EDGE INNOVATE TO INVEST £8 MILLION IN NEW PLANT & PEOPLE

A four year expansion programme focused on innovation, employment, skills development and export growth.

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WINNERS OF QUEEN’S AWARD FOR INTERNATIONAL TRADE

EDGE Innovate has been honoured with a Queen’s Award for Enterprise for International Trade. EDGE Innovate joins an elite group of organisations to be recognised with a prestigious Queen’s Award for Enterprise. Now in its 53rd year, the Queen’s Awards for Enterprise are the most prestigious business awards in the UK.

Established in 2008, the Dungannon based company employs almost 200 people directly. The company develops, manufactures, markets and exports sophisticated technologies for shredding, stacking, screening and sorting primary and secondary raw materials in production processes and recycling. The family run business has seen overseas earnings grow by 68% during a three-year period with top markets including the United States, Australia, France, Canada and Japan. They have been able to diversify their product range to cope with economic fluctuations and demonstrated exceptional levels of corporate social responsibility with particular emphasis on involving partners in the reinvestment into Research and Development to introduce more advanced technology to suit differing legislation. The company wins the Queen’s Award for International Trade for Outstanding Short Term Growth in overseas sales over the last three years.

Darragh Cullen, EDGE Innovate’s Managing Director commented on the recent success; ‘We are honoured and excited to have received the Queens Award for Enterprise. This renowned accolade is the highest award available to us. It is the result of years of dedication from a team of high performing people right across all our business functions. Their dedication and commitment is second to none.

Every member of our team has been instrumental in developing a world class business delivering world class products and services right across the globe. Our distribution partners of which there are now many and in particular those who have worked so closely with us from the very beginning have been a huge part of our successful story and the winning of this coveted award. This story is only beginning, however. We seek to further improve, expand and fulfil the needs of our people and our customers’.

EDGE Innovate currently export both material handling and recycling equipment to almost 60 unique countries. EDGE has experienced exceptional growth with exports rising from 85% in 2016 to 93% in 2017. To meet the rising demand for their product line; EDGE Innovate have recently announced an investment of £8 million in the business including an expansion of its production and office facilities and the construction of a new factory that will see EDGE doubling their covered floorspace. The investment also includes the creation of 80 new roles and a leadership and skills development programme.
Two New High Capacity Shredders Revealed at CONEXPO 2020

EDGE Innovate, a global leader in the design and distribution of bulk material handling and recycling solutions has launched two new high capacity waste shredders to the global market at CONEXPO, Las Vegas, NV. The EDGE HS750 horizontal slow speed shredder and VS420 twin shaft, high torque shredder were revealed to an international audience of over 130,000 attendees.

HS750

EDGE Innovate showcased a total of 4 products on their stand throughout the exhibition; including their class leading TRT622 track trommel and the newly reengineered TS100 track stacker. To find out more about EDGE Innovate’s new line of high capacity shredders please visit edgeinnovate.com.

VS420

EDGE's next generation shredder, is a high-capacity, 420HP, high-torque twin-shaft shredder that offers operators with an extremely versatility shredder that is resistant to contaminants. EDGE state that the VS420 is “ideal for the processing of a large array of materials including green waste, municipal solid waste, C&D materials, biomass and scrap tires. An intelligent operating system that incorporates tramp metal protection provides ultimate security from contaminants and preventing damage to the machine”.

At the heart of the VS420 are twin, 2m (6’7”) long synchronised, high torque shredder shafts which can be customised to suit a customer’s exact application and desired product piece size. EDGE claim that their “twin shaft design provides exceptional material intake, ensures less wear, promotes self-cleaning and prevents material wrapping even in the toughest of applications”.

The VS420 vertical shredding line from EDGE will offer operators a host of design features such as; hydraulic hopper extensions with hydraulic locking mechanisms, a large automatic tipping hopper with remote functionality, hydraulic height adjustable twin pole magnet and a “One Point” service area which EDGE claim will “make daily maintenance checks possible from one vantage point”.

