealing with dust and filling noise. At Drax, there are two 12,000m^3 storage silos, around 27m high and 30m in diameter, and the biomass is brought in by rail. These are centrally filled by conveyor and emptied via rotary screw discharger at the bottom. The size and throughput means the silos are being frequently fed into and discharged from giving an uneven product surface and the need for long range measurement.

VEGA have installed non-contact VEGAPULS 68 level radars for solids, working over a range of approximately 27m. Two units are installed on each of these large silos, to give an average reading, as well as for dual redundancy level measurement of the biomass material. They are mounted towards the centre of the silo, aimed down and slightly outwards, this is to measure at a point approximately at half the radius, to deliver a good average level reading over the surface profile. Although the conveyor fills point is quite close-by, the units work reliably, regardless of the filling stream. There are no cross-talk issues with VEGAPULS radars, even with multiple units in the same silo. This is achieved using dedicated pulse sampling filters, which means there can be many in the same area with no danger of them picking up each other's signals. The units have worked reliably ever since their installation over two years ago, providing information to facilitate the available filling capacity for the rail transport department and feed stock supply data to the power station control room, optimising the biomass supply to Drax.

The multi million pound co-firing facility provides Drax with the capability to produce 12.5% of power generation from biomass co-firing and it is a key element of their goal to reduce carbon dioxide (CO2) emissions.

www.hub-4.com/directory/2274

Accurate, simple batch control systems

Minimise material wastage, ensure legislative compliance and increase batch quality and profitability by reducing under and overfilling.

METTLER TOLEDO's online video "Expert Guidance on Batching Control Systems" demonstrates how to eliminate unnecessary cost during production and improve productivity.

Discover how the new checklist for Designing Batching Control Systems helps you improve your process explaining what should be considered with a new batching control system. You will also gain batching knowledge to maximise productivity and minimise costs in your operation.

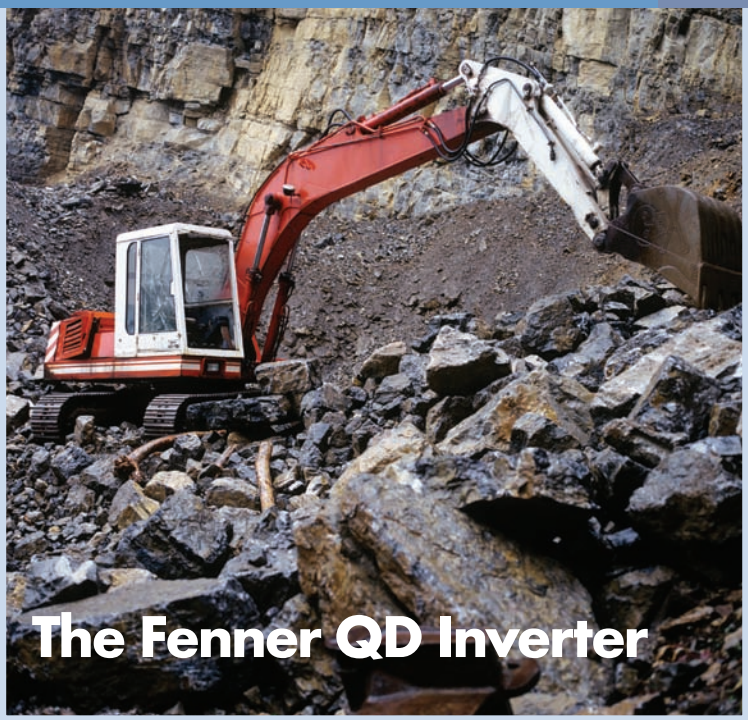
The rugged industrial batch controller IND780 can distribute to multiple controllers via ethernet connection from a single batch tool, easily managing changes to the batch process. Built in reports provide critical batch history information to help track and trace every step of your results.

The error-free recipe guides assist operators through the process reducing material wastage and optimising consistency, speed and accuracy.

