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**SCREEN MEDIA:** Choosing the most effective engineered screen media

**TRACKED FEEDERS:** The Astec Telestack TC 624R is a fully mobile radial conveyor

**AI TECHNOLOGY:** TOMRA Mining sets sights on sensor-based sorting

**PREVENTATIVE  
MAINTENANCE**

PILOT CRUSHTEC CAN LOWER  
TOTAL COST OF OWNERSHIP

PAGE 12





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Capital Equipment News is published monthly by Crown Publications

#### Editor:

Adriaan Roets

capnews@crown.co.za

#### Advertising manager:

Lizelle Francis

lizellef@crown.co.za

#### Design:

Ano Shumba

#### Publisher:

Karen Grant

#### Deputy publisher:

Wilhelm du Plessis

#### Circulation:

Karen Smith

PO Box 140

Bedfordview 2008

Tel: (011) 622-4770

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# UNLEASHING MINING'S DIGITAL FRONTIER

**M**ining Indaba takes centre stage as the new year unfolds, shaping expectations for the industry's direction in 2024.

Mining is not just an industry; it's a compass pointing to South Africa's capital investments, influencing mining equipment, technology, and job creation. In this edition of **Capital Equipment News**, we delve into the pivotal role of mining equipment in sustaining the heartbeat of mines.

This month's focus on mining aligns with our commitment to spotlight transport, construction, and mining in a rotating cycle throughout the year. With this rotation, **Capital Equipment News** aims to mirror the diversity of equipment shaping various industry sectors, offering hyper-focused content.

This issue explores the nuts and bolts of mining and delves into preventative maintenance and emerging technologies. The narrative extends to automation, a beacon guiding the industry's future.

A friend recently highlighted to me Australia's rapid adoption of automation, driven by the impact of the Covid-19 pandemic.

However, the transformative power of automation comes with challenges, particularly the shortage of skilled workers. McKinsey projects a significant global shift by 2030, with 100 million workers transitioning to tech-proficient roles. Mining faces the additional hurdle of attracting young talent due to ESG concerns.

Consequently, as automation improves production rates within mines, mining companies must address the skills shortage by investing in upskilling their existing workforce and enhancing the industry's image to attract new talent.

In response, mining companies worldwide must invest in upskilling their workforce and reshaping the industry's image to attract fresh talent. My friend then shed light on the global and local landscapes, emphasising the need for proactive measures to address the looming skills gap.

He transitions to South Africa, where the mining industry mirrors Australia's strides in embracing automation.

Driverless trucks, remote-controlled rigs, and innovative tools redefine mining operations. Significant players are at the forefront, testing cutting-edge machinery for increased efficiency and safety. In South Africa, major players in the copper, coal, diamond, and platinum extraction sectors are testing a variety of automated machines and software systems designed to improve mine efficiency and safety. Driverless mining in South Africa is no longer a pipedream. For more than a decade, a fleet of fully automated, remote-controlled trucks has been operating at the Finsch Diamond Mine in the Northern Cape. Along with automated vehicles, mining giants like Anglo American and De Beers are already testing a wide range of mechanised tools, systems, and equipment at their South

African operations, such as:

- Continuous Rapid Mine Development Systems (RMDS) that enable maximised ore extraction,
- Remote-controlled rigs capable of three times the output of conventional drill and blast methods,
- Continuous Haulage Systems that connect RMDS to fixed ore conveyors,
- Slot borers are purpose-designed to drill narrow vein hard rock ore.

As the industry evolves, so must its workforce. A solution emerges through the Engineering Institute of Technology's School of Industrial Automation.

This educational hub equips individuals with the skills vital for navigating the complexities of mining technology, ensuring they play a crucial role in the automated future.

Skills imparted, such as PLCs and SCADA systems expertise, address the intricate and hazardous processes within mining. The application of industrial automation emerges as a critical driver in optimising operations, enhancing safety, and promoting efficiency. The article concludes by emphasising the role of mechatronics and robotics in developing and maintaining automated mining equipment.

In essence, the School of Industrial Automation at EIT serves as a gateway to addressing the unique challenges within the mining industry. Its programmes, tailored to the sector's demands, contribute to sustainable and efficient mining practices. For those looking to explore these opportunities, EIT's South Africa office provides a starting point for various online study options. The future of mining lies at our fingertips, shaped by the skills and expertise developed in institutions like the EIT School of Industrial Automation.

**Adriaan Roets - EDITOR**



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**WEIR**  
Minerals



## Wacker Neuson is a hit in Mauritius

On-boarding of the new dealership brings Wacker Neuson equipment and after-market support to the beautiful island of Mauritius.

"When it comes to quality products, parts availability, and technical support, the Wacker Neuson brand is hands down the best, with service that is second to none," says Dave Alcock, Managing Director of Yellow Metal Machine Rental Ltd., the newly appointed Wacker Neuson dealer in Mauritius.

"Wacker Neuson is the perfect premium brand to represent us in Mauritius."

"We are extremely excited to explore the new market Mauritius presents to us through our partnership with Dave and his team," says Dennis Vietze, Managing Director of Wacker Neuson Sub-Saharan Africa. "There is an installed base of Wacker Neuson machines on the island, and these customers, plus all new customers, can now count on direct professional support for their machines from the Yellow Metal Machine Rental team."

Alcock was looking to open a business in another country to mirror the success of his road construction company in Pietermaritzburg, KwaZulu-Natal. While attending board meetings in Mauritius on behalf of his business venture in West Africa, he saw great potential for machine rentals and sales, especially in the construction sector, and gained an understanding of the island's unique business culture. He opened his Mauritian machine rental business in 2018.

Financial services and tourism demand primarily fuel Mauritius's robust construction industry. The constant arrival of people from various corners of the globe seeking business opportunities and retirement options has further catalysed the expansion of residential projects and subsequent infrastructure development on the island.

Alcock initially started in Mauritius with four large excavators purchased from various suppliers. However, these machines were costly to maintain and were heavy on fuel, an expensive commodity in Mauritius, prompting him to change his business model. Wanting to replace these large machines, Dave was now in the market for a smaller, premium brand, fuel-efficient equipment to meet the rental requirements of primarily compaction and excavation applications.

Alcock is looking at buying a 3.5-ton mini-excavator from Wacker Neuson soon. 🌟

## Comfort is key to efficiency in lifting

In heavy lift machines, prioritising driver comfort has become more than just a nicety; it's a strategic move with far-reaching benefits.

For drivers who spend a minimum of eight hours daily navigating these heavy lift machines, the paramount concern is the assurance of a secure and comfortable workspace that enables precision and effectiveness. The impact of comfort on drivers extends beyond job satisfaction; it directly correlates with reducing the risk of chronic health problems such as back pain, muscle strain, and fatigue.

Lenny Naidoo, Acting National Operations Manager at CFAO Equipment SA's Heavy Lift division, emphasises the importance of prioritising driver comfort, stating, "People are your most valuable assets, so there should be no shortcuts to making drivers of heavy lift machines feel comfortable."

Comfortable operators are less likely to take unnecessary breaks or rush through tasks, thereby maintaining efficiency and avoiding potential damage to goods or equipment. Moreover, operator discomfort or fatigue can lead to distraction and reduced attention, heightening the risk of accidents. A comfortable operator, on the other hand, is more alert, focused, and less prone to errors that could result in hazardous situations.

Konecranes, a leading player in the heavy lift machine industry, has been at the forefront of enhancing driver comfort in its range of products. The OPTIMA cabin, designed and built by Konecranes Lift Trucks, stands out for its superior visibility



and customisable features. The cabin includes adjustable seating, ergonomic controls, noise insulation, climate control systems, and smooth suspension, all contributing to a comfortable and efficient workspace.