Along with customisable shredder programs; the EDGE VS420 will be made available with a range of both rapid volume reduction and intricate piece sizing chambers which “will allow the unit to be deployed as either a primary or secondary shredder”. Operators will be able to select between tracked, wheeled or hooklift mounted chassis formats.

EDGE’s HS750 is a totally new concept to the shredder world and is a unique offering from EDGE Innovate. The new innovative product offers operators a high capacity, 750HP, horizontal slow-speed shredder that combines impressive throughput, the ability to withstand difficult to shred materials and superior resistance to non-shreddables. The new model combines the benefits of a high torque, slow-speed shredder with a horizontal positive feed delivery system which incorporates an intelligent material management system with built in tramp metal protection.

EDGE Innovates’ Design Engineering Manager, Dermot Murphy explains “The EDGE HS750 has been specifically designed to provide operators with a low maintenance, high capacity shredding solution that is ideal for processing of waste streams which may have a large percentage of contaminants”.

Boasting an impressive list of design features; the EDGE HS750 is powered via a Tier 4 Final / STAGE V Caterpillar C18 engine providing 750HP (560Kw). EDGE claim that the HS750 is a highly productive shredding solution that is easy to maintain and is ideal for land clearance projects and suited for the processing of wood waste, stumps, brush, railway ties, utility poles and construction and demolition waste.
INTRODUCING THE EDGE HS750
BORN TO DISRUPT THE NORM

The EDGE HS750 is a totally new concept to the shredder world. It offers operators a high capacity, horizontal slow speed shredder that combines impressive throughput, the ability to withstand difficult to shred materials and superior resistance to non-shreddables. EDGE Innovate have uniquely combined the benefits of a high torque, slow speed shredder with a horizontal positive feed delivery system which incorporates an intelligent material management and a tramp metal protection system.

A 42” (1066mm) diameter compression Top Feed Roll aids in the delivery of material to a 42” (1066mm) tip diameter solid steel downturn rotor which has been designed to absorb heavy impacts and deliver high throughput. Potential for rotor overload or material bridging is reduced via an intelligent material management system that ensures the efficient delivery of material to the chamber. Should a blockage occur; the feeder, top feed roll and rotor can be reversed via the radio remote.

HS750 FEATURES:
- Horizontal feed delivery system
- 42” diameter Top Feed Roll ensures high production capacity
- Unique Material Management System
- Intelligent self-protecting control system

OPTIONS:
- Chassis format options: Track, Wheel & Static
- Power-source options: Tier 4 Final / Stage 5 & Tier 3 LRC
- Various chamber configurations to suit numerous applications
- Various screen apertures
- Over-band magnet
- Belt Scale
- Air Compressor
- Apron Feeder
- Central auto-lube greasing
- Dust Suppression
- Telematics

APPLICATIONS:
- Land Clearance
- C&D (construction & demolition)
- Wood Waste
- Railway Ties
- Utility Poles
- Green waste (including grass, trees, stumps)
- Carpets
- Tyres
- Mattresses

On-board load sensing diagnostics
Hydraulic adjustable comb position regulates material piece size
Improved fuel efficiency with eco-power saving functionality
1400mm (55”) wide discharge conveyor providing a discharge height of 6.6m (21’3”)
INTRODUCING THE EDGE VS420
“NEXT GENERATION” SLOW SPEED SHREDDER

EDGE has taken decades of designing, manufacturing and commissioning of industrial waste shredders to create their next generation waste shredder. The EDGE VS420 is a high capacity, high torque twin shaft shredder that is ideal for the processing of a large array of materials including; green waste, MSW, C&D waste, biomass and end of life tyres.

EDGE’s next generation shredder has been developed for ultimate versatility and high resistance to contaminants with a number of customisable shredding programmes and chamber configurations available. An intelligent operating system which incorporates tramp metal protection provides the ultimate security from contaminants and prevents asset damage.

