2019 YEAR IN {REVIEW}

2019 HIGHLIGHTS

FENNER DUNLOP
ENGINEERED CONVEYOR SOLUTIONS

Welcome to Fenner Dunlop Australia's Year in Review!

The following pages provide an overview of TEAM Fenner Dunlop's achievements over the last twelve months, delivering head to tail conveyor solutions for our customers. Fenner Dunlop provides a unique offering in the Australian conveyor industry, proudly manufacturing at seven locations nationally supported by a network of 20 branches covering the breadth and depth of our amazing continent.

2019 was a truly exceptional and rewarding year for our hard-working employees within the Fenner Dunlop Group of companies. The year in review reflects upon some major milestones achieved over this period, including:

- Establishing a state-of-the-art autonomous idler manufacturing plant in Brisbane
- The acquisition of CPA to complete the vertical integration for the manufacture of all Australian made belting products and reels
- Re-establishing Fenner Dunlop's service capability in the Hunter Valley with the opening of the Newcastle branch
- WA Trade recognition for Fenner Dunlop's RTO accredited splicing training course and qualification
- Fenner Dunlop were shortlisted at the Australian Bulk Handling Awards in the categories of Excellence in Transport and Conveying, Supplier of the Year and Bulk Handling Facility of the Year
- A celebration of 10 years of manufacturing excellence at Fenner Dunlop's Kwinana facility in WA
- Introduction of innovative belting products (UsFlex® and KordFlex®) into key client operations in the Pilbara

As we head into 2020 Fenner Dunlop's long-term strategy of providing Engineered Conveyor Solutions is further underpinned with branch network expansions and company acquisitions to further support the customer base within Australia and the Asia Pacific Region.

In 2019 we passed the first anniversary of the acquisition of Fenner Dunlop by the Michelin Group, with both organisations cooperatively working together to identify and realise synergies throughout this period.

A special mention goes to Renata Hjelmstrom (Fenner Dunlop – Marketing Manager) for her dedication in making this publication a reality.

We hope you find this magazine interesting, and please keep in touch with us via our social media pages on LinkedIn, Facebook, Instagram, Twitter and YouTube.

Regards,

Trevor Svenson - General Manager - Sales & Marketing

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KORDFLEX®

THE RIGHT CONVEYOR BELT FOR THE JOB

Article published by:
Australian Bulk Handling Review

Reducing belt downtime was high on the priority list for an iron ore mining company in the Pilbara. It had recently extended the shut frequency, however its 28/7 covered steel cord belt construction fell short of its historical two shut rotation changeout target.

The company's lifecycle had been previously improved by increasing cover thickness on traditional steel cord construction, but an ever increasing need to reduce shut frequency, eventually the belt reached a point where the machine had reached the original equipment manufacturer's design capacity.

To find a solution, the company reached out to Fenner Dunlop, which embedded its Engineered Conveyor Solutions (ECS) team to meet the client's key productivity indicators.

This team began implementing a trial of compound changes, however the thickness of the belt was restricted, meaning no additional weight could be added or the belt would become unbalanced.

To solve this problem, a low stretch, high tensile aramid fabric carcass called KordFlex® was installed. This material's significant reduction in weight which meant additional weight could be used for the top cover compound to improve its wear resistance.

By changing the material, Fenner Dunlop was able to increase the belt from a standard 28-millimetre top cover and seven-millimetre bottom cover to 32 millimetres and eight millimetres respectively.

This additional four millimetres on the top cover significantly improved the lifespan of the belt by around 15% to meet the shutdown requirements.

Jimmy Lindgren, Fenner Dunlop ECS Manager, says utilising a lightweight, high strength carcass design permitted the advantage of additional cover gauge that was required to extend belt life.

"Additionally, this belt was locally made in our manufacturing plant in Kwinana, so it gave the client assurance that the quality was going to be according to Australian Standards and we could guarantee quick delivery not to mention allowed the opportunity for the WA client to visit the factory and see their belt being made," Lindgren said.

"KordFlex® has the highest strength-to-weight ratio of all our conveyor belt reinforcements, with more than double synthetic fabrics such as polyester and nylon and five times that of steel," he adds.

As part of the trial, the ECS team also used Fenner Dunlop's abrasion resistant conveyor belt compound Ultra Tuff™ as the top cover. With a typical abrasion resistance of 20 cubic millimetres, Ultra Tuff™ has been specifically designed for systems handling high abrasion materials.

Pictured:
Fenner Dunlop successfully installed an aramid fabric belt on a high-tension balance machine

"One of the key drivers to the Kordflex® success was the innovative highly specialised method of joining the conveyor belt together. Kordflex® adopts a single ply construction and hence traditional methods of joining were not applicable," Lindgren said.

"KordFlex® uses a High Integrity Splice (HIS) design, allowing for single ply constructed belting to be joined using a vulcanised platen. This is the first of its kind to be successfully installed in the Pilbara on a high-tension balance machine and was conducted by Fenner Dunlop's elite service team that have years of experience in such HIS methods of joining belt."

KordFlex® can be used on systems with a smaller pulley diameter, creating a lighter weight belt that can result in greater energy savings per tonne conveyed.

Fenner Dunlop handled the installation and commissioning of the belt, ongoing inspection and monitoring, performance optimisation and data collection.

The trial has helped showcase Fenner Dunlop's ability to successfully install an aramid fabric belt on a high-tension balance machine, one of the first of its kind with the ability to extend belt life in the right application.

Mr Lindgren says the success of the install was predominately contributed to Fenner Dunlop's complete conveyor solutions offering that incorporates a collaborative approach between all of Fenner Dunlop's teams.

"As a company, we work closely with our clients to ensure they get the solutions they need. Our teams have a toolbox full of products and solutions available to ensure each project is fit for purpose," he explains.

"Depending on the situation, our teams adopt a cradle to grave approach by working alongside our clients from a project's beginning until the very end."

Pictured:
Conveyor Pulley locally manufactured in Victoria by CPA

PRODUCT HIGHLIGHT

KORDFLEX® - FENNER DUNLOP'S ARAMID REINFORCED CONVEYOR BELT!

Article published by:
The Australian Mining Magazine

Fenner Dunlop's revolutionary concept in straight-warp conveyor belting - KordFlex® - uses a high tensile, extremely low stretch Aramid (Kevlar®) carcass. Aramid has the highest strength-to-weight ratio of all the conveyor belt reinforcements used. More than twice that of our synthetic fibres (like polyester and nylon), and five times that of steel, KordFlex® has a 10:1 safety factor.

Especially useful in weight sensitive, high abrasion, high tension applications, the KordFlex® carcass can be combined with any of Fenner Dunlop's premium cover compounds. When using KordFlex® in place of existing steel cord belting it can result in a carcass weight reduction of more than 70%.