The OPTIMA cabin's design prioritises safety with unobstructed sightlines, allowing excellent visibility to crucial working areas in front, sides, and rear. The cabin features an industry-first seven-inch touchscreen colour display for complete truck monitoring, including eco-drive, fuel management, and personal driver login. Electronic joystick controls, auto accelerator/power control, and ultra-smooth lifting levers enhance the operator experience.

The benefits of prioritising driver comfort in heavy lift machines are precise and extensive. Konecranes cabins, emphasising visibility, ergonomic design, noise reduction, and comfort, emerge as market leaders, setting a standard that enhances efficiency and fosters operators' wellbeing. 🌟

## Africa's largest health and safety expo set for May

With a record number of 4 005 industry professionals attending A-OSH Expo 2023 and a record combined 11 465 visitors to the four co-located shows — Securex South Africa, Facilities Management Expo, and Fireexpo — the stage is set for a highly successful A-OSH EXPO 2024. Being held at the Gallagher Convention Centre in Midrand from 28 to 30 May 2024, A-OSH EXPO will benefit from an additional exhibition hall to cater to the demand for more floor space.

"A-OSH EXPO continues to make headway as Africa's largest and most comprehensive occupational safety and health expo. The feedback we receive from exhibitors and visitors is that it is the ultimate interactive platform, where

important and enduring connections are made, positive networking is enabled, and product and service solutions are found," says Mark Anderson, Portfolio Director at Specialised Exhibitions, a division of Montgomery Group.

"We have found that visitors generally come to A-OSH Expo with a dual purpose. Firstly, they network with peers and simultaneously view, source and select products and services pertinent to their organisation's needs (89.2%). A further 10.2% come to hear industry experts and thought leaders discuss the latest trends, challenges, and legislation in the industry. We maintain a subtle balance between these two distinct needs by presenting cutting-edge solutions from our exhibitors

## Masslift Africa announces management buyout



Masslift CEO Marco Caverni.

Masslift Africa, the sole distributor of Mitsubishi Forklift Trucks in Southern Africa and a leading force in the material handling industry, is proud to announce a recent management buyout (MBO), marking a pivotal moment in the company's history.

The MBO was led by the Executive team of the business and the Chairman of the Board. This has increased shareholding for the CEO, Marco Caverni, and shareholding for the CFO, Thembi Mazibuko and the Chairman of the Board, Nelson Mwale, through his consortium.

The MBO will drive sustainable growth and value creation – through the vested interest model – within the business, building on an already impressive three decades of service excellence. The

company plans to leverage the upgraded ERP system and overall infrastructure to improve efficiencies while continuing to upskill and train its employees to offer the best service and establish new strategic partnerships to ensure sustainable business growth.

A noteworthy outcome of the MBO is attaining a Level 1 Broad-Based Black Economic Empowerment (B-BBEE) certification, demonstrating Masslift's dedication to diversity and alignment with the nation's transformation objectives. With over 60% direct black shareholding and over 20% black female shareholding, Masslift Africa is actively contributing to a more inclusive and representative business landscape.

Marco Caverni expressed his optimism about the future: "This MBO signifies a new era for Masslift Africa. We are committed to building on our legacy of outstanding service with an increased focus on our employees' growth and development. I am grateful for the support we have received from our previous shareholder, New Seasons, and the continued support from our OEM, Mitsubishi Logistics, throughout a challenging 2023. With this exciting shareholder change, we believe we are still big enough to service the whole industry but small enough to care, and we look forward to an exciting year ahead with new product announcements on the horizon." 🌟

and offering learning opportunities with our two free-to-attend A-OSH EXPO seminar theatres," says Anderson.

The free-to-attend Saiosh Seminar Theatre and the Working at Height and Safety Seminar Theatre are both populated with topics that cover the full spectrum of OSH issues, including PPE, training, statutory requirements, working at height safety, first aid, employee wellbeing, and management and analytical tools.

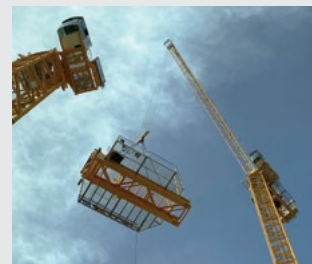
A-OSH Expo exhibitors gain from an ongoing intensive marketing campaign that begins months before the expo, ramps up as the opening date approaches, and continues after the expo. An extensive database, gathered over the years and complemented by data extrapolated from other successful Specialised Exhibitions expos, like Electra Mining Africa, ensures they stay top of mind with past and potential visitors.

"A-OSH Expo has gained a reputation as the preferred launchpad for all things OSH. Adding strength to this achievement is the additional footfall that derives from

co-locating the expo with the 31-year-old Securex South Africa and the rapidly growing Facilities Management Expo and Fireexpo. There is a great deal of synergy between these four expos, and we find that many visitors who came to visit one specific show ended up buying products and services from one or more of the other shows," says Anderson. 🌟



## Potain MR 229 luffing jib tower crane erected in London



Radius Group, a UK crane rental company and Potain partner since 2008, recently erected the world's first Potain MR 229 luffing jib crane. This milestone deployment occurred on a project for housing association L&Q Group, featuring 476 new homes on the Greenwich Peninsula in London.

Radius Group had already selected four MR 225 A cranes for the project based on the maximum capacity requirement of 2.15 t at full reach but increasing efficiency pressures led the company to swap one of the MR 225 A cranes for an MR 229 as soon as it became available.

The MR 229 is the first Potain luffing jib crane to feature Manitowoc's Crane Control System (CCS), helping to get work done faster and more accurately. With CCS, it takes just 15 minutes to configure the crane, calibrate sensors for crane movement, and set the trolley limit switch and jib length.

## First Develon DA45-7 sold in Italy



The first DA45-7 articulated dump truck (ADT) from Develon, formerly Doosan Construction Equipment, has been sold in Italy and is at work in the chalk basin of Roccastrada. The machine was purchased as it was seen as the best suited for the movement of rock in the region's so-called 'Chalk Valley' quarries.

The DA45-7 ADT is working in the province of Grosseto, in the heartland of the Tuscan Maremma, home to one of Italy's largest chalk deposits, renowned for the purity and the whiteness of its stone. The new machine is owned by Fibran Group, a Greek multinational, with production sites in seven European countries and commercial activities in over 60 countries around the world, which purchased its first chalk quarry and processing plant in the area back in 2009.

The optimisation of quarry machinery plays an important role in the management of extractive operations. The movement of earth and chalk rock is a crucial part of the process and recently required the addition of a new dump truck to the Fibran fleet. 🌟



## LETS shine the spotlight on conveyor belt maintenance

Correctly maintaining conveyor belts at manufacturing and mining facilities can take time and effort. Still, a new decision-making tool can help facilitate the correct lubrication to keep these critical assets performing optimally.

The LETS strategy, established by Lubrication Engineers (LE) South Africa, refers to load, environment, temperature and speed. It includes questions that maintenance teams can use to find the best lubrication solution from the original equipment manufacturer's recommended range for their particular operating conditions.

LE South Africa developed a comprehensive LETS lubrication strategy to help its customers proactively maintain conveyor belts and prevent the risks of wear with suitable grease and gear oil selection by facilitating correct grease application, contamination exclusion, and visual monitoring and contamination removal.

Through its partnerships with clients and the use of the LETS tool, LE has identified several common challenges. Across conveyor belt applications, these include problems with grease application and incorrect selection of gear oil and greases

for different components.

Other challenges that conveyor belts regularly face are extreme temperatures, water, vibration and heavy loads, all of which can be exacerbated when the equipment is outdoors.

Using the incorrect grease on a piece of equipment can harm its reliability and lifespan. In most cases, for conveyor belts, an extreme pressure grease that can withstand heavy loads, maintain performance in a broad range of operating temperatures, seal out water, protect from corrosion and wear, and will not emulsify when water is present is the ideal solution.