Thanks to its modular service orientated design, the VS420 is easily suited for tracked, wheeled or hooklift mounted chassis formats with all major components being accessible and easy to remove.

OPTIONS:
- Chassis format options: Track, Wheel, Static, Hook-lift
- Power-source options: diesel / hydraulic, direct electric
- Various chamber configurations to suit numerous applications
- 2” to 10” basket screens for guaranteed final product piece size
- Hydraulic Height adjustable over-band magnet
- Hydraulic Hopper extensions
- Reversible fan
- Dust suppression
- Central auto-lube greasing

APPLICATIONS:
- All types of wood (railway sleepers, pallets)
- C&D (construction & demolition)
- Green waste (including grass, trees, stumps)
- Domestic & household waste
- Commercial & industrial waste
- White household goods
- Paper & cardboard (including paper rolls)
- Mattresses
- All plastics (including wind turbine blades)

VS420 FEATURES:
- Powered via a Caterpillar C9.3B Tier 4 Final / STAGE V 310kW (420HP) engine
- Twin Shaft design provides exceptional intake behaviour, less wear, self-cleaning and prevents material wrapping
- Intelligent self-protecting control system
- Latest EDGE Operating System (EOS) with On-board load sensing diagnostics
- VS Status Link provides a quick and simple communication link between the machine and the operator
- Improved fuel efficiency combined with eco-power saving functionality
- Complete radio remote control functionality allows for one-man operation
- Hydraulic hopper extensions and automatic tipping hopper cycle
INTRODUCING EDGE INNOVATE’S
NEXT GENERATION
WASTE SHREDDER

EDGE has taken decades of designing, manufacturing & commissioning of industrial waste shredders to create their next generation waste shredder. The EDGE VS420 is a high capacity, high torque twin shaft shredder that is ideal for the processing of a large array of materials including; green waste, MSW, C&D waste, biomass & end of life tyres.
EDGE INNOVATE TO INVEST £8 MILLION IN NEW PLANT AND NEW PEOPLE

EDGE Innovate is implementing a four year expansion programme focused on innovation, employment, skills development and export growth.

EDGE Innovate will be investing nearly £8 million in the business including an expansion of our production and office facilities and the construction of a new 37,500 ft² factory which will be part funded by Invest NI. The investment also includes the creation of 80 new roles and a leadership and skills development programme.

During the announcement of EDGE Innovate’s ambitious growth plans; Alastair Hamilton, Invest Northern Ireland Chief Executive, visited EDGE’s headquarters to hear about the investment plans.

He commented: “EDGE Innovate is a global exporter on a significant growth trajectory. We have worked closely with the company for a number of years now, most recently with our Scaling Team and it is a pleasure to visit today to see the results of the company’s commitment. “This investment by the company is as a result of this ambitious growth and is a significant commitment to its future, its staff and the local area.”

Recruitment of 80 additional staff is well underway with almost half of the roles already in place. The remainder are to be recruited by 2020. “The new roles will generate nearly £2m annually in additional salaries once all are in place”, added Alastair. “Equally important is the investment in training for staff, which will make a positive contribution to the collaborative work ongoing across Mid Ulster to build the skills pipeline in this industry.

“We are pleased to be able to help this innovative manufacturer to scale by implementing strategic investments across all areas of the business.”

Speaking about the announcement Darragh Cullen, Managing Director of EDGE Innovate said: “The success EDGE Innovate has enjoyed in recent years is ultimately a reflection on our people. As part of our growth plans we are investing in our staff with a major leadership and skills development programme across all business areas, including the introduction of a new welding academy. We are also growing our team with 80 new staff and are already half way towards this recruitment target.

“At the same time, demand for our products is increasing. This investment ensures we are able to capitalise on this demand with the additional space, equipment and people needed to achieve our export targets.

Invest NI’s support is helping us make this investment at a quicker rate, meaning we are able to capitalise on new export opportunities. In combination of extending production facilities and infrastructure, EDGE Innovate are actively seeking to increase our workforce. EDGE Innovate are welcoming applications for the following disciplines; welder / fabricators, paint shop operatives, assembly fitters, mechanical design engineers, aftersales support, spares/yard person and digital marketing.