In preliminary site trials, when combined with Fenner Dunlop's Ultra Tuff™ abrasion resistant cover compound, KordFlex® has outperformed steel cord belts used in short cycle balance machine applications.

ANNOUNCEMENT

BELLE BANNE CONVEYOR SERVICES ACQUIRES CONVEYOR PULLEYS AUSTRALIA

We are pleased to announce that effective 7 January 2019, Belle Banne Conveyor Services Pty Ltd ("BBCS") has acquired the business of Conveyor Pulleys Australia ("CPA"), from Longship Enterprises Pty Ltd.

BBCS, part of the Fenner Dunlop Australia group of companies, is a leading supplier of conveyor products, belt handling technology, materials handling engineering and maintenance services in the mining, bulk materials handling, ports, and heavy industry market sectors.

CPA is a leading designer and manufacturer of conveyor pulleys, fabricated steelwork and a range of structural and specialised project work for bulk materials handling belt conveyor systems and other industrial markets worldwide.

"The combination of our BBCS brand with the CPA products and services will allow us to offer a complete range of high-quality pulleys, manufactured locally in Victoria," said Stuart Milliken, Fenner Dunlop's Chief Financial Officer. "We will combine the knowledge and expertise of the two businesses to enable CPA to provide the highest level of service and support to its many valued customers".

BBCS will continue to operate CPA at the same location, at 11 Network Drive, Carrum Downs, Victoria 3201.

FIVE TIMES

THE STRENGTH-TO-WEIGHT RATIO OF STEEL CORD BELTING

Article published by:
Australian Mining

In search of the best belting solutions, Fenner Dunlop welcomes the opportunity to work with clients to identify customer specific applications to optimise their conveyor performance.

In responding to a problem faced by an iron ore company in the Pilbara, Western Australia, Fenner Dunlop has developed a solution to reduce the overall belt weight and deliver increased cover thicknesses in a high abrasion environment.

Fenner Dunlop increased the belt's top cover from 28 to 32 millimetres, and its bottom cover from seven to eight millimetres.

The four millimetre increase in the top cover and one millimetre increase in the bottom provide the opportunity to increase the belt life by up to 15 percent. Thus, the development of KordFlex conveyor belting was initiated specifically to solve a common problem in the industry.

The KordFlex difference lies in its aramid reinforcement – a low-stretch, high-tensile fibre that replaces the traditional steel cord in the belt's carcass production. With aramid, KordFlex ends up with a lighter build so its cover thickness can be increased.

As an original equipment manufacturer (OEM) of belting products, Fenner Dunlop's in-house engineering has ownership all design and product development decisions.

"It's a Fenner Dunlop product, it's Fenner Dunlop-designed and it's Fenner Dunlop-manufactured. One of the benefits of being manufactured by a company with a global footprint is that we leveraged global knowhow and expertise within our business to deliver Kordflex to the Australian mining industry," Fenner Dunlop general manager of sales and marketing Trevor Svenson tells Australian Mining.

"Since we've gone from a traditional steel cord belt to an aramid carcass, the most common questions are how's that conveyor going to track and what about the integrity of the carcass, and on both accounts KordFlex has been proven very successful."

Fenner Dunlop is in the unique position of being able to weave their own carcasses for fabric belts for all mining environments to ensure the manufacturing process is owned and controlled from start to finish to produce a premium product.

As the only Australian belting manufacturer that produces the complete range of conveyor belts for all mining applications, Fenner Dunlop's recent development in belt cover compounds for high-abrasion applications, and low-rolling resistance belting to reduce power draw on a conveyor system.

"At Fenner Dunlop we don't develop cookie-cut, one-size-fits-all solutions. We are about customising a solution for that individual client's needs.

"KordFlex is a specific solution for specific applications, and that's the approach Fenner Dunlop takes with all customer requirements – it's a customised solution."

With 18 service branches around Australia, Fenner Dunlop are locally based where its clients are. Its sales support and field service teams work closely with users on-site, identifying potential value-adding opportunities for the relevant site.

Prior to the construction of the belt, Fenner Dunlop invites its mining partners to witness the complexity of the belt manufacture at Kwinana, the largest steel cord belting facility in the southern hemisphere.

"Fenner Dunlop takes pride on being a company that welcomes customer feedback to continuously improve the products we introduce into the market," Svenson says.

"When you're in close proximity to your manufacturing plant, it gives you a higher level of autonomy to make changes and work closely with your clients to deliver engineered conveyor solutions."

BUILDING A LOCAL BRAND

THROUGH ACQUISITION

Pictured:
The CPA Team

CONVEYOR PULLEYS AUSTRALIA

"We will combine the knowledge and expertise of the two businesses to provide the highest level of service and support"

Article published by:
Australian Bulk Handling Review

Fenner Dunlop Australia has acquired a local designer and manufacturer of pulleys and bulk handling equipment.

By 2008, the mining and resources boom was in full swing. Despite the global financial crisis affecting most major markets, Australia managed to avoid the brunt of its impact. According to the Reserve Bank of Australia, this was partly due to increased investment in the sector as well as sizeable resource exports to China.

During the time of investment into the resources sector, smaller companies were able to find gaps in the market and develop these opportunities. Conveyor Pulleys Australia (CPA) – who design and manufacture engineered conveyor pulleys – was one of these companies.

Tim Cleine, CPA operations manager, had been part of the business from the very beginning and says during the early stages, the company's staff was small, but dedicated to being successful.

"When we started, our name wasn't out there on the marketplace. We weren't established but none of us backed away from the hard work ahead of us that was necessary to succeed," he says.

"We were lucky to have a team of exceptionally experienced people. We have more than a hundred years of industry experience combined across the team.

"One of those great people is John Bowman, the man who was put on to run the company from the start. It was a great opportunity for the pulley business, as it was entirely sink or swim, but early on he was given some bad news – he was told he had six months to live."

John managed to beat cancer and has stayed on with the staff, working with the team to provide consultation and expertise with his 40 years of experience.

During these early stages of development, the business forged a relationship with Fenner Dunlop Australia. As a major client, Fenner Dunlop helped support CPA's cash flow, to the point where it was able to rapidly expand.

New infrastructure and manufacturing equipment were purchased, which in turn required more space to work. CPA moved its factory to Carrum Downs in Victoria and expanded its range of products and services.

The company was able to double its manufacturing output and increase its capabilities, including the supply of parts such as bearings, shafts, shaft locking assemblies and steel fabrications.

The team also grew, including the addition of experienced engineers skilled in using a computerised design program. This meant CPA could support its products through a quality management system and provide documented conformance verification, such as compliance with AS9000-2000.