However, even with the proper grease, performance can be hampered by incorrect grease application. Ford says that issues LE often helps customers resolve include under- and over-greasing, both of which can cause issues.

Many technicians manually grease lubrication points in hard-to-reach or unsafe areas, which can be neglected because of these difficulties. However, several functional single- or multi-point lubrication systems are available to help automate lubrication applications so that the right



An optimally performing conveyor system.

amount of grease is applied to the right place at suitable intervals.

These automatic systems are precision lubrication tools that can also improve the accuracy of greasing applications, reduce labour time, enhance safety, reduce equipment failures, and keep out contaminants.

As with grease, using inferior or incorrect gear oil can lead to equipment problems and unplanned downtime. 🌟

## Payouts to serve mining industry

Despite ongoing challenges such as low consumer confidence and high inflation, adumo Payouts saw robust growth in 2023. "We had a remarkably good year with some positive growth," says CEO Steve Mallaby, adding that diversification has been a key factor in the company's ongoing success.

"We reduce the risk on our side as there are a broad range of sectors we are involved with," explains Mallaby. The company serves industries ranging from FMCG to mining and motor manufacturing, strategically positioning itself to weather economic downturns.

The company underwent a strategic rebranding 18 months ago, shifting from being perceived solely as a rewards and incentives business to positioning itself as a holistic payout solutions provider. This move allowed it to craft specific use cases for different industries, significantly expanding its scope and opportunities.

In terms of specific plans for 2024, adumo Payouts aims to further expand its engagement in the mining industry, tapping into opportunities with mining houses, unions, and other stakeholders. The company plans to address the downstream supply industry in mining



The adumo Payouts team.

and explore solutions for greater transparency in fund flow for ESG initiatives. In addition, it will focus on junior miners, who are also faced with the need to drive safety and productivity incentives.

"Traditionally, mines tended to hand out grocery vouchers as an incentive. But what if it is the middle of the month and you need to pay school fees, or in fact you want to try and save money for the end of the year for other needs?" questions Mallaby.

"It is always about making the employee feel appreciated and giving them a choice. They become much more engaged at the

end of the day, and it has a knock-on effect. Mineworkers are more empowered as we have increased their spending power. Increased production means the mining industry contributes more to economic growth. If the mining industry is doing well, as a result, service providers such as adumo Payouts benefit as well," says Mallaby.

With a customer-centric approach, a focus on diversification, and an eye on emerging trends, the company looks set to navigate the dynamic business environment and continue its upward trajectory in 2024 and beyond. 🌟



## SKF showcases its circular economy product, technology and service solutions

With mining a key account segment for SKF globally, SKF South Africa used Mining Indaba 2024 to spotlight its premium brand mining and industrial product, technology and service solutions that underpin its relentless drive towards a circular economy.

With businesses doubling down on calibrating increased production, decreased operating costs, and environmental compliance, the global focus has shifted to creating a circular economy. Saien Rugdeo, Industrial Distribution and Regional Sales Manager at SKF South Africa points out that mines face similar and unique challenges. Achieving machine reliability and subsequent rotating asset optimisation is pivotal for efficient, sustainable and profitable operations.

SKF is on a global and local drive that embraces the concept of reliability and a circular economy, which go hand in glove. Here, remanufacturing, predictive maintenance and asset management play

a pivotal role. "In a bid to ensure that crucially important factors such as maintenance, repair and operations (MRO) work, which regrettably do not always enjoy top priority, are prioritised, we must first have a clear understanding of the mine's vision and ensure that our premium technical support and supply is done through the right channels," notes Rugdeo. Programmes such as Customer Needs Analysis (CNA) and Stock Inventory Management Optimisation (SIMO) perfectly position SKF South Africa to assist mines on the African continent with streamlining their supply chains by procuring application-specific products.

"Through an integrated approach – product, technology, engineering, reliability, intelligent and service solutions – in collaboration with our wide Authorised Distributor network and our Circular Economy Centre located at our head office in Johannesburg, Gauteng, we have created a strategic efficient supply chain ecosystem with distributors, customers and end-users," shares Rugdeo.

Training programmes are part and parcel of SKF's reliability and circular economy drive. "There is a direct correlation between correct product use and equipment reliability," stresses Rugdeo. "Our objective is to train future leaders, engineers and in-



SKF is on a global and local drive that embraces reliability and a circular economy, which go hand in hand.

dustrial pioneers." Training programmes offered to local communities and educational institutions form the cornerstone of SKF's corporate social responsibility initiatives. "We are committed to developing local talent by equipping them with the necessary skills and SKF knowledge on best modern mining practices about rotating equipment reliability," says Rugdeo. He also points out that continuous training and skill honing arm people with the necessary tools to keep in step with the rapid advancement of technology. Visitors to Mining Indaba 2024 will also have the opportunity to view some of SKF's intelligent solutions, including the smart Quick Collect sensors. 🌐

## Bühler Johannesburg offers complete solutions for the mining industry

As a regional hub for value-added solutions and aftersales service across Sub-Saharan Africa, Bühler Johannesburg was established in 1972. The office and manufacturing facility in Honeydew, Gauteng, was set up in 2004 to consolidate its presence there, explains Francois Knoetze, Head of Manufacturing and Logistics. Manufacturing services at the Johannesburg facility range from small steel construction to heavy processing equipment. Its primary focus is chain conveyors for grain collection points, terminals, and processing plants. These are compact and have a high conveying capacity over long distances thanks to their premium quality drop-forged chain. They also provide gentle handling of granular and floury bulk goods. Bühler chain conveyors set new standards for service life, sanitation, and versatility, with up to 1,200 t/h throughputs.

The manufacturing setup in Johannesburg is an independent entity operating as a standalone Bühler business in the market, supplying assemblies for machines and production plants globally. Value-add-

ed services include drafting, prototyping, general steel fabrication (specialising in mild steel, stainless steel, and aluminium), bending, rolling, welding, boiler making, sheet metal work, laser cutting, powder coating and painting, pickling and passivating, and assembly.

A unique aspect of Bühler Johannesburg is that it manufactures and exports mining equipment. "For example, we assist Brazil with expertise and knowledge because it has many woodworking plants, which use similar equipment to the mining industry," says Knoetze. The company supplies equipment for the power generation sector. Other focal markets include sugar, bottling, smelting, brewing, and agricultural processing.

"Our market segmentation and diversification assist us to weather cyclical variances in any specific industries and sectors," says Knoetze. However, he points out that extended load shedding is having a significant impact on feed customers. Hence, the current trend is for longer-lasting equipment and a backup power supply to maintain production during any outages.

Bühler Johannesburg's state-of-the-art manufacturing facility and full stockholding of essential spares underscore its



The Bühler Johannesburg manufacturing facility.

vision of 'if you can imagine it, we can make it'. Knoetze reveals that customisation is the norm, mainly due to the lack of Greenfield projects in South Africa.

"We often have to take an existing building and ensure our equipment fits into that specific footprint and layout, which is where a lot of the customisation comes in. We also carry out a lot of equipment replacement, which is all part of our value-added service offering to our clients," says Knoetze.

"From a manufacturing perspective to a group perspective, Bühler Johannesburg is committed to ensuring its clients get the best value possible, from planning to logistics and assisting with energy efficiency and optimisation," says Knoetze. 🌐



## ISO-Reliability Partners announces strategic partnerships for 2024

ISO-Reliability Partners capped off a successful 2023 with a landmark five-year tender to supply Royal Purple premium lubricants to Transnet Engineering for the lubrication of high-speed traction motor bearings. "In the mining industry, we add value to milling and processing plants. We have grown our market share in the open gear lubrication field by onboarding new customers looking to improve production output while lowering operating costs," notes Craig FitzGerald.