To discover more watch the online batching video and download the free checklist.

Visit: www.mt.com/uk-ind-batching-webinar

www.hub-4.com/directory/7340



The Fenner QD Inverter

Achieving energy efficiency from motors and drive systems for conveyors and elevators requires the specification of gearboxes, drive motors, couplings and chains that are capable of withstanding extreme loads, shock, and contamination from dust, debris and glass, plus widely varying temperatures. The quest to maximise efficiency is more than worthwhile; by focussing upon efficiency and cost reduction, the quarrying, mining and construction industries will be far better placed to survive the tough economy and maintain a strong competitive advantage.

To extract raw materials from the ground in the most cost effective way requires an awareness of the most up-to-date methods of production, state-of-the-art products and new technologies. Companies such as ERIKS, that offer a deep and broad experience across the engineering industry, understand the challenges presented by harsh environments and work constantly to deliver solutions that meets those needs, with energy-saving features built in as standard.

The addition of one particular component offers not only the potential to save energy but reduces shock loading to machinery, and provides continuous motor protection, minimising both maintenance and operating costs.

That component is the Fenner QD Inverter.

This capability of this device to vary the speed of an electric motor delivers significant energy- and cost-savings, especially in industries where machinery can be required to work more or less around the clock. When inverters are fitted to heavy duty machinery, the resulting elimination of shock loads can significantly limit wear and tear as well as reduce energy consumption.

Efficiency is also enhanced by upgrading to an IE3 motor, which offers even greater energy efficiency than the IE2-rated motor now required within the EU. The ERIKS Online TCO Calculator provides a simple method of evaluating a motor upgrade, enabling the user to view the total cost of ownership for the year, or for fifteen years, or any period of years in between. The results provided by the calculator will list and compare the cost of repairing and running the existing motor, replacing it with a standard IE2 motor, or replacing it with an energy-efficient IE3 motor.

Plant reliability is vitally important in minimising downtime and maximising uptime - even a couple of hours' downtime can result in huge losses - but a range of simple but highly effective tools are now available that can reinforce that reliability.

www.hub-4.com/directory/912

Vibratory conveyors and feeders from Mogensen

Mogensen manufactures an extensive range of vibratory conveyors and feeders.

The designs, based on more than 60 years of experience in the field of vibration engineering, extend from light-duty, stainless steel units for use in the processing of foodstuffs and pharmaceuticals up to the heavy-duty, heat-resistant machines used, for instance, in foundries and incinerator plants. Trough conveyors are usually custom-made to suit individual applications and are powered by twin Invicta rotary electric vibrators. They are available in either open or fully dust-proofed versions with or without wear-or heat- resistant liners. The company also offers tubular, vibratory conveyors in either mild- or stainless-steel execution. Internal diameters range from 200mm to 609mm; lengths vary from 2 to 6 metres between inlet and outlet centres. These versatile, inherently dust-tight machines may be linked together using flexible, dust-proof connectors, either in a straight line or angled to fit plant layout needs. They are also driven by twin Invicta vibrator motors, and, together with Invicta electronic variable speed controllers, can deliver easily adjustable feed rates. Throughput capacities extend from a few kilograms per hour up to 300tph (based on a bulk density of 1.6 tonnes/m^3).

The Mogensen vibratory feeder range starts with the simple, inexpensive Type SR1 machine, which is driven by a single, rear-mounted Invicta vibrator motor. Trough widths up to 1000mm are available and offer capacities up to 160tph depending on the bulk density of the feed material. The heavier Type TR1 feeders are driven by twin rear-mounted Invicta vibrators and are suitable for variable speed control. Trough widths extend up to 1000mm; throughput capacities reach about 300tph depending on the size of machine and the feed bulk density. The feeder range also includes the heavy-duty Type TS machines, which are available in three different construction weights and trough widths up to 2.5m. Capacities are up to about 800tph. These machines are driven by two side-mounted Invicta vibrators, and are also suitable for variable speed operation. Of particular note are Mogensen's spreader feeders, which accept a flow of material from a relatively narrow source and distribute it evenly across a wider item of process equipment. Spreads of up to 3 metres are possible. Machines, which spread a narrow feed efficiently and evenly across two or more following machines, are also available.