“This investment ensures we are able to capitalise on this demand with the additional space, equipment and people needed to achieve our export targets.”
EDGE Innovate Provide Tyre Shredding Solution in Oman

EDGE Innovate has recently installed & commissioned a fleet of waste shredders for the processing of several million end of life tyres.

It is estimated that Oman generates around 45,000 tons of so-called ‘end-of-life’ (ELT) tyres every year - a figure that is projected to rise in line with population growth and urbanization. Tyre Derived Fuel (TDF) offers a realistic cost-efficient alternative to fossil fuels and can increase the profits of a number of major industries such as cement producers, paper mills and energy utilities.

According to the U.S. Environmental Protection Agency (EPA), when burned, Tyres generate the same amount of energy as oil; 25%–50% more energy than coal, and 100%–200% more energy than wood. The growing volume of end of life tyres are stored across two dump sites in Oman, with the biggest of which having amassed several millions of waste tyres.

...when burned, Tyres generate the same amount of energy as oil; 25%–50% more energy than coal, and 100%–200% more energy than wood.

THE SOLUTION

Based on the material, throughput and end usage; EDGE Innovate offered its Slayer XL twin shaft, slow speed, high torque waste shredder. This particular shredder can be deployed as either a primary or secondary shredder due to its highly robust design, high throughput and superior resistance to difficult to shred material.

The twin shaft design provides exceptional intake behaviour, reduces traditional wrapping of material such as wires, plastics and long fibres and lends itself to less wear and longer life expectancy. This combined with impressive design features such as tramp metal cycles and intelligent load sensing insures against asset damage and makes the EDGE Slayer XL the ideal solution for the processing of end of life tyres.

THE PROJECT

The aim of the project is to process the large legacy pile of end-of-life car and jeep tyres by reducing the waste material to a manageable piece size of minus 150mm at a rate of 400 tyres per hour. The shredded material was then to be used to create tyre derived fuel for local cement kilns.
THE PROCESS

Commissioned in February 2019, the fleet of EDGE’s Slayer XL slow speed shredders have been quickly and efficiently processing the end of life tyres to produce a reduced piece size of 0-150mm at an impressive rate of 500 tyres per hour.

At the current processing rate, one EDGE Slayer XL has the potential to shred up to 960,000 tyres annually.

Speaking of the installation, Mohammed Iliyas Namoji, Assistant Divisional Manager, Khimji Ramdas; “EDGE Innovate is an innovative equipment manufacturer from Northern Ireland. During the project they faced the challenge of proving a solution that offered our client the capacity and performance of shredding a minimum of 400 tyres per hour. Indeed, upon installation of the shredder units, they exceeded the output requirement by an extra 100 tyres.

CUSTOMISATION

The project and operator requirements, it’s location, working conditions, availability of reliable electricity and it’s demanding application resulted in EDGE offering a highly customised design specification. The fleet of Slayers supplied to the project are fitted with a hooklift type chassis and are driven via an electric/hydraulic power-source. This enables the units to be operated for sustained periods in a demanding application within an extremely hot climate without the fear of over-heating. The need for the shredders to be utilised across multiple sites and availability of hooklift trucks, resulted in the client opting for a hooklift chassis configuration complete with a hydraulic folding discharge conveyor. This format lends itself to simple, quick and cost-effective transportation method.

Our client is happy with how the machines operate and the overall built quality of the machines supplied”.

Up to 90% of the ferrous metal found in the tyres processed is also recovered thanks to adjustable overband magnet found on the Slayer XL. At the current processing rate, one EDGE Slayer XL has the potential to shred up to 960,000 tyres annually. The final shredded product is taken from the dump site and is transported to nearby cement kilns where it is used as a fuel source.