Mr Cleine says what sets CPA apart from their competition is the fact that they are a local company who know how to speak the language of Australian firms.

"Because we're based in Australia, we have a deeper understanding of the local industry than firms based in other regions such as China," he explains.

"The ability to just catch a plane or drive down to get hands-on with whatever needs troubleshooting means we can provide a fast response to fix issues effecting productivity.

"We have also spent a lot of time developing our costing process, so that when a mining or quarry company runs into an issue, we're able to get a price for them in a matter of hours," Mr. Cleine says.

SPLICE WITHOUT A KNIFE

Pictured:
Executive General Manager Stakeholder Relations Lisa Harrington (centre) was impressed with the Belle Banne team's shared approach to eliminating the safety risk of knives when splicing

Article published by:
AGL

Can you do a splice without a knife? That was the question put to Belle Banne employees at Loy Yang following a spate of knife-related injuries within parent company Fenner Dunlop.

A Belle Banne workgroup at Loy Yang came up with innovative solutions, eliminating the use of all blades when working on conveyers, revolutionising the industry.

Belle Banne Conveyor Services, Site Manager, Glenn Nijenhuis said a comprehensive review of work practices was undertaken following a knife-injury on site at Loy Yang.

Glenn said improvements to PPE, specific risk assessments and changes to body positioning when using knives, just didn't seem to go far enough.

"The driver was people are getting hurt with knives and the best way to stop people getting hurt with knives is to stop using them altogether," he said.

"Initially our people thought we can't do that, this is the way it has been done for 30 years. For a belt splicer the knife was the go-to tool, like a calculator is to an accountant.

"We got our people on the shopfloor involved in the process, shared the problem and challenged them to come up with a solution.

We identified ten different steps in doing a splice that involved a knife. We worked through them systematically. Once we executed one successfully, we moved onto the next. Finally, we completed our first splice in the field without a knife."

All knives have been eliminated from the splicing process, including Stanley and Olfa knives and replaced with various other tools including a multifunction tool, known as 'The Renovator".

A grooving gun traditionally used to groove pulleys and tyres replaces the hook knife. Piano wires also replace hook knives and industrial snips are used in place of various other types of knives.

The new processes have been trialled for a couple of months now, with great success.

"We do 50-80 belt splices a year on site at Loy Yang and about 25,000 man-hours on belt repairs. By eliminating the use of knives we've eliminated the risk of knife-related injuries on these tasks," Glenn Nijenhuis, Belle Banne said.

Glenn said that the number of people required to undertake the tasks has not changed and tasks are completed within the same timeframe.

"We've eliminated the risk of cutting and there are additional benefits including reduced wear and tear on joints in the hands as well as injury to knees and shoulders associated with the old work practice."

TECHNOLOGY

ENABLIS AND SOLISTA JOIN FORCES TO TAKE FENNER DUNLOP TO THE CLOUD

Article published by:
www.crn.com.au

Sydney-based IT providers Enablis and Solista have teamed up to take engineered conveyor systems provider Fenner Dunlop to the cloud.

Fenner Dunlop initially contacted Enablis back in 2017 to refresh its 24-site network that supports a team of 830 onsite and remote staff. Enablis designed and implemented a new fibre network, communications platform and centralised data centre with direct Microsoft Azure connectivity.

A year later, Fenner Dunlop got in touch with Enablis once again when it needed to replace its end-of-life SAN and aging backup and DR setup.

The company was previously backing up its data using disks and tapes that were physically stored offsite, a costly and complicated process.

With cloud connectivity already established a year prior, Fenner Dunlop reached out to Enablis to address its storage and backup needs, who in turn brought in Solista to implement a flash storage and cloud backup solution.

To start with, the two IT providers utilised VMware's VMotion to migrate their customer's data from their old SAN to a Pure Storage flash solution, transferring 35 virtual machines in total.

Enablis and Solista deployed a cloud backup solution from Rubrik in order to replace the manual backup process. Rubrik compresses and backs up data to the cloud automatically when VMs are created, and can be managed from a central dashboard that's controlled by Fenner Dunlop. Deploying Rubrik also allowed Fenner Dunlop to close an offsite backup and DR facility.

Importantly, they also removed Fenner Dunlop's reliance on tape, which the company said was critical in reducing its expenditure and operating costs.

"People make mistakes and delete things. But I can sleep well every night knowing I can recover any file without having to worry it might not be there," Fenner Dunlop's IT manager Sammy Jammal said.

The CEOs of both Enablis and Solista praised the partnership as having potential for the future in providing for mid-sized enterprises by combining their expertise in network and managed communications with professional services, cloud and security.

"Our partnership with Solista really helps extend best of breed cloud, security and backup solutions to our customers, backed by their industry leading expertise," Enablis chief executive Jon Evans said.

Solista chief Noel Allnut added: "Our partnership with Enablis allows our mutual clients to gain better insights into their data and enhance their reach from the cloud to the network seamlessly."

ANNOUNCEMENT

NEW PORT KEMBLA BRANCH IS OFFICIALLY OPEN!

To mark the opening of the new, strategically important branch, Fenner Dunlop celebrated the occasion with an Open Day event for customers, business partners and suppliers.

The decision to relocate the branch to Port Kembla is a further example of Fenner Dunlop's ongoing commitment and growing presence in the Wollongong region and the growing popularity and demand for Fenner Dunlop products and services.

"Opening a bigger branch builds upon our strategic plans for continued growth and development across Australia through investment in local operations," said Peter Reed, Branch Manager. "This move shows that we have the right people on the ground with a real passion for working hard to meet the needs of our customers".

The branch is conveniently located at 2 Flinders Street, Port Kembla. Along with customer service, the branch features 1600m2 workshop, 2000m2 hardstand with head cranes, suitable to service any conveyor belt requirement.

MANUFACTURING SUCCESS

FENNER DUNLOP SUPPLIES SOUTH FLANK OVERLAND CONVEYOR

Article published by:
Australian Bulk Handling Review

In 2018, BHP approved one of the largest iron ore operations in the world. The $4.7 billion South Flank project is expected to produce 80 million tonnes of iron ore per year and create more 3000 jobs.

It also aims to enhance the average quality of the company's Western Australian iron ore production from 61 per cent to 62 per cent, and the overall proportion of lump from 25 per cent to around 35 per cent.

The project will involve building a new crushing and screening plant, stockyard and train loading facility, procuring a new mining fleet, a substantial mine development and an overland conveyor belt.

BHP estimates around 85 per cent of the project's spend will be awarded to companies based in Australia, with around 90 per cent of the contracts going to companies in Western Australia.

Fenner Dunlop Australia was one such business as it was recently awarded a $16 million contract to manufacture and deliver around 50 kilometres of low rolling-resistance conveyor belt for the project's overland conveyor belt package.