Replaceable stainless-steel, rubber, hard metal, ceramic and adhesion-resistant liners are available for all feeders and conveyors. Some models of machine are available with heated bases for the non-stick handling of damp clays and damp, fine stone.

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schenck process

we make processes work

Experts in measuring and conveying solutions.

One company. One Location. The combined know-how of three strong partners.
Clyde Process, Redler and Schenck Process now share one name and one address.
At the Doncaster Head Office location, Schenck Process UK are now able to offer customers an even greater range of products and process solutions.

Schenck Process – a global market leader in applied measuring and process technology, develops innovative solutions used in the cement, steel, chemicals, plastics, food, pharmaceuticals, mining, coal-fired and alternative fuel power plants, transport and automation sectors.

Redler – known throughout the world as the originator of 'en-masse' mechanical handling, is a leading manufacturer of high quality chain, belt and bucket elevators for use within a wide range of process industries.

Clyde Process – a leading supplier of pneumatic conveying, pneumatic injection and air filtration technologies that has a strong position in the market for highly reliable, energy efficient solutions.

Enjoy the benefits of this strong partnership between three companies whose market leading technologies, industry expertise and product ranges complement one another perfectly.
For more information, please e-mail enquiries@schenckprocess.co.uk.

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Pack your bags and go

The number of industrial processes that ultimately dispense an end product into a receptacle (sachet, stick pack, bag, sack, or big bags) is extremely large and the spread of applications span virtually all industrial sectors. The diversity of products (ranging from very fine cohesive powders to free-flowing graded aggregates) being packed prior to shipment to end users is enormous, and consequently the range of dispensing equipment has grown over the years to meet this seemingly ever expanding industrial requirement.

One of the prime requirements for any dispensing equipment is that the filling operation should be undertaken with minimum overfill, maximum consistency (between filling operations), and of course with as little spillage or fugitive particles generated as possible. Modern control systems have proven invaluable for the co-ordination and operation of high speed filling operations, but even the best instrumentation or supervisory control and data acquisition (SCADA) control can only give optimal results if the bulk particulate being handled can be brought to the point of entry into the receptacle in a controlled bulk condition and at a controllable flow rate. Failure to achieve these seemingly basic requirements for particulate delivery can bring considerable inefficiency and degradation to local environmental working conditions, through poor filling efficiency and spillage due to powders "flooding" from handling equipment.

For some companies (often those processing easily aeratable - or more to the point air retentive powders), maintaining shift output levels can be an almost daily battle. In many cases the cause of the problems can be traced back either to the use of buffer hoppers that afford minimal residence time for powder to densify before reaching the metering apparatus or to an overly exuberant application of aeration to obtain a "consistent" feed of material (the only consistent thing about some of these systems being their inherent inconsistency)!

Approaches to resolve such fill variation problems should invariably focus on an evaluation of the flow properties of the powders being handled. As a general observation most concessions to the need for a standard piece of equipment to handle cohesive powders invariable involve the attachment of additional aeration points or vibrators (usually positioned in the most convenient point for access - rather than for optimal assistance to flow). Such air introduction points can be of benefit, but should be considered as an augmentation to best practice for reliable flow, taking second place to a consideration of bin geometry and flow control operation. The latter two aspects of equipment should be designed in accordance to the flow behaviour of the powder - with aeration (in very small quantities) being used to assist flow. The control of air usage to initiate flow is an aspect of operation that can bring very rapid and tangible benefits to plant optimization where packing problems occur with fine powders.