EDGE SHREDDER VERSATILITY

Tyre shredding is only one of many applications that EDGE’s versatile Slayer range can handle. Indeed; when the EDGE Slayer XL fleet is not shredding tires, they will be put to work processing green waste, palm trees and waste wood.

With a huge range of both rapid volume reduction and intricate piece sizing chambers available, EDGE shredders can be employed as either a primary or secondary shredder and can be seen working anywhere from waste management companies to biofuel producers. With the recycling industry ever changing and adapting to new regulations and stringent requirements placed on MRFs, adaptability is key. Whether it is processing C&D waste, organic waste or domestic household waste; the EDGE Slayer Series offers that all-round capability.

The EDGE Slayer can be customised to provide the right tonnage at the desired piece size.

SLAYER XL APPLICATIONS:

- All plastics (including wind turbine blades)
- All types of wood (railway sleepers, pallets)
- C&D (construction & demolition)
- Commercial and industrial waste
- Domestic and household waste
- Green waste (including grass, trees, stumps)
- Mattresses
- Paper and cardboard (including paper rolls)
- White household goods
BetterGrow ‘Blown-Away’ by EDGE TRT Trommel performance

New South Wales based organics recycler, BetterGrow own and operate processing facilities across Australia. The company was first established in 1978 and over the course of the past 30 years and have been at the forefront of an array of organic industries including, drilling slurries, biosolids, garden organics, food and grease trap waste. BetterGrow’s leadership in these sectors has gone from strength to strength with the ethos of continued re-investment in their people and new technologies to maintain the companies pole position in the market place.

THE CHALLENGE

Certainly not ones for doing things by halves, BetterGrow’s newly acquired processing facility in Northern NSW demanded an initial screening requirement of 120ktpa of compost from the offset. High performance at an economical cost was outlined as the pre-requisite to their technology selection.

After the initial consultation with FOCUS enviro, BetterGrow was invited to see two Melbourne based large scale producers of organics who have been successfully running the EDGE TRT Trommels for the past two years in similar applications. Then having past the qualifying stage FOCUS enviro was invited to showcase the high production trommel on site and to put the machine through its paces. BetterGrow Operations Manager Neale Hogarth attended the trials and was impressed by the screening system capacity to size their materials at small apertures without losing screen efficiency.

“Using the EDGE trommel screen, we were able to adjust the screen angle, drum speed and even the feeder speed while the machine was running. This allowed us to see in real time what differences the settings changes were having on the material flow, carry over and quality of the fines. Even when we need to produce different product sizes or if the material characteristics change due to the weather; we can always achieve peak output tonnage without losing saleable product into our overs.” said Neale. “When you combine this with the physical size of the machine, we could see why the EDGE trommel is becoming so popular” added Neale.

The EDGE 2m x 6.9m long drum provides excellent screening options and is driven via a direct 4-wheel drive system with a variable drum speed of 0-30 rpm. Various aperture meshes, punch plate, fully welded punch plate and drums with scrolls are all available and interchangeable in the TRT622 model.

THE TURNING POINT...

One of the unique features of the EDGE TRT622 trommel screen is the radial remote-controlled fines conveyor that can stockpile over 1000m³ of material in a single stockpile (almost 10 times that of traditional trommels) without moving the material with a loading shovel.

However, BetterGrow discovered that this feature was the turning point for their process in a different way. Andrew Hogarth, site operations manager said “We operate a very open site that is subjected to changing and prevailing crosswinds. The radial conveyor allowed us to position the fines conveyor behind the initial stockpile while still running the screen parallel to the unprocessed windrow. This allowed us to retain all the important fine organic material (>5mm) within our product that would have otherwise been ‘Blown Away’ and lost to the wind. The radial stacker feature ensures uptime and production for us when the wind changes direction.”

“It has been an absolute pleasure to learn and do business with the BetterGrow organisation. From meeting the people, many of whom have spent their whole career in the organisation, to experiencing their drive for success that is embedded into every aspect of their daily operations. For an industry heavy weight like BetterGrow to select the EDGE equipment is a massive endorsement for the manufacturer EDGE Innovate here in Australia.