One of the key reasons Fenner Dunlop was selected was due to its Kwinana manufacturing plant in Perth.

This year will mark the 10th anniversary of Fenner Dunlop's Kwinana plant, which was specifically built for the production of steel cord belting. The $70 million state of the art manufacturing facility is one of the largest investments in conveyor belt manufacturing ever made in Australia.

"The ability to manufacture in WA and be so close to mine sites offers speed to market and supply chain security for Fenner Dunlop's customer base," Trevor Svenson, Fenner Dunlop's General Manager, Sales and Marketing says.

The company is one of the only companies to manufacture a complete range of conveyor belts for all mining applications locally.

Its Kwinana plant houses one of the world's largest steel cord press, calender and related equipment and has the capability to produce steel cord and rubber ply belting up to 3200 millimetres wide and up to 50 millimetres thick. This gives the facility an annual production capacity of 330,000 square metres, approximately 130 kilometres of 3200-millimetre belt.

Scott Ryan, Fenner Dunlop's Project Manager, says the company is proud to be an Australian manufacturer supporting the major project.

"Fenner Dunlop has manufacturing centres located around Australia, with the oldest located in the Melbourne suburb of West Footscray, which has been making conveyor belts for more than 100 years."

"Our Kwinana plant was strategically located, as iron ore projects are the biggest customers of steel cord belt. It just makes sense to also have the manufacturing facilities located close to this core market.

Pictured:
Our Kwinana plant manufactured the largest fabric belt on record. The 580m roll of UsFlex® belt was sent to a customer in the Pilbara

The huge 2.8m x 6m belt reel was built by JAF, part of the Fenner Dunlop Australia group of companies.

"Delivery times and freight costs are often much lower when sourcing from a local business and you also have the assurance of after sales support that operates in the same time zone as you."

The manufacturing plant also includes a testing and research and development laboratory to ensure product compliance with strict local, international and customer nominated standards. It is also home to the mechanical practice training facility, designed for new mechanical technicians to undertake on-the-job conveyor belt maintenance training.

"We're looking forward to working with BHP on this new project, improving their conveyor performance and supporting them in the expansion of their operations," Mr Ryan said.

"2019 is shaping up to be a big year for Fenner Dunlop as the company continues to increase sales. Kwinana is currently working 24-7 to keep up with the order books, which is thanks to our dedicated team that always try to provide quality products and the best possible service."

South Flank's Overland Conveyor Belt project is expected to be completed in December this year.

A DECADE AT KWINANA

FENNER DUNLOP CELEBRATES

Article published by:
Australian Mining

Australia's mining industry has gone through notable evolution over the past 10 years. From the wax and wane of the nation's boom to the rise of the driverless truck, the sector has changed considerably.

Conveyor specialist Fenner Dunlop was in on the ground floor of this transition in 2009 when it developed its Kwinana manufacturing plant in Western Australia.

Designed as a manufacturing facility for conveyor belts, the plant was built to accommodate mining clients in the Pilbara region, saving them significant time by being able to order belts from a local supplier.

Fenner Dunlop's choice of location, use of advanced technologies and $70 million budget set the plant apart from its competition at the time.

Now celebrating its 10th anniversary, the Kwinana plant was not only innovative when it was commissioned, but was also built with an eye to the future.

To this day, the Kwinana plant is the most expensive investment made by a conveyor belting manufacturer in Australia. While it was arguably a risky investment at the time for Fenner Dunlop, it is one that has paid dividends in the years since.

The construction of the high-tech plant has accompanied the rise of the Pilbara as a premier mining region, particularly for commodities such as iron ore and gold.

"For us, Western Australia was where all the action was," Fenner Dunlop Australia managing director Graham Lenz tells Australian Mining.

"It gave end users some key benefits in just naturally being that close to their facilities. We were — and still are — so much closer to them than anyone coming from Asia or anywhere else in the world so that was a natural fit."

The end users of the Kwinana plant's conveyor components have taken advantage of considerably shorter lead times than they were previously accustomed to when using overseas suppliers as it meant they weren't reliant on shipping.

The shorter lead times in turn allowed mining operations to cut down on their working inventory due to faster and more reliable supply chain.

Lenz says the logistical advantages, in addition to the sheer scale of the operation, allowed Fenner Dunlop to push its manufacturing to the limit by delivering some of the biggest and heaviest conveyor belts ever built.

This culminated in the record delivery of a 580-metre roll of UsFlex ply belt in March 2019, a design accompanied by a 2.8 metre by six metre belt reel that was specially built by Kwinana-based Fenner Dunlop subsidiary JAF Engineering.

Following a $20 million expansion in 2013 that added a second press line, the plant boasted the capability to produce steel cord and rubber ply belting up to 3200 millimetres wide and 50 millimetres thick.

The plant was built with the space to accommodate another three expansions and according to Lenz, there's room for much more growth.

"The plant was built with cutting-edge technology — that was what made it very special back then and still special today," Lenz explains.

"We spent around $16 million then to put extra capacity into Kwinana in 2013 as a vote of confidence in the market, and since then we have invested heavily in innovative technology for greater efficiency and greater throughput."

Fenner Dunlop's expansion at Kwinana will continue beyond the site's 10th anniversary. The company plans to leverage a deal of innovative upgrades over the next decade, with a host of upcoming developments in the

Pictured:
The Kwinana manufacturing team

pipeline (Lenz prospectively hints at the plant's potential for solar investment, for example).

The company's sizeable investment in the plant has not, however, been to the detriment of its older Australian facilities.

Fenner Dunlop's Melbourne facility has recently gone through an extensive retrofit to implement Industry 4.0-driven smart technologies, for example.

The company has built its service offering over the past decade through a series of engineering-focused acquisitions, such as the aforementioned JAF; the Belle Banne group of companies, acquired in 2010; Statewide Belting, acquired in 2011; and Australian Conveyor Engineering (ACE), acquired in 2012.

In January 2019, Belle Banne Conveyor Services in turn purchased Victoria-based manufacturer Conveyor Pulleys Australia (CPA), further expanding Fenner Dunlop's range.

Lenz believes the company's philosophy supports the mining industry with the best engineering solutions and designs to support conveyors in total, not just the belts.

"CPA can handle pulley and structure — you've got to get that right. One thing that all our acquisitions have in common is that they can do engineering, refurbishment, overhaul and manufacturing of conveyor systems, including the electrics," Lenz says.

"We've invested heavily in engineering-focused businesses and products in the time since we built the Kwinana plant. All the things that support the conveyor — and everything that sits under it — is where we've concentrated our efforts over these last 10 years."