In summary, although control systems and automated operations have advanced considerably over the last decade it is often the case that the potential for realizing the full potential of such systems is often hampered by poor flow performance when fine powders enter the equation. The main reason for this under-performance is invariably a lack of understanding of the importance of correct bin and interface design for the powders being handled.

www.hub-4.com/directory/7067

Protecting people and productivity

Unprotected conveyors can be dangerous to workers around the belt - especially around the rollers and pulleys. The safety and well-being of site personnel is priority one and every investment in improving the workplace environment is a smart one.

Metso have recently launched a new product range focusing on the safety around the conveyors. With the Metso Hisafe products, your people will be able to work safer and your operation will work smarter.

Metso HiSafe Roller Guard

Metso HiSafe Roller Guards reflect your commitment by making it impossible for clothing and fingers to be caught between the belt and roller. Metso HiSafe Roller Guards are designed to perfectly fit the curve of any medium rollers available on the market. Their high adaptability makes prioritizing workplace safety even easier.

Metso HiSafe Head Pulley Guard

Made of two rigid polyurethane blocks that adjust to the shape of the belt, the HiSafe Head Pulley Guard eliminates the space between the belt and pulley. Its quality material ensures the on-going, long-lasting protection you and your co-workers depend on for a safer and more productive work environment.

Metso HiSafe Tail Pulley Guard

The HiSafe Tail Pulley Guard eliminates the space between the tail pulley and belt where the risk of pinching is greatest. Because of its fit and plow-styled deflectors, the HiSafe Tail Pulley Guard also prevents stones and debris from wedging between the belt and pulley - extending the belt lifespan and minimizing the risk for costly downtime.

Other products included in the new HiSafe product range are:

Metso Belt Turner

Material build-up in the return idlers and under your conveyor means more safety risks and downtime for cleanup, and lowers the belt's throughput. The Metso Belt Turner is a clog prevention belt turning system that solves the issue in one hassle-free installation. Its dual-action antifouling system twists the belt to keep the drive side clean and dry, improving its grip on the pulley. The Metso Belt Turner is a cost effective way to keep the conveyor rolling, extend the life of your equipment, and minimize unnecessary risky interventions by personnel.

Metso Chain Cradle

The Metso Chain Cradle is an all-in-one feed point system providing impact absorption and sealing at the same time. Impact force prevention, spillage minimization, pinch protection and belt life optimization - all from a single, standardized unit that is fast and easy to install onsite.

Metso Troughing Cradle

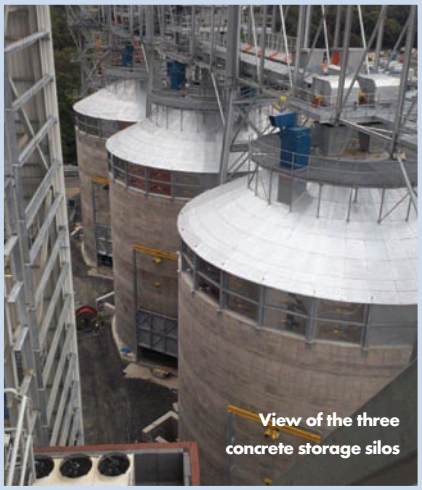
Optimizing the loading point of your conveyor is a simple tactic for improving productivity and lowering cost-per-tonne. The Metso Troughing Cradle helps you do just that, working as a secondary loading point system to better distribute the material on the belt and prevent spillage. A simple adjustment lets you raise the belt edges to create up to a 75° trough, preparing the load for problem-free conveyance with no spilling from the start.

www.hub-4.com/directory/560

Saxlund innovations deliver on RWE npower plant contract

Scotland's mega renewable plant biomass combined heat and power plant (CHP) at Markinch incorporates Saxlund efficiency know-how and equipment in turnkey project management and supply contract

Evidence of Saxlund International's capability to tackle large scale projects and deliver innovative solutions is spotlighted by its prestigious contract for the RWE npower renewables biomass combined heat and power plant (CHP) at Markinch in Fife. The bulk handling and biomass experts were tasked with project managing the Biomass Fuel Handling System for the £200 million build in 2010 which, when finished in 2013, will be the largest of its kind in Scotland.



