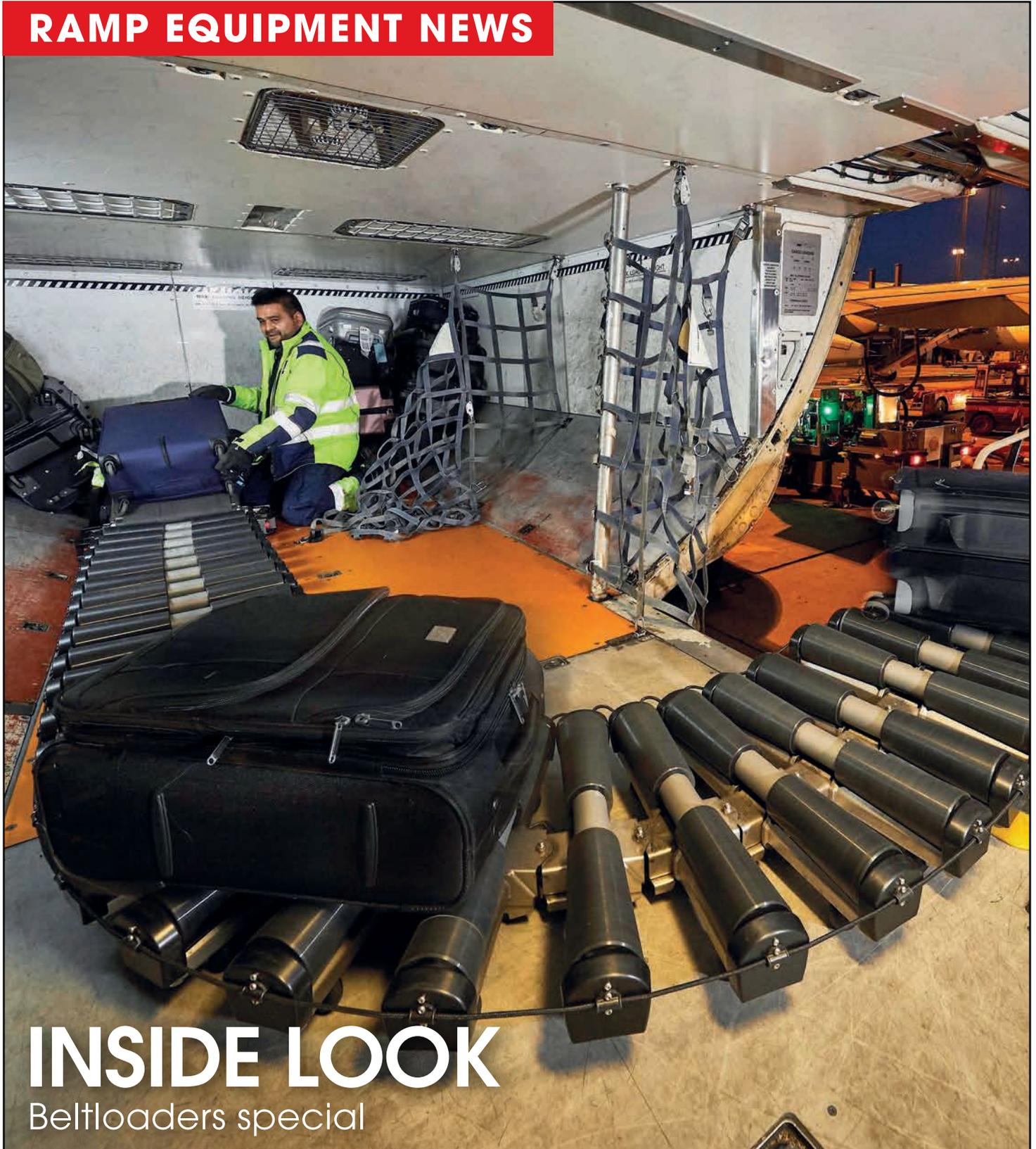


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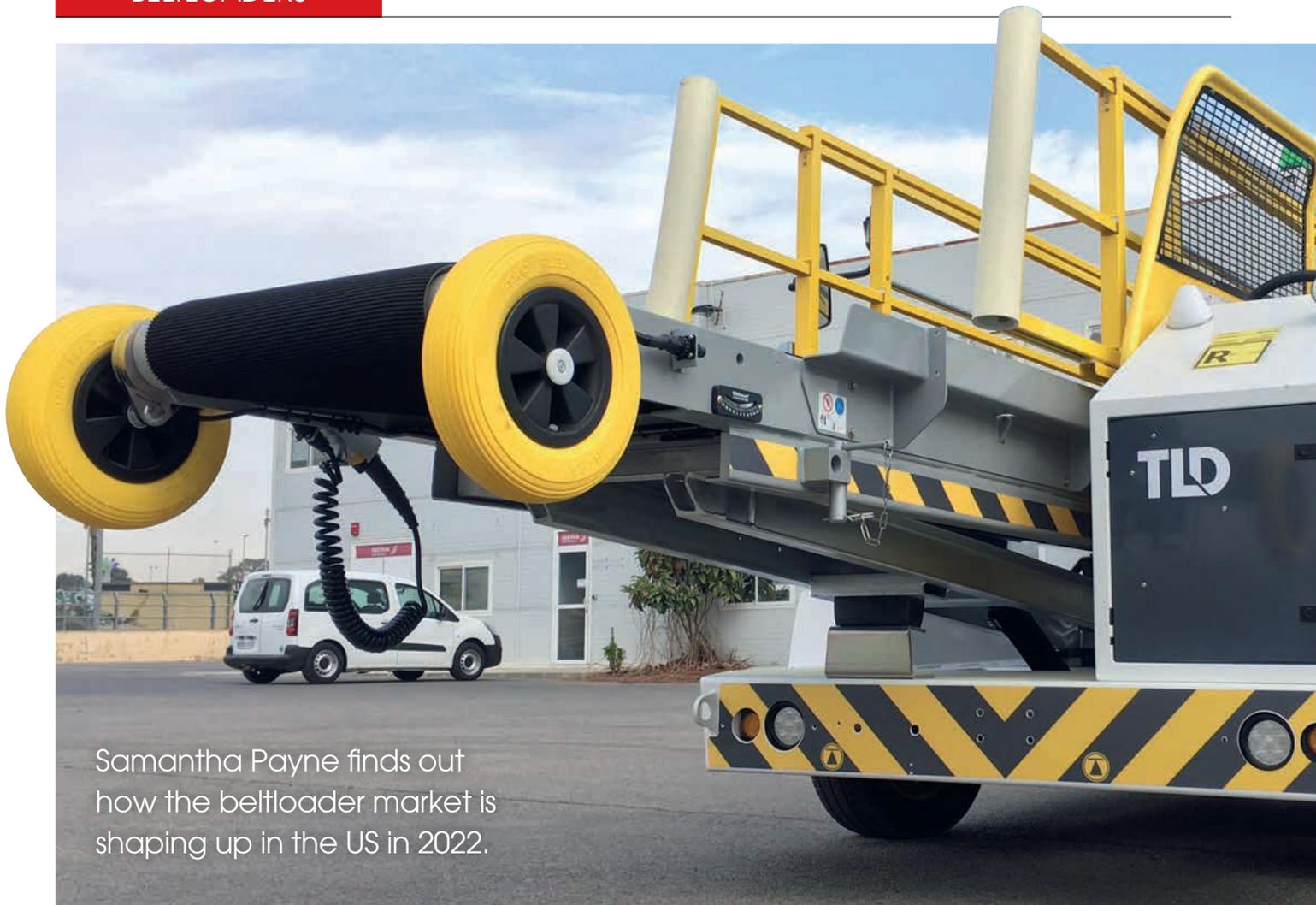
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INSIDE LOOK
Beltloaders special

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Samantha Payne finds out how the beltloader market is shaping up in the US in 2022.

Leaner ground operations

As travel restrictions ease across the US, many GSE manufacturers saw an uptick in orders at the start of the year following a robust 2021 final quarter.

Ben Reeves, Vice President of Power Stow Americas, said 2022 had already started strong for the company thanks to an increased demand for hybrid automation caused by labour shortages affecting the ground handling industry.

“The demand is particularly fuelled by the need for semi-automated equipment to enable a lean ground operation, since all handlers are faced with a shortage of staff, high turnover of staff and consequently high on-boarding costs of staff. Furthermore, among many of the benefits,

our semi-automated equipment enables ground handlers to reduce operational costs and optimise their teams, as well as improving ramp agents’ working conditions and efficiency.”

The majority of Power Stow’s customers come from North America and Europe. It has designed a special rental programme for customers who cannot afford to purchase its product outright during these difficult times.

“Our Rental Programme has been designed to work especially for our ground handling customers and has provided us with some opportunities we may not have had without it. It is one of our solutions to the uncertainty that our customers were and are facing. It allows them to take advantage of all the benefits that the

Rollertrack Conveyor system offers with a flexible pricing model,” said Reeves.

Also its Assisted Docking System is nearing the end of the product development phase, which Power Stow hopes to roll out later this year.