This engineering focus runs parallel to Fenner Dunlop's evolution as a trainer and service provider. As a registered training organisation (RTO), Fenner Dunlop expanded its remit last year to include mechanical services training in addition to conveyor technician training.

The company's RTO status has aided its launch of the Engineered Conveyor Solutions (ECS) arm of the business, envisioned to provide long-term, post-installation support for conveyor setups using in-house technicians.

This top-to-tail approach helps eliminate 'the blame game' that can arise during periods of equipment breakdown when sites are reliant on multiple suppliers. The consequence of this back-and-forth interaction is that it exacerbates already costly downtime scenarios due to wasted time.

"Thanks to the ECS approach, we have embedded a lot of our in-house engineers on customer sites, which allows us to tailor these solutions right down to the individual conveyor," Lenz says.

"If a customer has a particular mining conveyor where they can get energy savings from, say, low rolling resistance or high impact resistance, we can accommodate that."

And what of the next decade? According to Lenz, the evolution of Fenner Dunlop over the next 10 years could be even more radical than the previous one as concepts such as the Internet of Things (IoT) and the continued electrification of the mining workplace becomes more common.

Given the pace of change in the industry at present, perhaps it won't be too long before we see 'the new Kwinana'.

"Electrification is a big part of it. We're starting to see some changes now, but the big trucks and trains are largely diesel driven, whereas conveyors have always been electrified," he explains.

"So, because we've already got electrification and automation covered, we are always thinking about how we make conveyors smarter.

"In the future, we anticipate smart factories that have the ability to allocate construction slots based on knowing when something's going to wear out so you can begin to build the solution before it becomes a problem.

ANNOUNCEMENT

FENNER DUNLOP OPENS NEW SALES, SERVICE AND MANUFACTURING CENTRE IN BRISBANE

Fenner Dunlop continues to expand with the opening of its newest location in Brisbane to better serve its valued customers. In addition to the Sales and Marketing office, the branch will also be home to the Service Centre, warehousing and a state-of-the-art Idler plant.

The branch will serve as a hub to provide engineered conveyor solutions, field service and after sales support. Located less than 8 kilometres east from Brisbane CBD and within 500 metres of the Gateway Bridge, the brand-new facility includes a spacious workshop and covers 3,300m^2 with the site having a total of 6,053m^2.

"The move to this facility in Murarrie allows for additional capacity to meet growing demand from our customer base both now, and into the future. A lot of effort from our dedicated Fenner Dunlop and ACE teams went into making this facility a reality," said Trevor Svenson, Fenner Dunlop's General Manager - Marketing and Sales.

The new branch is located at 35 Alexandria Street, Murarrie, and can be contacted at (07) 3907 3200.

LINKING ZINC

WITH FENNER DUNLOP'S TOP-TO-TAIL CONVEYOR SYSTEM

Article published by:
Australian Bulk Handling Review

Fenner Dunlop and Australian Conveyor Engineering have set sail to Singapore to undertake a major conveyor overhaul on the shipping vessel Aburri.

On the banks of the Northern Territory's McArthur River is the Bing Bong loading facility, one of Australia's most important sites for zinc and lead exports.

Trucks from the McArthur River Mine carry hundreds of tonnes of bulk concentrate 120 kilometres north, depositing their payload at Bing Bong's storage shed.

However, the mouth of the river is shallow, meaning massive bulk transport ships are unable to anchor directly at the facility. This is why Carpentaria Shipping Services operates a custom solution called MV Aburri.

Designed specifically for this operation, MV Aburri is a shipping vessel that is small enough to dock at Bing Bong. The vessel is a workhorse and operates around the clock to cart up to 3200 tonnes of concentrate to ships waiting in deeper waters.

In order to keep it in ship shape, MV Aburri undergoes a dry dock once every five years. The vessel is sent to Singapore, where it is removed from the water to allow maintenance crews access to begin major repairs or upgrades.

As part of this process, conveyor belt specialist Fenner Dunlop was brought in to service MV Aburri's conveyor system.

Craig Wright, Fenner Dunlop's NT Branch Operations Manager, explains that the company quickly inspected the ship and presented a detailed report that later was converted into a million-and-a-half-dollar tender.

"Initially the approach from the customer was to re-use the existing belts and most conveyor components if it was viable, however after an inspection to ensure the vessel would operate with minimum down time, we advised of a complete overhaul," he says.

Fenner Dunlop began the project late last year in collaboration with its sister company Australian Conveyor Engineering (ACE). It involved the delivery and commissioning of an entirely new conveyor system, including all new pulleys, idlers, belt cleaners, chutes and a programmable logic controller (PLC) operating system.

Once the structural repairs to the vessel's haul had been completed, the five re-furbished systems and one brand new system were installed into place.

"Our goal was to provide an entire system replacement, not just the belts, in order to provide a long-lasting and well-engineered solution," Mr Wright says.

"Upgraded components replaced parts that had become worn over time. With the right lubrication and maintenance, MV Aburri should see years of trouble-free servicing.

Around 340 metres of Fenner Dunlop's QuarryMaster belt will be supplied and vulcanised as part of the overhaul. QuarryMaster is an M Grade cover compound, which provides high strength, low stretch and is completely resistant to moisture.

In addition, stainless steel components were used instead of painted steel to ensure the new conveyors are able to handle the highly corrosive salt air.

Mr Wright says an important thing to consider when designing a ship-based conveyor system is the potential for alignment shifts.

"On land, a conveyor will be largely fixed, as the ground underneath it rarely moves," he explains.

"However, when a conveyor is on top of a ship, the vessel is constantly flexing which can change the alignment. To account for this, we re-engineered how the drive system works to take pressure off of certain components, improving its longevity."

Safety features include improved guarding systems around a counterweight wire rope, to a complete new and improved PLC system to control all the conveyors. The new PLC system has many advantages including eliminating previous faults like in the event of a loaded shut down, having to manually remove concentrate before the system can once again begin.

As part of the tender, Fenner Dunlop also provides a 24/7 breakdown service, with technicians on call to respond to urgent issues.

"We are working with the customer to avoid unnecessary downtime. We also expect to see improvement in the overall efficiency of their conveyor system," Mr Wright says.

"Undertaking this major upgrade alongside our sister company ACE has been a great experience. This was an interesting project and it demonstrates our ability to manufacture and supply a complete conveyor system from head to tail."

ANNOUNCEMENT

AUSTRALIAN BULK HANDLING AWARDS 2019 FINALIST

Fenner Dunlop has been named as finalists in the Australian Bulk Handling Awards 2019 under three categories:

- Excellence in Transport and/or Conveying (Overland Conveyor Belt)
- Supplier of the Year
- Bulk Handling Facility of the Year: Manufacturing and Processing (Kwinana)

The awards are the only program specifically dedicated to recognising the outstanding achievements and successes of companies across the bulk solids handling sector.