We are honoured that FOCUS have been selected to provide the solution to this project and hope this will be the beginning of a winning combination with the team at BetterGrow.”

– Robbie McKernan, director at FOCUS enviro
Tancoal Energy invests in new crushing technology to meet higher product specifications

Tancoal Energy was founded in April 2008, as a joint-venture between the National Development Corporation of Tanzania (NDC) and Intra Energy (Tanzania) Limited (IETL), a 100% subsidiary of Australian publicly listed company, Intra Energy Corporation.

Operating two coal mines in Tanzania; the NDC hope that Tancoal will play a leading role in Tanzania’s economic development, providing reliable, long-term and affordable energy supplies to domestic industry and export customers. Tancoal Energy intend to establish itself as the leading coal supplier in Tanzania and becoming a major partner in the development of Tanzania’s vast mineral and energy resources.

The Ngaka Coal Project is Tancoal’s flagship project. Located in south western region of Tanzania, the Ngaka Basin has the potential to host up to 1 billion tonnes of high quality thermal coal. Tancoal has a total coal resource of 367 million tons. Coal mining commenced at Ngaka in August 2011, with initial mining conducted by a simple, low cost “truck and shovel” operation, and presently selling up to 600,000 tonnes per annum (Mtpa) of unwashed coal to Tanzania’s domestic customers.

With demand and production rates increasing, Tancoal have up coal their production process to meet the requirements for the nearby Ngaka Power Station expected to come on-line in 2021. To meet the increased demand and high product specification; Tancoal Energy took the decision to invest in new crushing technology.

They opted for an EDGE RS1500 roll sizer and RTS80 radial track stockpiler which they took delivery of in the first quarter of 2018.

THE SOLUTION

Boasting an impressive list of design features that includes a highly efficient hydraulic drive system, tramp metal release, easy selective piece sizing controls, intelligent hydraulic load sensing system and a five function remote control; the RS1500 is packed with the most up to date technology and components. With the introduction of the EDGE RS1500 tracked roll-sizer and radial track stacker in 2018; Tancoal have observed a significant reduction in the volume of material loss through the creation of dust, as well achieving a much more homogenous product, with a piece size of 0-75mm being achieved. Production capacity also rose to 300tph.

The tooth rotor design found in the RS1500 allows undersize material to pass through the precision designed shafts increasing product throughput. The shafts are designed to grab Tancoal’s feed material of 300-600mm and reduce it to the desired 0-75mm piece size whilst creating the minimum of fines. Thanks to a single deck, two bearing 50mm aperture pre-screen; the EDGE roll-sizer also allows fines to by-pass the roll chamber, increasing processing efficiency and production capacity whilst reducing the volume of fines (Dust) created.

THE CHALLENGE

Tancoal required a sizing solution that could bring a 600mm product down to minus 75mm without the creation of large volumes of dust fines and secondly; would provide additional production capacity to allow Tancoal to meet their rising production demands. Previously Tancoal had utilized an impact crusher and jaw crusher in their production process. When trying to create a coal product with a maximum piece size of just 75mm; site operators found that the crushers created substantial amounts of dust; a waste material with the end product size being very much inconsistent.
THE PROCESS

The 300-600mm material is fed into the RS1500 hardox lined hopper and is carried to the pre-screen via the 1400mm (55") wide heavy-duty feed conveyor with variable belt speed controlling the flow of material to pre-screen.

The feed hopper boasts a hydraulic sliding function to enable quick transition from transport to operating position. Material passes from the feed conveyor to the RS1500 single deck, two bearing pre-screen fitted with 50mm aperture mesh screens. The minus 50mm screened material by-passes the chamber and discharged to a height of 3084mm (10'1") via the fines discharge conveyor.