In addition, the company showcased its expertise by demonstrating the enhanced compressor performance achieved by Sasol Synfuels by adopting the Royal Purple Synfilm GT, resulting in improved protection and reduced energy consumption.

"Our success has come with challenges," adds FitzGerald. The company had to address attempts by unscrupulous competitors to replicate its pioneering Filter Focus branded micro-fine filtration technology.

Despite copied products resembling the original, these underperform significantly. ISO-Reliability's strategy for 2024 involves continued education efforts to inform customers about these imitations and

emphasise the superior performance of authentic Filter Focus products.

Another milestone goal for this year is establishing a predictive maintenance platform powered by Artificial Intelligence (AI) in partnership with a leading German AI technology firm. FitzGerald anticipates announcing these partnerships early next year to deliver substantial cost-saving initiatives to its client base.

To extend its offering and break into the consumer and retail markets for premium motor vehicle lubricants, ISO-Reliability Partners has acquired 100% of Power Performance Lubricants (Pty) Ltd. As a result of this acquisition, the company now controls the distribution of Royal Purple's energy-saving premium lubricants' industrial and consumer range.

Condition monitoring requires regular analysis performed at predetermined intervals to evaluate changes in machine vibration, wear particle analysis of lubricating oils, and temperature increases through thermographic inspections. Most importantly, it requires human interaction and off-site laboratories, with results often only available up to three days after a site visit.



Superior lubrication slashes electricity consumption, reducing vibration and friction in the industry.

Conversely, AI can continuously monitor equipment in real time at a fraction of the cost. It can provide early insights into potential machine issues months before the current techniques.

"AI will dramatically reduce the costs associated with condition monitoring, with the added safety value, by eliminating human interactions with equipment. Our solutions provide automated fault reporting with root cause identification and recommendations for fault repair," notes FitzGerald. 🌟

## Best lubrication solution for arduous mining applications

The RENOLIT CXS GSM series from FUCHS Lubricants South Africa provides excellent extreme pressure protection, which is crucial for heavy-duty applications like mining. It forms a durable lubricating film to prevent metal-to-metal contact, reduce wear, and extend the life of pins, bushes, slew gears, and slew bearings.

"Mining equipment often operates under high loads and harsh conditions," says Dave Gons, Mining Export Technical Support. The RENOLIT CXS GSM series has a high load-carrying capacity, allowing it to handle heavy loads and resist the effects of shock and impact. This helps to maintain smooth operation and minimise downtime due to equipment failure. It is a high-performance calcium sulphonate complex thickened grease formulated with 100% virgin base oils, an optimised extreme pressure and anti-wear additive system, a corrosion and oxidation additive package, and fortified with a synergistic solids additive system for maximum protection in heavily loaded and shock loaded applications. This solid additive blend provides improved performance over straight 5% Molybdenum Disulphide (MoS<sub>2</sub>) grease alone. Industrial applications include steel and metals, mining, quarrying and exploration, machinery and equipment,

construction, cement, agriculture, forestry, and metal processing. Mining operations may involve exposure to water, such as in open-pit mines or during equipment cleaning. The CXS GSM Series has excellent water resistance properties, providing a protective barrier against water ingress. It assists to prevent corrosion and rust formation in a range of arduous mining industry applications:

- **Open-Pit Mining:** In large open-pit mines, heavy-duty equipment such as draglines, shovels, excavators, blast hole drills, and auxiliary equipment extract minerals. Operating in harsh conditions, the RENOLIT CXS GSM Series ensures that greased components are well-lubricated and protected against the environment, thus reducing wear.
- **Haul Trucks and Dumpers:** Large haul trucks and dumpers transport mined materials within the mining site. RENOLIT CXS GSM lubricants offer excellent protection for these heavy-duty vehicles, allowing them to withstand the arduous operating environment.
- **Drilling and Exploration:** Drilling rigs and exploration equipment used to identify and assess mineral deposits are exposed to extreme environments. RENOLIT CXS GSM lubricants ensure these machines



The RENOLIT CXS GSM series lubricants.

operate smoothly and efficiently, even when subjected to high temperatures and harsh drilling conditions.

- **Slew Rings:** Slew rings require a lubricant that adheres well to their surfaces, even under high loads and rotational forces. The CXS GSM Series offers excellent adhesion properties so that the lubricant stays in place for continuous protection, even in demanding mining applications.

Mining operations can experience extreme temperature variations, ranging from hot to cold environments. The RENOLIT CXS GSM Series from FUCHS is formulated to perform reliably across a wide temperature range, maintaining its lubricating properties and offering protection from excessive wear and damage. 🌟



## A surge in demand for Proximity Detection Systems

Booyco Electronics, an original equipment manufacturer specialising in mine safety equipment, has witnessed a rise in demand for its Proximity Detection Systems (PDS) and Collision Prevention Systems (CPS) since the regulation's promulgation. These systems offer crucial vehicle-to-pedestrian and vehicle-to-vehicle detection capabilities.

Anton Lourens, CEO of Booyco Electronics, notes that South Africa's mining industry has proactively adopted technologies and innovative products to foster behavioural changes in pursuit of safety.

With stricter mine safety legislation, the company is focused on ensuring compliance with South African proximity detection and collision prevention systems requirements. Lourens says the Minerals Council of South Africa played a pivotal role in understanding and mediating around this regulation and identified concerns related to equipment supply, installation, and maintenance. In addition to implementing PDS systems, some mining houses are keen to take ownership of product maintenance, requiring comprehensive training for their personnel, which creates

further opportunities for Booyco Electronics to expand its workforce.

"Significantly, South Africa was the first country to regulate PDS deployment in mining, attracting interest and engagement locally and internationally," Lourens says. Booyco Electronics, in business for over 17 years, has evolved its product line to meet diverse operational needs. However, Lourens emphasises that PDS alone cannot guarantee safety improvements and that overall CPS success hinges on buy-in from all stakeholders implemented through an integrated approach.

"The mining industry's appetite for technology adoption varies, but most have embraced advanced technology systems, including PDS and CPS. Better connectivity and data management are also priorities, aiding in safety, efficiency, and productivity enhancement," he adds.

The company, which is expanding its African footprint, has a presence in Congo, Ghana, Namibia, and Zambia and has been appointing collaborative technology partners in areas with a similar mode of operation to that of South African mines.



Proximity Detection Systems (PDS) and Collision Prevention Systems (CPS) offer crucial vehicle-to-pedestrian and vehicle-to-vehicle detection capabilities.

Lourens says digital twin technology is also gaining traction, enabling real-time scenario simulations for risk mitigation, traffic management, analyses, and movement monitoring. Booyco Electronics remains committed to helping industries save lives and reduce injuries through its innovative technology. 🌐

## Winder Controls celebrates 50 years of innovation and service excellence

Supporting innovation and focusing on the agile provision of solutions to its clients has ensured the ongoing success of shaft-hoisting specialist Winder Controls. This has led to a large installed base in multiple countries, with significant growth from our humble beginnings 50 years ago, says MD Tim Keegan.

Winder Controls is unique in its ability to provide flexible, practical solutions to its clients. While being large enough to comfortably take on large projects' significant bonding and risk requirements, the company remains committed to maintaining a dynamic approach to problem-solving and specialised solutions.