Reeves continued: “We maintain a very close relationship with our customers, as we always look for ways, input and ideas to make their baggage and cargo handling operation more efficient, easier and cost-effective. In the past year, we’ve made some smaller changes to the system to improve the total cost of ownership and reliability. We’ve upgraded our Roller Motors from DC to EC and improved our bungee design to be three times stronger than before. Furthermore, we are continuously working



on additional features on the system to make it even more convenient and effective to handle packages, mailbags or other types of bulk cargo.

“In the US, our customers have moved to almost all electric. Many are incorporating lithium battery technology. In Europe electric motors have been the predominant choice for several years, while in the Asian markets, diesel is still preferred, but several markets are now in the process of accelerating the change to electric,” explained Reeves.

For Textron GSE, 2021 sales did not rebound to pre-covid levels but it is witnessing encouraging signs of recovery due to orders booked and quote activity as domestic travel picks up again.

“There has been stronger demand within North America for our beltloaders as domestic travel regains momentum. As flight schedules increase, customers have needed to add and replace equipment to manage their operations. Textron GSE is committed to developing and offering products that improve operational efficiency and safety for all customers around the

world,” said Matt Chaffin, Vice President and General Manager, Textron GSE. “There was a definite shift in demand during 2021 from internal combustion to electric powertrains and Textron GSE was able to capture increased sales of both lead acid and lithium powered vehicles.”

Textron GSE is optimistic about 2022; however, like the rest of the industry, remains cautious. “There has been increased demand for equipment as operations begin the journey to pre-pandemic levels and Textron GSE will respond to meet that demand. Even with Omicron, according to the TSA, domestic travel is nearly back to pre-pandemic levels,” said Chaffin.

Similarly, TLD is seeing an increase in enquiries for its beltloader product line as many customers want to transition to electric and Aircraft Safe Docking solutions.

“From main ground handlers, like Swissport, to airlines or cargo companies, like JetBlue and Amazon, many customers are enjoying the reliability of the TLD beltloaders and the efficiency of the ASD system,” said Remi Langlois, COO TLD Sherbrooke, Canada.

ASD was launched in 2014 and has been retrofitted as a standard feature in all NBL beltloaders that are operating in the US and across the world.

Over the last eight years, ASD has evolved and is now fully integrated within TLD’s LINK IoT system, which is available with a no-touch option that controls the approach speed and stops the GSE from colliding into aircraft and an anti-pinch front bumper, stopping the conveyor belt if a baggage strap gets trapped or even worse someone’s hand.

The hybrid beltloaders come with lead-acid and TLD’s own patented iBS lithium-ion battery options, featuring an electric driveline and a small genset. It can also be powered by hydrogen fuel cells.

“Our customers really appreciate this flexible approach. At a time when flexibility towards existing infrastructure is a challenge for our industry, those alternative power sources are a real benefit for operations,” continued Langlois. “The vast majority of our production is electric today. This is the driveline of the future and it brings a lot of safety and comfort for the operators while loading and unloading an aircraft next to a quiet, emission free GSE. And with a lithium-ion version the autonomy is such that even with limited access to charging, you can always operate it.”

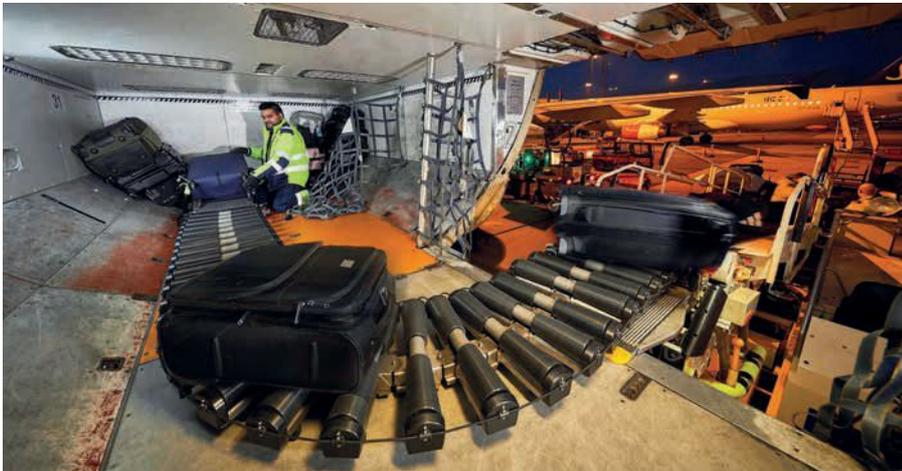
Mallaghan is well positioned to benefit as the US market continues to bounce back this year, with customers showing an interest in both its lithium-ion and lead-acid battery powered Bendibelt conveyors.