ROBOTIC AUTOMATION

IDLER FACILITY IN QUEENSLAND BOASTS

Article published by:
Australian Mining

Fenner Dunlop, Australia's only company to manufacture and supply a complete conveyor system, has taken residence in a 6000-square-metre facility in Brisbane that incorporates the latest in robotics technology.

Fenner Dunlop has been manufacturing idlers since doors opened in July 2019. Now, the new plant could produce 50 to 100 per cent more idlers a day than conventional manufacturing thanks to automation.

"The fabrication time depends upon the size of the unit that we're making, but that rate is the rule of thumb," Fenner Dunlop chief operating officer Steve Abbott tells Australian Mining.

When asked about the start of idler manufacturing, Abbott attributes Fenner Dunlop's success to the company's familiarity with manufacturing and good relationships with equipment suppliers.

"Being a mining OEM is in Fenner Dunlop's DNA. This facility completes the loop to make us Australia's only full conveyor OEM," Abbott says.

Being the newest idler manufacturer in Australia, Fenner Dunlop had the opportunity to adopt the latest technology at its idler plant.

It's a "big step up" from the traditional methods of idler manufacturing in Australia, as the entire plant can be run with only two people, according to Abbott.

The use of robotics also helps to ensure Fenner Dunlop is capable of generating repeatable product quality and removes human error from the equation.

The robot-run manufacturing reduces manual handling and automates the welding process, ensuring consistency of end products every time.

While Fenner Dunlop has always designed its idlers, they were previously imported. Long lead times became an issue for some customers, resulting in an increase in working capital for their operations.

"Customers can forget to restock idlers or require them quickly due to changes in mine plans. So often they are needed in a hurry. We need to be able to cater to that need and quickly turn that supply around," Abbott says.

Fenner Dunlop believes that local fabrication of products is key to that fast turnaround, and automation supports the need for speed, consistency and competitiveness.

The Brisbane-based idler plant is a good logistical point to cater to mine sites in the Queensland's Bowen Basin, New South Wales' coal regions and across these states more broadly.

Aside from idler manufacturing, the Brisbane facility performs rubber lining work for steel equipment, supplies a range of specialised conveyor equipment from its warehouse and sends out service teams for on-site maintenance in the local city area.

Fenner Dunlop is also exploring alternative materials and looking at reducing the idlers' weight. Not only will this help minimise the manual handling risks associated with the idler, it also has potential to lower noise levels.

"The new facility was designed with consideration for broadening the idler product range" Abbott says.

Elsewhere in Australia, Fenner Dunlop has opened a service operation in the Hunter Valley, which Abbott believes "will become quite a big business" for the company.

This service offering complements Fenner Dunlop's existing ACE engineering business in the NSW region.

The company has also secured a belt contract with one of Australia's largest iron ore operations this year, a significant milestone that builds on its conveyor contract win at BHP's South Flank project in Western Australia during April.

"We are currently seeing the benefits of investment decisions and hard work from our teams over the last 5-10 years. It's great to see our employees get reward for effort." Abbott says.

HEAD TO TAIL

SYNERGY SUPPORTS SAFETY SOLUTIONS

Article published by:
Australian Mining

Fenner Dunlop's diverse engineering expertise has led to innovative inventions and practices, such as a racetrack belt reel and knifeless splice, that dramatically improve safety.

One of Australia's biggest mining companies, approached Fenner Dunlop's Engineered Conveyor Solutions (ECS) team with a dilemma.

The company was transporting Fenner Dunlop belt reels on its site with a forklift and wanted to make the process safer for its transport operators.

Measuring around four metres in diameter, the round belt reels had forklift pockets on the bottom that added further height. Because of this, forklift operators were moving up to 35 tonnes of belt reel with an awkward centre of gravity.

Safety is critical for the team at Fenner Dunlop, according to Alex Mason, one of Fenner Dunlop's ECS Engineers.

"It's something at the forefront of all of our minds," he says. "Major considerations are made to determine if something is safe or if we can make it even safer."

Following a review of Fenner Dunlop's transport procedures, Fenner Dunlop's ECS team soon began drawing a concept design to improve how belts are delivered.

Two issues were identified in the original round style belt reel design: the height of the belt reel and the lashing point positions. Both of these factors impacted the belt lashing procedure significantly, which a new design could make safer.

Fenner Dunlop found that if the reel design was changed from a round to a racetrack style, it would reduce the reel height by 400 millimetres, to 3.2 metres in diameter. In addition, with the new design the forklift pockets could be shifted to the centre of the reel instead of below it.

"Picking up a belt reel from the centre is more stable, as it shifts the centre of gravity significantly," he says.

After drawing up the design, the team submitted it to Australian Conveyor Engineering (ACE), a sister company part of the Fenner Dunlop Group, which performed the calculations. These were sent to another company in the group, JAF Engineering, to find any issues that could arise within the manufacturing process. After this, ACE created a model and finalised the design.

The new design shifted the lashing points on the reel to the centre point, using lifting style holes. This allows transport operators to use significantly shorter chains and can set up on the ground, without needing to climb into the trailer.

"WE ALSO FOCUSED ON DESIGNING THE REELS TO BE AS USER FRIENDLY AS POSSIBLE," MR MASON SAYS.

"The new design reduces the chain length by removing the requirement for a chain to run through the centre of the reel. Additionally, we ensured each lashing point could be easily accessed from a ground position.

"Now the operators can run shorter chains from the centrally located chain down points to the trailer in the desired direction of restraint, meaning it's a lot more ergonomically efficient and requires a lot less labour."

Transport operators have felt the difference between the two designs and are much more at ease as a result of the change.

Craig Arnott, Operations Manager for Zenith Low Loaders, says drivers greatly appreciate the lower centre of gravity, as it is more comfortable to transport over long distances.

"There is a lot less risk of these top-heavy belts going over in transit," Mr Arnott says.

"The drivers are a lot more comfortable about moving to the shoulder of the road, thus putting the belt on a slight angle when approached by oversize loads in the opposite direction, which is a common occurrence.

"The lashing points on the side of these new reels have been a huge improvement, as we no longer require very heavy and dangerous chains going through the middle of the belts. There is now sufficient tie down points on the side of these new cages to over secure these belts to the trailer."

As part of his role as an ECS engineer, Mr Mason regularly liaises with other members of the Fenner Dunlop Group to provide solutions across the entire process, from design, manufacturing, installation and maintenance.

The company is constantly looking for new ways to improve productivity and safety through innovative engineering.

An example of this can be seen through Fenner Dunlop's knifeless splice solution. Following a number of knife-related injuries, a work group at AGL's Loy Yang Power Station found a way to remove the use of blades when working on conveyors.