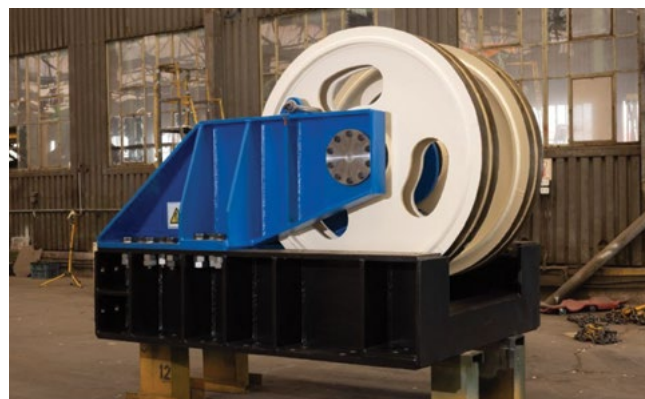
Keegan states that 2023 has been a significant milestone for Winder Controls, saying: "We are most grateful for the support of our clients, and while celebrating our 50 years of experience in the design, manufacture, supply, installation, commissioning and servicing of high-quality hoisting and associated equipment, we reflect on the depth of our rich mining history."

Further to targeted mergers and

acquisitions, Winder Controls today comprises the best elements of the original Winder Controls, Blane & Co. Engineers, and Siemag South Africa. This combination seamlessly integrates the company's industry-leading technical excellence in electrical and automation, and hydraulic engineering while retaining and building on decades of installed product base and specialist knowledge in the hoisting industry.

The company's association with the Siemag Tecberg Group has broadened its product base to include state-of-the-art rope-handling equipment, pressure exchange energy recovery systems, specialised winder brake callipers, and other equipment. Engineering and management collaboration has ensured global knowledge transfer and ongoing client interaction.

In addition to providing practical solutions to its clients, Winder Controls places high value on its employees, the



An example of rope-handling equipment from Winder Controls.

requirements of shareholders, and the communities in which it operates, with the company managing to retain 100% of its personnel through the Covid-19 pandemic. "We have experienced significant peaks and troughs in the hoisting market over the years. Our strategic decision to focus primarily on an excellent core of technical skills has enabled us to ride out the storms based on delivering invaluable expertise to our clients," stresses Keegan.

As a certified ISO 9001:2015 company, Winder Controls continually strives to enhance its client service and experience by improving its systems and tools. 🌐



With the extended warranty on the JCB JS305 Excavator, the Lapua (Pty) Ltd fleet has the assurance of the sustained technical support that Bell Equipment is known for and the maximum benefit of good production that our clients at the mine are entitled to.



## JCB JS305 EXCAVATOR IMPRESSES LAPUA IN ZINC ORE APPLICATION

In the demanding terrain of zinc mines in the Aggeneys area of the Northern Cape, Lapua (Pty) Ltd, a hydraulic repair and maintenance specialist, found a reliable ally in the JCB JS305 Excavator. Facing the abrasive sphalerite rock known for its toughness on equipment, Lapua is impressed with its durability despite the challenging conditions.



We took delivery of our new JCB JS305 Excavator in October 2022, and the buying experience with Bell Equipment and Brendon Gird was pleasant. This new machine will add value to our existing fleet of two other JCB Excavators, JS305 and JS205, respectively. It will be used for at least 300 hours a month, so we bought it with an extended warranty of 6,000 hours on its wet drivetrain.

Willem Wium, owner of Lapua (Pty) Ltd

**W**illem Wium believes he is loyal to a brand that looks after his business. He has found a certain yellow excavator that seems particularly hardy for working in challenging conditions.

A son of the Free State, Willem hails from the historic town of Philippolis in the west of the province. He worked in banking for 15 years before venturing into buying and selling livestock, a job he, by his own admission, really enjoyed.



"Life, however, moves one in different directions and, in about 2007, I found myself dabbling in hydraulics in the mining industry in Rustenburg," Wium tells us.

"I registered my company, Lapua (Pty) Ltd, in Rustenburg in 2011. Lapua which specialises in all aspects of hydraulic repair and maintenance in the mining industry, on surface and underground."

In 2016, he successfully tendered to do hydraulic maintenance on the zinc mines in the Aggeneys area of the Northern Cape, opening an opportunity to extend his services further afield.

His company's tasks included repairing and maintaining the hydraulics on drill rigs, trucks, and loaders used in underground and surface mining and all aspects of high-pressure hydraulic hoses and fittings. This was challenging as the service was required around the clock, 365 days a year.

### Facing the challenges

"Challenging though it may have been, we stuck to the task, and our dedication paid off. In 2019, our clients asked us whether we'd be interested in doing materials handling and related tasks," says Wium.

"We would be tasked with building safety berms bordering haul roads, and loading platforms and managing the ore on the run-of-mine stockpile, which was fed into the plant for beneficiation."

To do this, Wium needed yellow equipment, so he consulted his friend Anton Schonken, owner of Lusthof Civil and Plant Hire in Cradock, for advice.





"Anton is a big fan of JCB equipment, and he suggested we also look at the brand, especially as we needed hardy excavators for work in the sphalerite rock where zinc ore is found."

As Wium has found, sphalerite, with a specific gravity ranging from 3,5 to 4,1, is known to be harsh on metal.

"We first bought a JCB JS360 Excavator, and it gave us excellent service to 5,000 hours when we decided to trade it in on a newer machine," Willem says. "Working in the sphalerite rock, ground engaging tools on the JCB JS360 Excavator's bucket would only last a week."

### Dealership support

When Wium looked to trade in their JCB JS360 Excavator for a newer model, he was pleased to learn that Bell Equipment, with its wide service and support footprint, was now the distributor of JCB equipment in South Africa. He duly met with Brendon Gird,

Lapua initially invested in a JCB JS360 Excavator for its durability in the abrasive sphalerite rock.

The owner later upgraded to a JCB JS305 Excavator in October 2022, impressed with the capabilities of JCB Excavators.

The JCB JS305 Excavator has an extended warranty of 6,000 hours on its wet drivetrain.

The machine is expected to contribute at least 300 service hours per month.

QUICK

TAKE

the Bell Equipment Sales Representative from the Cape Town branch.

"We took delivery of our new JCB JS305 Excavator in October 2022, and the buying experience with Bell Equipment and Brendon Gird was pleasant," says Wium.

"This new machine will add value to our existing fleet of two other JCB Excavators, JS305 and JS205, respectively. It will be used for at least 300 hours a month, which is why we bought it with an extended warranty to 6,000 hours on its wet drivetrain," he adds.

"I believe in putting down a healthy deposit when financing such equipment so that the machine can generate enough income to pay for itself," he explains. "With the extended warranty, we have the assurance of the sustained technical support that Bell Equipment is known for and the maximum benefit of good production that our clients at the mine are entitled to."

"Let it be known that we and our clients are delighted with the performance of our JCB Excavators."

### Life at Lapua

Lapua's JCB Excavators are hired out on dry rates, as the client supplies the diesel.

Although fuel consumption is monitored, according to Wium, it has always stayed well below any fuel cap.

"Working where we do in this part of the hot and dry Northern Cape, preventative maintenance is a key feature of our daily pre-start checks as dust and heat combined can play havoc with lubrication and cooling systems. We hose down dust, especially near radiators, and see that air filters are clean as the summer temperatures often exceed 40 degrees Celsius," says Wium.

Due to the abrasive and dense rock where Lapua's JCB Excavators are used, Willem has had specially reinforced rock buckets built by a third-party supplier using VRN400 steel.

"These reinforced rock buckets are slightly smaller than the standard buckets the JCB Excavators are supplied with, and what amazes us is that despite the abrasive underfoot conditions, the JCB Excavators' tracks seem not to show any excessive wear."

When asked about his company's plans, Wium is adamant that he will need more excavators soon as he expands his service offering. We share his confidence that new JCB Excavators will quickly dot the picturesque Northern Cape horizon. 🌄





OEM parts offer significantly greater value in machine performance and long-term cost-effectiveness.

## WHY OEM PARTS PAVE THE WAY TO LOWER COSTS

TALKING POINT



"The OEM must not only consider this kind of intricacy in the design and manufacture of its parts but also ensure that all the parts a customer needs are available."