The 50mm plus product continues from the pre-screen into the sizing chamber where two, reversible, variable speed shafts size the product from up to 600mm to 75mm down. The sized product is transferred onto the product discharge conveyor where it is discharged onto an EDGE RTS80 radial track stockpiler with discharge height of 11.8m (38'10) and radial stockpile capacity of up to 13329m³ (17433 yds³).

RESULTS

The RS1500 plays a vital role within Tancoal’s production process. With an impressive cubical piece size, minimal fines produced, low power consumption and high tonnage per hour; the EDGE RS1500 with now over 6000 plus working hours has enabled the company to produce an average of 65,000 tons of coal each month to end user specification throughout 2018. Coal sales have increased from 422,569 metric tons in June 2017 to 540,937 tons in June 2018.

Tancoal not only supply the local domestic market and nearby Ngaka power station, the company now supply coal to various end users across multiple sectors including cement, steel and tile manufactures. Tancoal have become increasingly competitive in regional markets and are now negotiating with overseas trading companies seeking access to export markets.

RS1500 ROLL SIZER FEATURES:

- Produces less fines than any other similar product on the market such as an impactor or jaw crusher
- Capacity to process up to 276 tonnes p/hr with a maximum feed size of 15 ½ inch
- Purposely designed so that a variety of options can be retrofitted to the basic spec machine
- 11.25m³ and a lower feed in height of 3.3m allowing the RS1500 to be fed by the largest wheel loaders without the need for a constructed ramp

RADIAL TRACK STACKER FEATURES:

- Can be continually fed by any Primary / Secondary Crusher or Screener
- Can reduce fuel, maintenance and labour costs by up to 80%
- Eliminate double handling of material with wheel loader
- Fully tracked for on-site mobility
- Impressive stockpiling rates from 100 -1000+ Tonnes per Hour
- Discharge heights up to 13.9m (42'7")
- Huge 360° windrow stockpiling capacity
- Transports easily via low loader or packed in container for shipping
Owned and operated by Tarmac, (a CRH company) Greenwich Wharf is located on the south bank of the Thames, upstream of the Thames Barrier. It is the most central wharf for marine aggregates and since 1987 the wharf has processed more marine sourced sand than any other in North West Europe.

Regularly handling around two million tonnes per annum its deep-water jetty allows loading and unloading at most states of tide. Barge loading has been an essential part of Tarmac’s operation at Greenwich Wharf. This has led to the recent investment of a EDGE Innovate RTU220 Radial Truck Unloader. The RTU enhances the loading operation by facilitating a greater efficient loading method.

Supplied by EDGE Innovate; the RTU220 is designed to allow for the continuous loading of barges directly from trucks. This has resulted in increased efficiency in barge loading at Greenwich Wharf.

“A SUPERIOR SOLUTION

Alireza Zand – Marine Plant Manager, takes up the story, “It was just over two years ago when we decided to look at mobile feeders to provide a cost effective and reliable solution to barge loading for supply of 6A fill material for the Thames Tideway Project.

“Installing a conveyor on the jetty didn’t make sense because of the high cost and loading speed so we looked at the market for feeders and opted for an EDGE RTU220 as it was exactly the machine we wanted at a competitive price.”

With such a tight footprint at the wharf the Radial Truck Unloader is fed by trucks off loading directly into the feed hopper of the RTU220.

Each truck taking it in turns is loaded by shovel from the yard stockpile and then making the short journey to the machine. Ali, continued, “We are very happy with the machine so far; speed of loading is dictated by two trucks loading in turn in a very tight area so we can currently load a 1000 tonne barge in just over 3 hours at approximately 300 tph, although if we could load the RTU220 with a constant feed it would easily do 1000 tph.

“It is a far superior solution compared to a conveyor system on cost and loading speed.”

Since February 2017 the RTU220 initially loaded two barges a day with over 50,000 tonnes of 6A feed material going through the machine for projects at Chambers Wharf at Tower Bridge and Kings Memorial Park. Plus other contracts including the supply of clean aggregate and sand to Hanson at Wandsworth and Euromix.