Belle Banne Conveyor Services (BBCS), a member of the Fenner Dunlop Group, undertook a comprehensive review of work practices following a knife injury on site.

Glenn Nijenhuis, BBCS Site Manager, says improvements to PPE, specific risk assessments and changes to body positioning when using knives, just didn't seem to go far enough.

"People were getting hurt with knives and the best way to stop people getting hurt with knives is to stop using them altogether," he says.

"Initially our people thought we can't do that, this is the way it has been done for 30 years. For a belt splicer the knife was the go-to tool, like a calculator is to an accountant.

"WE GOT OUR PEOPLE ON THE SHOPFLOOR INVOLVED IN THE PROCESS, SHARED THE PROBLEM AND CHALLENGED THEM TO COME UP WITH A SOLUTION."

The team identified 10 different steps to perform a splice that involved a knife and worked through them systematically to find a way of completing a splice without a knife.

A multifunction tool known as "The Renovator" was designed, combing a grooving gun traditionally used to groove pulleys and tyres to replace a hook knife along with piano wire and industrial snips in place of various other knives.

Mr Nijenhuis says the team does around 50 to 80 splices a year at the Loy Yang site, with around 25,000 man hours spent on belt repairs.

"By eliminating the use of knives we've eliminated the risk of knife-related injuries on these tasks," he says.

The Fenner Dunlop Group uses engineering expertise from all stages of a conveyor's lifespan as part of its ECS offering. Mr Mason says this is what helps Fenner Dunlop stand out.

"CONTINUOUS IMPROVEMENTS OF OUR SYSTEMS IS SOMETHING WE ALL STRIVE FOR AT FENER DUNLOP," HE SAYS.

"My role is to liaise across different departments and use the collective knowledge to help find new ways to make our processes and products better.

"Our clients appreciate the additional accountability and communication that comes from this broad support network, which ends up saving them time and money."

Pictured:
Nigel Haywood (RITC Manager), Mark Shaddock (IBSA Industry Engagement Partner), Vicki Wust (General Manager - Safety, Training & Technical), Fenner Dunlop Trainer/ Assessors and Fenner Dunlop WA Apprentices

BELT SPLICING

IS NOW A TRADE IN WESTERN AUSTRALIA

Fenner Dunlop's Belt Splicing Traineeship has become trade recognised in Western Australia. This recognition means that now we offer our employees a learning pathway that combines a national certification and trade papers through our Enterprise Registered Training Organisation (RTO).

Vicki Wust, General Manager - Safety, Training & Technical, started the process with the Resources Industry Training Council (RTIC) in July 2018 to initiate the trade recognition for Fenner Dunlop's Conveyor System Technicians in Western Australia. This proceeding led to industry engagement and action by the State Training Board and WA Department of Training and Workforce Development.

Success was achieved on 24 September 2019, when the Western Australian Government (MP - Sue Ellery) endorsed Belt Splicing as an Apprenticeship/Trade.

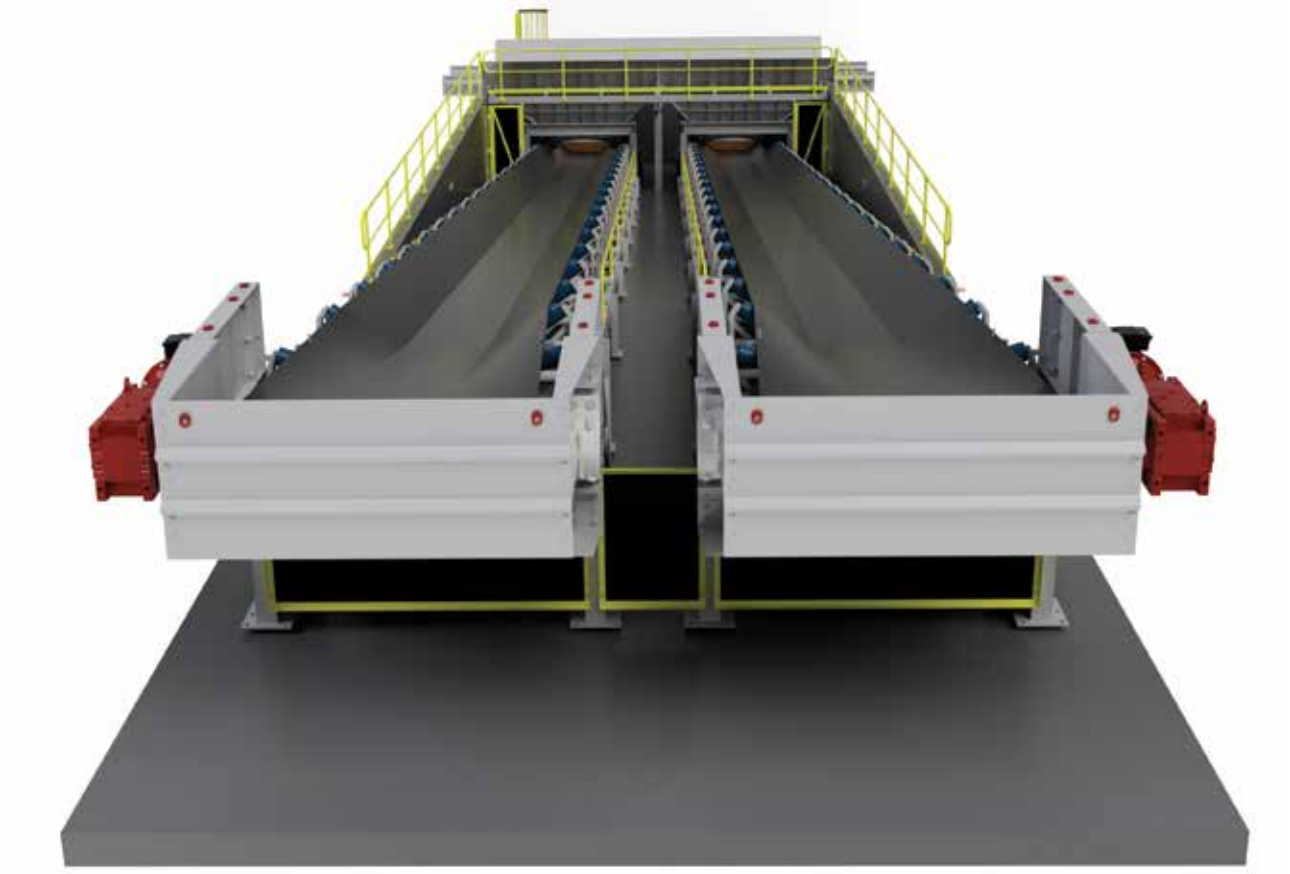
"Fenner Dunlop are industry leaders, with a proven track record for developing and upskilling both new entrant and experienced Belt Splicers through their nationally certified career pathway." Said Vicki. "I have a vision to see Belt Splicing recognised as a trade across Australia. Currently two states down and five to go!".