View of the three concrete storage silos

The Biomass CHP, which lies on the grounds of Tullis Russell Paper Makers, will replace their existing coal fired power plant and reinforces the company's position as one of the world's leading environmentally-focused papermakers. Using a mixture of reclaimed and virgin woods, the 49.9 megawatt plant will supply both steam and electricity to Tullis Russell. Moreover, the company also signed a 20 year energy supply contract with RWE npower renewables, with any excess electricity created being supplied to the National Grid, equating to around 25MW an hour, compared with the 17MW actually used.

To help complete this massive project, Saxlund had to choose and develop key subcontractors, as its managing director Matt Drew explains: "One of the largest challenges to overcome was the removal of oversized materials. Our solution was to use two large disc screen separators, which are capable of screening up to 780m³/hr of waste or virgin wood before conveying them to our storage silos. We then had to erect three 20m diameter, 26m high concrete storage silos, complete with explosion protection. Each Silo is fed by two overhead conveyors from the reception system.

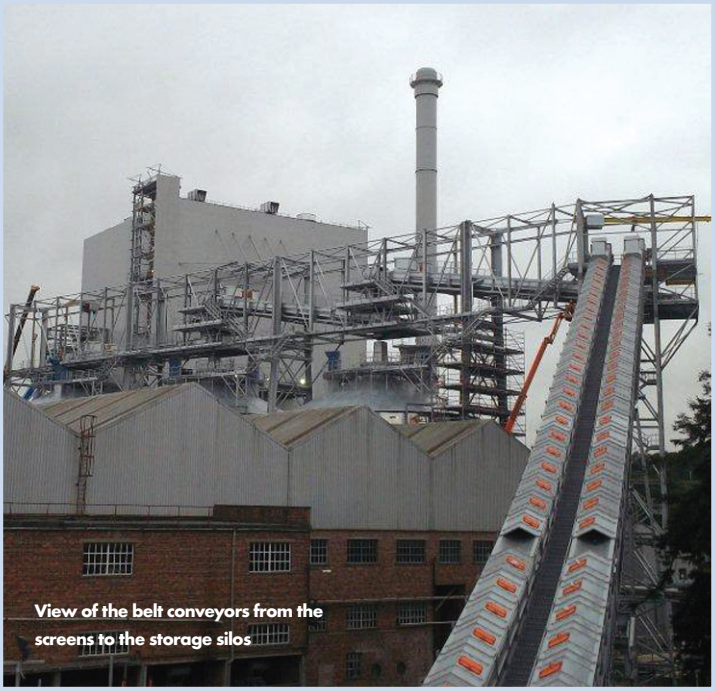
"The process of discharging the wood from the silos is completed with the use of a Saxlund TubeFeeder®. Each TubeFeeder sits on the bottom of the Silo and sweeps its floors discharging the wood at a rate of up to 285m³/hr. The patented TubeFeeder® consists of a screw conveyor housed inside a rotating tube. The tube is perforated with a regular slot pattern permitting 'activated' material to fall onto the screw conveyor, thereby eliminating the external static material pressure on the screw and presenting a uniform feed to the screw."

Here Saxlund has been able to aid Tullis Russell's eco drive, with this system needing just 25% of the power needed for traditional exposed screw reclaimers. The biomass materials collected by the TubeFeeders are transported by chain conveyors back above the ground where they discharge into the downstream conveying system.

Other innovations to support the substantial logistics operation at the plant include specification of Lorry Reception units. Each of the four units is capable of receiving up to 380m³/hr from either Walking Floor Trailers or Tipping Trucks. The units are supplied complete with reverse jet bag filters to minimise dust emissions and fully mobile enabling a simple robust method of providing redundancy.