Ali, added, “We have the 6A material brought in by our deep-water dredgers where it is stockpiled and ready for these types of contracts, it is basically a 40-60 split sand and gravel, 100mm down.”

MAJOR PROJECTS AND THE ABILITY TO DELIVER:

The 4-acre site has a very tight footprint and supply to market is facilitated through either the on-site railhead, or by barge, or locally by road to concrete plants at Battersea and Kings Cross.

The Greenwich Wharf operation has a chequered history having supplied materials that have contributed to the building of the Millennium Dome, Olympic Village, Crossrail, the Jubilee Line Extension and the Emirates and Tottenham Stadiums.

Recently materials have been supplied to the Thames Tideway Tunnel which is a 25km tunnel running under the River Thames to provide capture, storage and conveyance of wastewater discharges that previously discharged into the river.
THE EDGE RTU220 RADIAL TRUCK UNLOADER:

The RTU220 is an independent track mounted feeder, powered by a Cat 4.4 96KW (129BHP) diesel engine with a remote controlled radial discharge conveyor. The RTU220 offers huge torque whilst only consuming 12-15 litres per hour (3-4 USG).

The RTU220 provides operators with a greater efficient loading method and is designed to allow operators to continuously load directly from trucks into train wagons or barges.

The full HMI control panel and remote-control functions provide operators easy control of the RTU functions whilst loading. The Panel Interface provides easy fine tuning for accurate application performance. The HMI allows for automatic start/stop operation and provides visual data output such as engine load, hydraulic oil temp and fuel consumption displayed while the machine is still operating.

Full length impact bars prevent belt sag thus reducing material roll back and prolonging the life of the conveyor belt. Variable belt speed via the HMI control panel controls the flow of material to the radial conveyor. The massive 23m³ hopper capacity improves cycle times and increased on-site production. With dual access, hydraulic flared sides, the RTU Hopper can be fed directly by wheel loaders and grab cranes.

Unlike feeder belt systems driven via a drum roller, the RTU220s’ sprocket and chain design ensure against belt slippage or stalling. The RTU has the capacity to convey 1000 tonnes per hour (1102 UST) with a maximum feed size of 600mm (23").

Material is stockpiled via the 1200mm (48") wide radial product conveyor which provides a discharge height of up to 6800mm (22’4"). The 140° radial function enhances the flexibility of the RTU allowing it to be utilised in a number of applications. The hydraulic folding head section allows for quick transition from transport to operating position.

The machine supplied to Greenwich Wharf has a range of applications but is specifically designed to load barges with feed material received directly from lorries and dump trucks. The RTU can accept a full 23 cubic metre (30 cubic yard) load. Its high torque drive system allows the speed of the conveyor belt to be adjusted meaning the output of the machine can be regulated.

Further applications include material stockpiling, and loading of ships, containers and railway carriages. Material is fed into the RTU220s’ large 23m³ (30 cubic yards) hopper and is carried to the radial conveyor via the 2200mm (87") wide heavy-duty belt.

The RTU220 is an independent track mounted unit that provides flexibility and reliability. Capacity to convey up to 750 tonnes per hour (826 UST) - dependent on cycle times. Accepts a huge variety of trucks and loading options. Triple side loading access for improved production.

Applications:
- Aggregates
- Coal
- Fertilisers
- Grains
- Linking
- Mulch
- Rail Loading / Unloading
- Ship Loading
- Stockpiling
- Truck Loading / Unloading

Options:
- Power source options: Diesel / hydraulic, Dual Power
- Full 140° radial discharge conveyor with choice of conveyor lengths
- Belt weight scales
- Hydraulic extended hopper wings
- Option of steel or rubber tracks
- Wrap-around pull cord
- Vibrating motor for sticky material
- Belt options: Chevron, Heavy Duty
- Various feedboot liners; hardox, various rubber plys
- Full, 1/2 and quarter length rubber conveyor skirting available

Low power consumption: 18 Litres per hour (4.7 USG/hr)
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