Fenner Dunlop's current intake of 30 WA Belt Splicing Trainees have all transitioned onto the new Apprenticeship Scheme.

Fenner Dunlop RTO has delivered over 1400 Belt Splicing qualifications, across New South Wales, Northern Territory, Queensland, South Australia, Victoria and Western Australia, including more than 300 new entrants.

INNOVATIVE TRAIN UNLOADER

CONVEYORS DELIVERED TO SADA



Formed in 1991 to undertake contract processing and handling services for the NSW and Australian coal industry, SADA Group operates with extensive experience in every step of the process, from mining and coal preparation through to logistics and shipping.

SADA focus on innovation enables the company to deliver a trouble-free, seamless, integrated solution on every project. At this time, the challenge was to provide a lower cost-per-tonne alternative to trucking.

Fenner Dunlop ACE was contacted and designed a low-cost train unloading station built to receive and safely transport a variety of bulk materials from directly underneath a railcar. Two identical systems operate in parallel to convey the product up 4.5m vertically from under the railcar to a location 32m away, streamlining the unloading process.

The new Train Unloader Conveyor provides a safe and cost-effective alternative to conventional unloading methods. It has a compact design and is robust enough to suit a range of material types, particle sizes and densities.

SADA recognises that the innovative design will contribute significantly to their customer's operations.

SPLICE WITHOUT A KNIFE WINS BEST SOLUTION TO A SPECIFIC WORKPLACE HEALTH AND SAFETY AWARD

The WorkSafe Awards celebrate the efforts of Victorian people and organisations in improving workplace health and safety and supporting injured workers' return to work. Finalists were selected from 219 nominations across nine categories and represent a variety of industries, including construction, transport, retail, local government and health.

Belle Banne Conveyor Services (BBCS), part of the Fenner Dunlop Australia group of companies, has won the Best Solution of a Workplace Health and Safety with the Splice without a knife initiative.

Employees at BBCS realised that 80% of injuries at their workplace were lacerations caused by using knives to splice conveyor belts or repair damaged sections of rubber. In response, it was developed a knifeless splice technique that involved identifying 10 actions that required a knife and implementing an alternative method for doing each task.

Stuart Milliken, Chief Financial Officer, said "Creating a safer environment for our employees is always the forefront of our business. We are honoured to be recognised for this award, and thanks to Kurt, Glenn and the BBCS Team for their leadership to increase worker safety. The splice without a knife methodology has changed the way belt splicing is completed across the industry Australia wide."

Several outstanding safety initiatives and projects were also recognised, congratulations to all the winners.

SERVICE RECOGNITION

35 YEARS SERVICE
Jeff Farrell
Frank Najdek
30 YEARS SERVICE
Mike Hock
Van Vuong
25 YEARS SERVICE
Dean Parsons
Kenneth Jones
20 YEARS SERVICE
Kae-Leene White
Craig Larkin
15 YEARS SERVICE
Jan Stendara
Shane Macdonald
Nathan Bell
Robert Herceg
Brett Page
Andrew Tunks
Lenard Renehan
Cameron Trott
Stephen Peters
Daniel Nugent
Shane Wilson

10 YEARS SERVICE
Julian Norton
Brendan Collins
Mathew Trousdale
Jai Campbell
Terry Windust
Daniel Hopf
Duncan Waugh
Martin Cuff
Craig Hemingway
Paul Burkinshaw
Brendon Whittaker
Peter Higgs
Tajinder Mann
Sharyn Kapitelli
Anthony Downing
5 YEARS SERVICE
Megan McDonald
Robert Brown
Cheryl Ruedin
Jarred Robson
Adrian Wright
Scott Robertson
Gerrard Cecil

John Irgl
Shane Ruff
Nathan Collier
Miki Djukic
Matthew Shilson
Joel Hingst
Marthese Kizan
Jacob Gibbs
Shailendra Borade
Laura Bruce
Michelle Tankard
Con Argyris
Joshua Ward
Joy Krige
Bradley Milikins
Peter Reed
Noel Shillig
Phillip Patrick
Matthew Sharam
Michael Brosas
Anthony Hacket
George Reid
Darren Santospirito
Agung Wardana

{ MEET THE TEAM

WHAT DO YOU LIKE MOST ABOUT YOUR JOB?

CARLEEN STEERS

Administration Officer at
Statewide Belting

"We have a very close-knit team here, which makes it a privilege to come to work every day."

CAMERON HOOKS

Supervisor as part of the
Rio Tinto Ports contract

"My favourite thing about working for the company is all the different people I've met and work with from all around the country."

DAVID COCKERAM

Service Coordinator

"The satisfaction of completing jobs safely; customers that are happy with the quality of our work; and the great teamwork shown from our crew."

BARRY STEPHENS

International Business
Development Manager

"My current role has allowed me to fully utilise my conveyor belting knowledge that I have gained over the last 25 years in this industry."

BEAU WEISS

Branch Manager at
Belle Banne Conveyor Services

"I enjoy the diversity within my role and the challenges that each day presents."

JEREMY AXISA

Branch Manager (Mackay)

"The culture across the entire business is the best I have experienced in this industry, and it filters down from the very top of the organisation. It is rewarding to be part of such a successful TEAM."

JOY KRIGE

General Manager Service WA

"I enjoy working here as every day is different with its unique challenges. I am fortunate that I get to be involved in all aspects of the business and get to interact with the entire team."

LOUISE BOYLE

Conveyor System Technician
Mechanical Level 2

"The support the company have given me is fantastic; Working with good people makes the job more enjoyable!"

MARK GREEN

National Services
Technical Manager

"I enjoy the complexities of different types of conveyor installations and the continuous improvement of conveyor systems."

SAMMY JAMAL

National IT Manager

"I enjoy the challenges of working with different parts of the company providing solutions to complex situations including integrations and upgrades."

ANUSHKA FERNANDO

Commercial Manager
East Coast

"It's been a very supportive environment throughout my 9 years at Fenner Dunlop, with genuine opportunities to develop my career and skills as well as move into different parts of the business."

TIM CLEINE

Site Manager at CPA

"I like being part of the TEAM because every day brings a different challenge. One day you're working with coal in Whyalla, the next it's woodchips in Hallam. Life is never dull!"

MADE ULTRA TUFF™

Next generation abrasion resistant cover compound.

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LONGER BELT LIFE - LESS SHUTDOWNS

TAILORED COVER THICKNESSES

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A durable compound that offers a significantly longer belt life resulting in extended intervals between major shutdowns.

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