“We have come out stronger as a company from the pandemic because we have invested our time and money into electrification,” said Sebastian Köllner, Marketing Manager, Mallaghan.

TUG 660 Li

In October 2021, Textron GSE introduced its TUG 660 lithium beltloader. This new beltloader complements the existing line of TUG 660 models available in gas, diesel, LPG, and lead acid. Designed with a high-performance lithium-ion electric drivetrain, the TUG 660 Li offers the advantage of energy efficient, quieter technology that delivers low cost of operation.

Engineered to consume less power and charge twice as fast as lead acid technology, the TUG 660 Li also delivers an increased range. A battery management system constantly monitors the health and performance of the battery, and the TUG 660 Li provides the convenience of



opportunity charging in between flights. Its zero-maintenance lithium battery offers greater depth of discharge, meaning more battery capacity is utilised and generates consistent performance that does not fade over time. Developed to include a highly efficient AC drive system and regenerative braking, the TUG 660 Li recycles energy back to the battery when the brakes are applied. Built for the flexibility of customer operations, the TUG 660 Li can accommodate a range of commercially available lithium-ion batteries.

Chaffin said that there was significant interest in the TUG 660 Li both during and following the GSE Expo show in Las Vegas last year, adding that: “Customers are actively seeking electric product solutions that align with their sustainability initiatives and effectively support their operations without compromising product performance. Several units have already been sold to customers.”

Textron GSE agrees that lithium will continue to be in demand now and in the future because the industry is committed to evolving itself and delivering solutions that position it to be net zero by 2050.

“To achieve this, customers are focused on exploring a host of emerging technologies like lithium that will assist the reduction of CO2 emissions. While lithium technology is typically more expensive than other powertrain options, it offers many cost advantages that can be realised over the life of the product. For example, the TUG 660 Li beltloader charges twice as fast as electric powered technology and unlike lead acid, once charged it will no longer pull power from the wall. This reduces the amount of power required to charge the unit resulting in lower energy consumption. Lithium technology also generates efficiencies via its maintenance

free batteries that have a longer life and greater depth of discharge.

“The cost of lithium technology is improving every year as interest and demand increases for electric vehicles. The more lithium vehicles in use, the more opportunities for the technology to be adopted in other products. In addition, government organisations are increasingly subsidising the use of electric vehicles through tax credits, rebates, grants and more in support of clean energy technologies.”

Until a sustainable infrastructure is established to support electric technology, Textron GSE knows that its customers may face challenges with their charging infrastructures and has designed its new

products with the ability to interchange power systems.

“This means a customer could purchase a gas or diesel product and as infrastructure evolves the vehicle can seamlessly be repowered with a lithium powertrain.”

Textron GSE has a good relationship with Power Stow, which offers a solution designed for Textron GSE’s TUG 660 line of beltloaders. The TUG 660 line of beltloaders is available with optional Smart Sense collision avoidance technology. Designed to offer a safer approach to loading and unloading the aircraft, Smart Sense uses ultrasonic sensors that attach to the front of the beltloader that based on its proximity to the aircraft restrict its operation. **R&N**

Menzie's upgrades beltloaders at US airports

Menzie's Aviation Americas is in the process of studying the viability of internal refurbishment of baggage tractors and beltloaders at several locations in the US. The close relationship with A&V Rebuilders, LEVCON and HPEVS has resulted in a partnership to supply Menzie's Aviation with lithium repower kits for baggage tractors and belt loaders.

“These kits are complete plug and play units and are a viable option for upgrading our fleets moving toward our carbon neutral goal. Some of the benefits of internal refurbishment and repowering are control lead times and quality as well as lower costs. Beltloader kits also come complete with the same safety features built in as baggage tractors with the addition of plane safe aircraft avoidance systems. Refurbished beltloaders have already been tested and approved,” said Scott Bellamy, Director GSE – Americas, Menzie's Aviation.

Menzie's Aviation uses a variety of beltloader models, both American and

internationally based, including TUG(217) TLD(17) and WASP (73). Selection reasons are typically availability and location of manufacturer, safety features, reliability, cost and consistency of supply, which makes training easier.

When asked if there was more appetite for electric nowadays or was it predominantly petrol or diesel powered in the US, Bellamy added: “There’s no real difference in the US to other countries when trialling new GSE. If it improves our safety and operational performance, we are keen to embrace change. The appetite for electric is growing. It is different state to state and it’s fair to say that gas and diesel are still the main options, however this is changing. The largest challenge facing the Americas on trialling electric GSE continues to be airport infrastructure. In the next year, we expect to see the continued increase of electric options across suppliers, providing more alternatives to conventional fuel belts.”