Jorge Abelho, Director of Technical Support at Pilot Crushtec

TALKING POINT



"We see increasingly how our customers are calculating the cost of their spares expenditure and are able to satisfy themselves of the value of OEM spares."

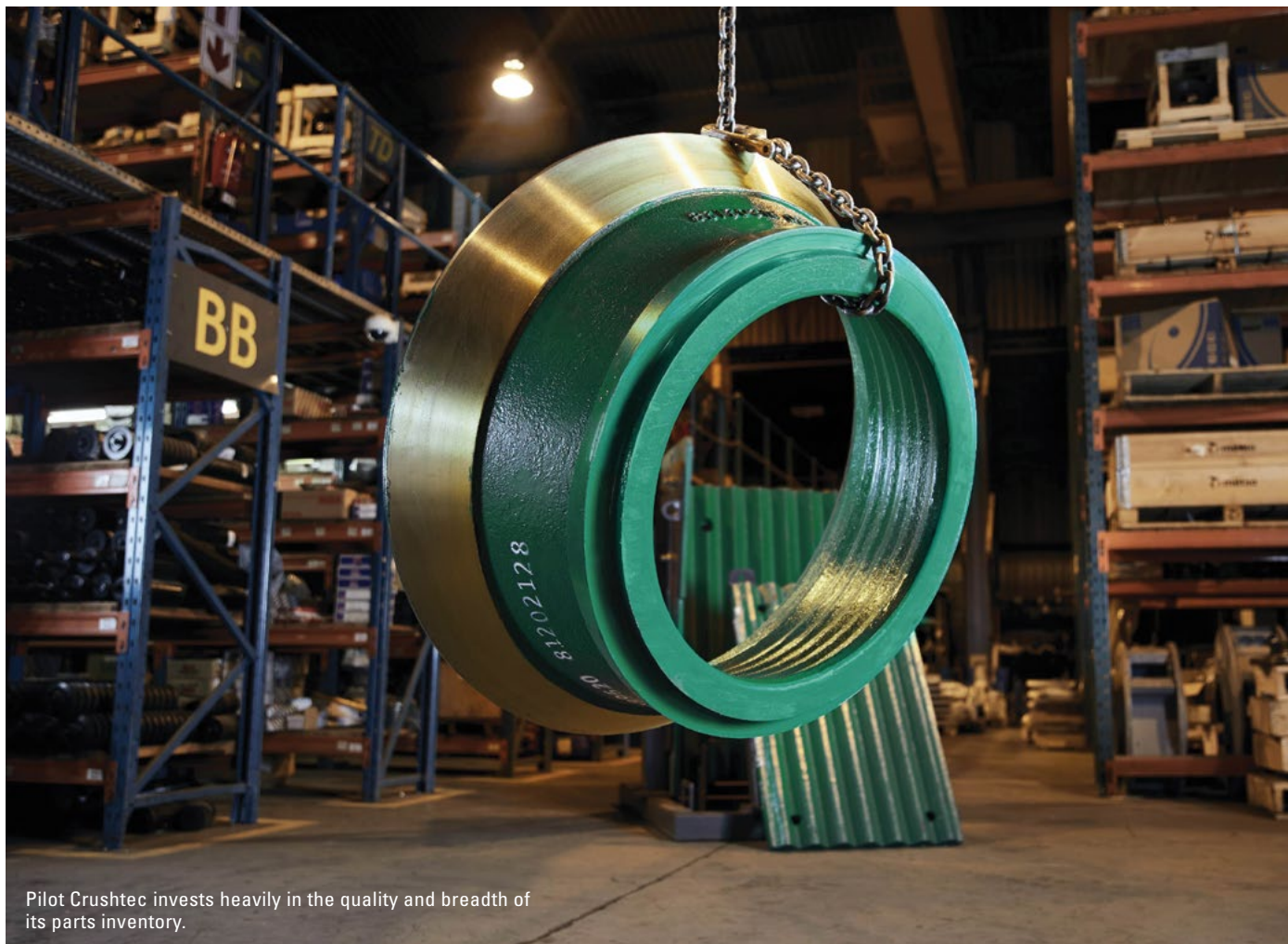
Jacques Erasmus, Aftermarket Sales Engineer at Pilot Crushtec

Even when operating high-value, complex machinery in the mining and construction sectors, many equipment owners are still tempted to use spares from the aftermarket sector – rather than from the Original Equipment Manufacturer (OEM). Pilot Crushtec's Jorge Abelho explains some technicalities about why OEM parts are vital to ensuring the lowest total cost of ownership.

**W**hen is a spare part, not just a spare part? The answer, says Pilot Crushtec Director Technical Support Jorge Abelho, is when it is designed and manufactured with the machine's whole system in mind.

Abelho spoke to **Capital Equipment News** and explained that Pilot Crushtec customers use the company's equipment to





Pilot Crushtec invests heavily in the quality and breadth of its parts inventory.



OEM parts are intricately designed for machine systems, ensuring optimal interaction between components for enhanced efficiency.



Pilot Crushtec invests heavily in a quality parts inventory, considering equipment holistically, resulting in industry-leading warranties and uptime.



Pilot Crushtec's continuous research and development yields parts adapted for global conditions, ensuring efficiency and constant improvement.



Considering consequential impacts, OEM parts offer performance guarantees and warranty coverage, while aftermarket parts may lack such comprehensive protection.

achieve the lowest cost of ownership while optimising their production and bottom line. "The specific characteristics of our spare parts and components make this possible – and allow us to provide them with industry-beating standard warranties and uptime."

From this starting point, he argues, it makes sense that Pilot Crushtec invests heavily in the quality and the breadth of its parts inventory. Unlike the aftermarket supplier, the Original Equipment Manufacturer (OEM) must consider the item of equipment as a whole. In this context, every spare part has an integral function for other aspects of each machine.

"We look at the bigger picture to ensure that every part or component of our equipment interacts optimally with the other parts," he explains. We can do this because of our intricate knowledge of how the systems work and the continuous research and development we conduct to improve and fine-tune performance."

### The importance of parts

An example of what this means for spare parts is that the OEM may decide to include a sacrificial part in the system to protect a more complex and expensive component. With this knowledge and experience, an aftermarket manufacturer will have these





Every spare part concerning other machine components is considered, ensuring optimal interaction and performance.



OEM parts are critical in enhancing plant production efficiency.

insights. The part they produce, therefore, may miss this nuance and inadvertently lead to unexpected and costly results.

"The OEM must not only consider this kind of intricacy in the design and manufacture of its parts, but it must also ensure that all the parts a customer needs are available," he says. "In contrast, the aftermarket supplier will cherry-pick those fastmoving parts that sell most frequently and offer just a small selection of a customer's needs."

### Monitoring machines

Abelho highlights that Pilot Crushtec's R&D investment involves monitoring and maintaining hundreds of its machines in the field, which is the basis for continuous improvement of parts. It also conducts detailed testing and assessment of new prototypes, each of which will be adapted for different operating conditions around the world.

"An added benefit is that we have

access to other OEMs during our design stages, and this knowledge sharing continues through manufacturing and into operations and maintenance," says Abelho. "Specialised input from experts in track design, for instance, informs our designs and ensures the best interaction of components under the expected duty cycles."

This means that, while the part might be at a higher price point, its value to the machine's performance and the customer's bottom line is much greater. Customers today are even quantifying this benefit for themselves, says Jaques Erasmus, Aftermarket Sales Engineer at Pilot Crushtec.

"We see increasingly how our customers are doing the cost calculations on their spares expenditure and can satisfy themselves of the value of OEM spares," says Erasmus. "This goes hand-in-hand with the support they receive from our experienced technicians

– giving peace of mind that their operations will meet targets."