Working with Canning Conveyors to deliver this project, due to the large size of the Fuel Handling System, Saxlund and Canning Conveyors negotiated separate contracts with the client for their respective scope of supply, with Saxlund taking the overall Project Manager role.

"This is a challenging project, which demands innovation and creative solutions at every stage. Ultimately its projects of this type, not just because of the scale, that allow us to demonstrate how we can add real value to the project; we believe that Tullis Russell is a prime example," concludes Matt.



View of the belt conveyors from the screens to the storage silos

Saxlund Specification:

- Four x B&W Lorry Reception units.
- Two Disc Screen Separators for the removal of oversize material.
- Three 20m Diameter, 26m Height Concrete Storage Silos.
- Three Saxlund Radial TubeFeeders® for the discharge of waste or virgin wood
- Three Saxlund Elevating Twin Strand Chain Conveyors
- Two GEFA Enmass Elevating Chain Conveyors

Enmass Conveyors feeding the METSO day bins

www.hub-4.com/directory/10149

Flexible storage for bulk materials

To build storage bays for bulk materials that can be removed, replaced or expanded at any time. Quickly but solid, without digging foundations. That, in short, is the essence of the Legioblock® construction system.

The flexibility of the Legioblock® construction system is a valuable feature, since it allows their owner to adjust the walls to their changing needs for storage capacity. Need more capacity? Simply call Jansen to extend the height of your existing walls or to add more storage boxes. Moving to another site? You can move your blocks with you and construct them again at the new site. With Legioblock®, it is all possible. Also, while many local authorities regard a Legioblock® construction as 'temporary structures', planning consent is much easier to acquire, in some cases not even needed at all.

The standard size of a Legioblock® is 160 x 80 x 80 cm with a weight of 2.400 kg. Thanks to the interlocking principle, the blocks are easily stacked an placed, without the need of any fixing material.

This way, walls can be built in minutes and hours as opposed to days or weeks. Legioblocks® are delivered directly from stock, which means very short delivery lead times. They arrive on the back of trucks and are then lifted into place with a truck mounted crane very similar to a brick-grab.

Main applications of Legioblocks® are storage bays, retaining walls, partition walls, soundproof walls, fire resistant walls and industrial workspaces. Especially for waste recyclers and other companies that deal with bulk materials, it is the ideal solution to - temporarily or permanently - optimize storage capacity. Legioblock® walls also have excellent sound-proofing and fire resistant properties.

Legioblock® is a product of A. Jansen B.V., a Dutch based company with over 15 years of experience with concrete building blocks. Over the years, the Legioblock® has developed as a high quality product and has become a very popular solution in Northern Europe for all kind of constructions. The ultimate flexibility and the sheer durability of blocks, make it a highly cost-effective construction system.

www.hub-4.com/directory/14510

Schenck Process expertise in pneumatic conveying

The combined product and process technologies from Schenck Process are able to handle a wide variety of raw and processed materials from delivery to despatch.

The market-leading pneumatic conveying technology provides systems that efficiently handle bulk materials within a production plant with very high levels of reliability and minimal plant downtime.

By using Dense Phase pneumatic conveying, difficult materials that are abrasive or friable are transported in a plug form at very low velocities which ensures minimal wear on the pipes and bends and a long life of the installation. Standard Schenck Process systems are available for material temperatures up to 450° C, flow rates of over 300 tonnes per hour and for distances up to 2.4km, depending upon the material, all in a single pipeline.

Central to the operating efficiency of all Schenck Process pneumatic conveying systems is the Dome Valve® which incorporates a unique and highly reliable inflatable sealing arrangement. The inherent simplicity of the Dome Valve®, the only moving part in system, ensures the overall system's reliability and low maintenance operation. The original Dome Valve® was developed by Clyde Materials Handling in 1974 and the Company was purchased by Schenck Process in 2011 and the Dome Valve® is part of the extensive range of Schenck Process technologies.