### Owners have a role

It is also vital for equipment owners to consider the consequential impact of a part's unexpected failure, as the possible damage will not be limited to the part itself. Abelho emphasises that the warranty on an OEM part will have a performance guarantee and will also cover the mating parts and the rest of the components in the system.

"If an aftermarket part prematurely fails, however, there is seldom recourse for damage to mating parts," he says. The aftermarket supplier may not have those other parts, even if they replace their failed item. The problem is that a cheaper part may damage a much more expensive one."

Another example – of an oil filter on a mobile crusher – illustrates the importance of a holistic approach. A filter that is too fine will cause extra load on the pump and reduce oil flow, while a too coarse filter will allow dirt into the system. The complexity of the equipment will also be a factor in deciding which filter to choose.

"With a relatively simple system, it may be acceptable to fit a coarse filter – which is less costly," he says.

"However, with a complex system using servo valves and other critical components, you would have to prioritise an exact match at a higher cost."

He notes that OEMs are fully invested in how all their machines' parts and components interact and have decades of experience to prove what works best together. This makes for long-term relationships – especially with customers who also see a long-term future for themselves.

"OEMs like Pilot Crushtec appreciate customer engagement," says Abelho. This gives us more field knowledge and gives them opportunities to ensure that every part is working as they expected – and for as long as they expected. We see how our equipment is applied globally and can share valuable insights on what improvements might help customers."

He points out that while the principles of crushing have remained mostly the same for many decades, significant refinements have been made in the makeup of crushing equipment. This has allowed rock to be reduced to particular product sizes and shapes while lowering the total cost of ownership.

"Our focus as an OEM is to support customers in achieving the lowest cost per tonne of saleable product," he concludes. "This means high levels of performance and reliability, and the right parts are vital in delivering this result." 🌟



# ISO CAN MITIGATE MINING'S RELIANCE ON UNPREDICTABLE POWER

The impact of load-shedding on South Africa's mining sector has been considerable. However, internationally accredited energy management standards can reduce production downtime, share price reductions of production targets, and drive up ESG achievements.

According to Statistics South Africa, mining output slowed almost 2% in September 2023 compared to the same period in 2022, mainly due to the country's power crisis. This was the third month in a row that output had dropped off.

With a severe decline in infrastructural stability and Transnet's ongoing woes, the mining industry has lost some R150 Billion in export value in the past 12 months.

## Shift reliance

"Mining operations cannot rely on Eskom's power supply and scheduled downtime," notes Muhammad Ali, managing director of ISO specialist World Wide Industrial & Systems Engineers (WWISE).

"This impacts production targets, market share price, and shareholder confidence, which, in turn, has a huge impact on the economy. Mining companies have invested heavily in diesel generators or alternative energy, such as solar plants. Still, all these expenses make mining costs high in South Africa, and investors are losing confidence and looking to put their money elsewhere."

## Reprioritisation at mines

With profits falling, mining houses spend less on crucial areas like safety, health and environmental programmes.

Ali says the situation has necessitated that top management devise innovative and impactful mitigation strategies, and one way they are doing this is by turning to standardisation.

The International Organisation for Standardisation (ISO) comprises more than 160 national standards bodies and develops and publishes a wide range of proprietary, industrial and commercial standards. In 2022 alone, it published almost 25,000 international standards and standards-type documents.

South Africa is a significant contributor to standardisation processes in Africa.

"With the energy constraints, mining houses are looking to implement international best practice standards like ISO 50 001:2018, where the capital investments of solar or renewable energy are aligned with the Paris Accord striving for net zero," Ali explains.



By committing to ISO standards, mines are inherently safer, and equipment failures can be reduced.

"Standards like ISO 14065 allow organisations to establish greenhouse gas emissions and take the necessary action. These standards also assist in identifying significant energy use assets, which can be tailored to reduce consumption but optimise production. Mathematical planning allows mining houses to reduce the cost of downtime."

Standards like ISO 50 001:2018 Energy Management Systems are a must for companies as they enable them to calculate the return on their investment for alternative energy sources and initiatives.

"Not subscribing to the standard will result in unplanned downtime."

## Less equipment failure

Standardisation also plays a vital role in reducing the risk of injuries in the mining sector.

In November last year, a cage carrying workers at the Impala Platinum Mine in Rustenburg fell to the bottom of a shaft due to issues with a winder rope, resulting in the death of 11 employees. A total of 86 miners were involved in the incident.

Ali says standards like ISO 45001:2018



and regular audits of companies under the Mine Health and Safety Act are vital.

"Organisations tend to be fearful of audits when their systems are aligned to international standards and local legislation. In South Africa, audit findings are perceived as negative, given that they affect key performance indicators.

"However, findings should rather be encouraged. An expert is appointed to assist the organisation to improve. The company will be better off all-round by making top management accountable for poor maintenance plans and budget reductions that may put lives at risk," concludes Ali. 🌟

Look for a manufacturer that offers analysis systems for vibrating screens. Haver & Boecker Niagara's Pulse vibration analysis software allows operators to monitor vibrating screen performance in real time safely.



## SCREEN EFFICIENCY THROUGH HIGH DEMAND

**Haver & Boecker Niagara aims to find solutions for choosing the most effective engineered screen media. Increasing global demand for aggregates and the right job tools can increase profit. Steve Fair, the Tyler-engineered media manager at Haver & Boecker Niagara, talks to *Capital Equipment News* about some starting suggestions for engineered screen media.**

**M**any mining and aggregates operations have used traditional products, such as woven wire cloth, for years with excellent results.

However, engineered screen media for operations experiencing high wear and frequent screen changeouts is worth looking into. Polyurethane, rubber, and perforated steel plates handle heavy and abrasive materials better than woven wire. But operators need to know how to choose the best screen media.

### Drawing the line

The difference between using “good-enough” screen media instead of the optimal screen media for the application can be unwanted downtime and expense. Consider three things when selecting the best-engineered

screen media for an application.

Steve Fair, the Tyler-engineered media manager at Haver & Boecker Niagara, makes some starting suggestions.

“First, look at all aspects of an aggregates or mining operation and any challenges to increasing production rates and profitability. Second, look at the composition of the material going through the vibrating screen and consult an expert from a reputable company to match the best screen media to the application. Finally, learn to install and maintain the screen media properly,” he says.

The first step toward selecting the most productive screen media involves answering several questions. What material is being processed? Is the screen media reaching a suitable lifespan for

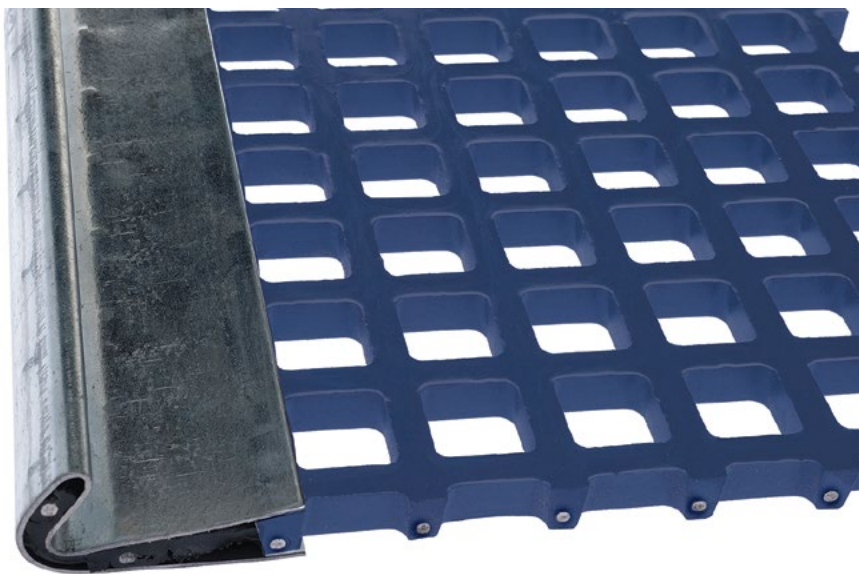
the operation? And what sort of challenges are occurring with the current screen media?