Schenck Process pneumatic conveying technology ensure that materials are moved without creating any dust to maintain a clean working environment both internally and externally to the plant which has significant operating benefits compared to alternative conveying methods.

www.hub-4.com/directory/758

Phase 3 completed at Grain Storage Facility

GAME Engineering has been working with WoldGrain since 2010 completing Phase 1, Phase 2 and now Phase 3 of their plant development programme at their grain storage facility in Hemswell, Lincolnshire.

As part of WoldGrain's planned programme of works which included a plant upgrade and throughputs in 2012, they installed new in-feed conveyors to their original storage silos.

The new conveyors have increased the transfer capacity from 50 t.p.h to 100 t.p.h to match the equipment installed during phase 1 & 2.

This investment will not only increase the transfer throughout but also eliminate the untimely breakdown which can happen due to the pressure put on the old equipment by the earlier phase improvements.

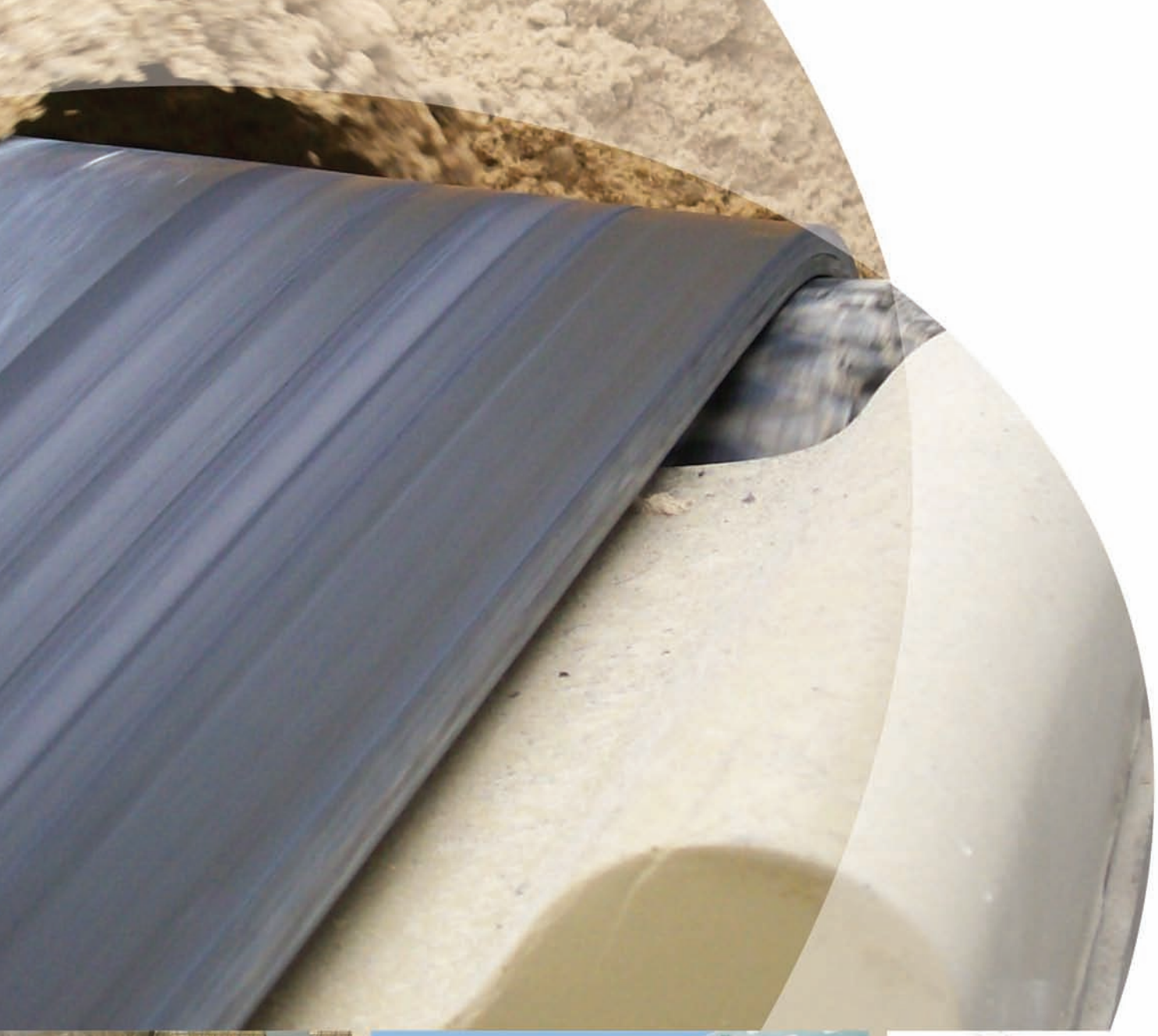
It is hoped that during 2013 further improvements can be made to the old silo discharge arrangement so that their routes become more reliable and faster.

GAME Engineering Ltd has been working in the Grain & Seed sector since its formation in 1986, originally focussing on the design, manufacture and installation of milling equipment.

Specialising in these sectors, GAME has amassed a wealth of knowledge, experience and capabilities which have been implemented into a variety of projects already undertaken.

The expertise that GAME hold in turnkey solutions and CAD Design, means they can offer services to design, construct, upgrade, refurbish, extend or improve processing facilities

www.hub-4.com/directory/328



Putting safety first

Unprotected conveyors can be dangerous to workers around the belt – especially around the pulleys and rollers. Improve your workplace safety and productivity with Metso HiSafe Systems, specially designed to eliminate the space between the belt and roller/pulley where fingers and clothing could get caught.

Metso Minerals (UK) Ltd, Tel: +44 1788 532100
www.metso.com - email: minerals.info.uk@metso.com

metso
Expect results

Guttridge conveyors deliver high reliability for abrasive duties in new Lafarge aggregate blending unit

Guttridge Ltd, a leading manufacturer of materials handling solutions, has supplied a suite of conveying equipment to the Lafarge Barnstone Works (Nottinghamshire UK) for feed and product transport through a new aggregate blending unit. Specified to ensure maximum reliability for highly abrasive process streams, the six Hi-Load bucket elevators and the Kleenbelt belt conveyor incorporate sensors for upset detection as well as a number of features that streamline maintenance. Lafarge is a global leader in the production of building materials and has installed the new plant to make sand/cement/aggregate blends for specific applications within the construction industry.

"We already had Guttridge machines working reliably on site," explains Adam Elmes, Project Manager for Lafarge, "so we were well aware that the company could provide us with quality systems at an acceptable price. Beyond that, though, we were impressed with the company's willingness to innovate new solutions that would help us to achieve the very highest levels of reliability - a major goal for our site. The Guttridge engineers are both responsive and knowledgeable and this was an important factor in ensuring the success of the project."

The six bucket elevators are used to vertically lift different streams - cement, aggregate, sand and associated mixtures - at various points in the process. The belt conveyor is a completely enclosed system that transports a cement and sand mixture some distance, from a vibratory screen to the elevator feeding the mixer. All equipment was supplied with a host of carefully engineered features designed to ensure reliable long-term abrasives handling with minimal manual attention, as well as to ease maintenance.

"All the systems came on stream quickly and easily and are working well," continues Mr Elmes, "but we're especially impressed with the Kleenbelt. It's a really robust design with an excellent sealing system. All of the incoming material is fed cleanly onto the belt without spillage and we have complete product containment even though the stream is very dusty. This is a major improvement compared with our previous experience of a conventional belt conveyor."

The Kleenbelt conveyor is a unique but well-proven solution for applications where it is especially important to avoid product spillage or emission. Capable of handling flow rate up to 800 cu.m/hr it is suitable for the widest range of materials - from rolled oats to rubber crumb, coal to cement.

To find out more visit the Guttridge website: www.guttridge.co.uk

www.hub-4.com/directory/367