“Consider the types of materials going through the vibrating screen. Factors such as material size, weight and abrasiveness all come into play during selection. For example, screening gravel typically requires media with higher wearability to handle the material’s abrasiveness. On the other hand, materials with top sizes as large as 10 inches require more durable screens because of the constant high impacts,” advises Fair.

### The next step

Look at the vibrating screen itself and complete a vibration analysis. Some analysis systems are designed to monitor vibrating screen performance safely in real-time and detect irregularities before minor problems lead





to diminished performance or more significant issues. The machine may be running perfectly in some cases, but changing the screen media can prevent screening irregularities and the resulting damage.

"Vibration analysis is an excellent tool for getting the most out of your screen media. This technological advancement can substantially improve efficiency," says Fair.

Consider the three phases material goes through within the vibrating screen, from layered to essential to sharp. Producers can customise the screen deck with various types of screen media through each phase by accounting for open area and wear life to maximise productivity.

In the layered phase, as the material of all sizes hits the screen deck, the media should handle a deep bed depth, high impact and a mix of coarse and fine particles. The material should stratify in the middle of the deck during the primary phase, and near-size and oversized particles should be at the top of the screened material. Virtually all undersized material should have fallen through the screen media by the time it reaches the sharp phase at the discharge end, where near-size and oversized particles should be in direct contact with the media.

A vibrating screen operator should also examine wearability to determine whether media in the three phases is reaching maximum potential. If screen media has to be changed too often, consider switching to something more durable.

Next, look at the screening challenges. Examine discarded screen media for signs of problem areas, such as broken wires, wear areas, pegging or blinding. Common screening issues include premature wear due to heavy material and significant abrasive fines. Screening problems can cause carryover or contamination, resulting in unwanted material in the screened pile or the added cost of rescreening. Also, broken screens mean costly unscheduled changeouts. All of these signs indicate there's likely a better screen media option for at least one phase of screening, if not all three.

### Screening a solution

An operation can see increased maintenance costs and downtime due to using the wrong screen media. Suppose a vibrating screen continues to operate while having issues with pegging, blinding, broken screens or screen media with incorrectly sized openings. In that case, the screened pile will likely be contaminated and require rescreening. The most costly problems are unscheduled

	Haver & Boecker Niagara highlights polyurethane, rubber, and perforated steel plates for effective mining and aggregate operations.
	Fair advises considering the operation, material composition, and proper installation and maintenance for optimal screen media.
	Engineered screen media offers durability, reduced noise, and customisation for unique applications, enhancing service life.
	Fair says vibration analysis is essential for real-time issue detection, efficiency improvement, and problem prevention in vibrating screens.

TAKE

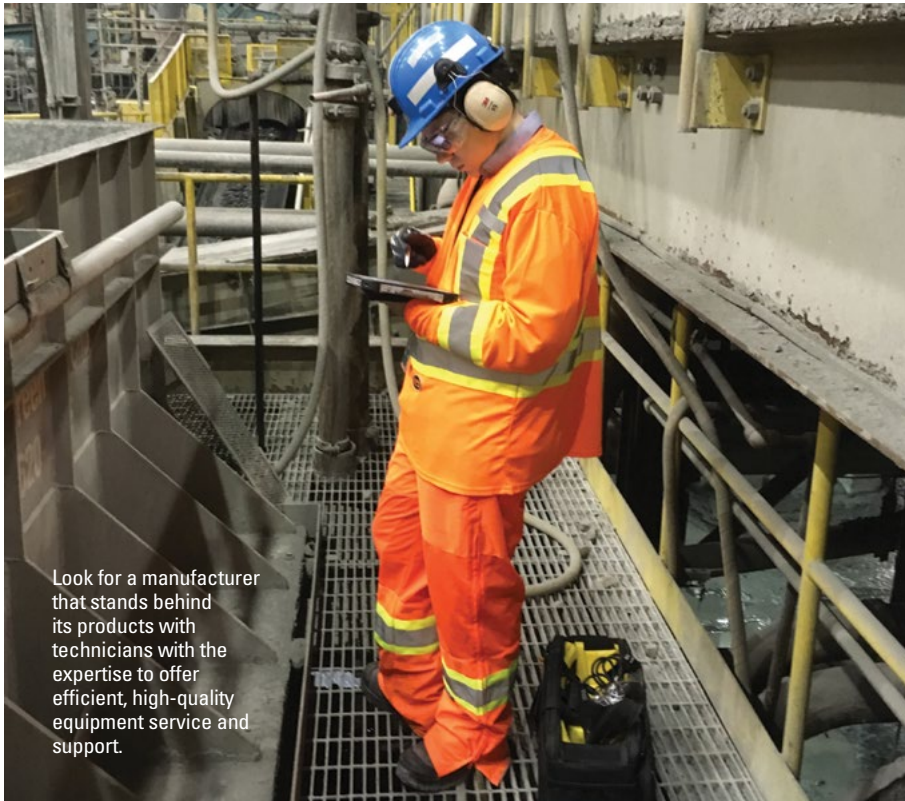
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TALKING POINT



Consider the types of materials going through the vibrating screen. Factors such as material size, weight and abrasiveness all come into play during selection. For example, screening gravel typically requires media with higher wearability to handle the material's abrasiveness.

Steve Fair is the Tyler-engineered media manager at Haver & Boecker Niagara.



Look for a manufacturer that stands behind its products with technicians with the expertise to offer efficient, high-quality equipment service and support.



changeouts. It takes about an hour to shut down a vibrating screen and change one screen media section. While an hour may not seem like a long time at first glance, the lost production to a mining operation, for example, will result in thousands of dollars off the bottom line.

Combined with woven wire cloth or self-cleaning screens, engineered screen media solves many common screening problems. The screens generally offer a longer service life than wire alternatives, and their durable qualities address screen breakage from heavy bed depths. In addition, polyurethane and rubber resist premature wear from abrasive materials.

Besides the longer service life, polyurethane and rubber-engineered screen media dampen the noise level of screening compared to metal screens. This allows for more operational hours in areas with decibel limits during certain times of the day.

Engineered screen media is versatile. It allows operators to solve different problems or address unique situations by ordering customised panels. Some screen media manufacturers, for example, offer dual durometer screens with softer polyurethane on the top layer and more rigid polyurethane on the bottom. This combination works well for hard-hitting applications requiring openings more significant than 2 cm and, primarily when used with tapered openings, helps eliminate pegging and blinding by allowing larger particles to screen

better or reject near-sized particles. Some screen media manufacturers address high-impact applications and improve wear life by supplying screens with solid areas to withstand the heaviest materials. Engineered media's versatility addresses not only the material's composition but also its temperature. Manufacturers can create polyurethane products to withstand high-heat applications, such as when screening silica after running it through a drying drum. Operators can also request additional customised screen media for unique and challenging applications.

#### Made to be used

Manufacturers create engineered screen media from several materials, such as polyurethane, rubber and perforated plates. Polyurethane offers a long lifespan and durability. Look for a polyurethane screen media manufacturer who blends their material and pours their open cast rather than injection-moulded polyurethane open cast. The open cast process takes about 9 hours to complete and typically lasts 1.5 to 2 times longer than injection-moulded products. In addition, open-cast polyurethane permanently hardens when cured to maintain its chemical properties, so it resists wear and tear. Injection-moulded screens, though faster to manufacture, can soften when the temperature rises during screening, resulting in less wear life.

Engineered screen media is made with thicker material for increased

durability, resulting in less open area. This is ideal for screening many small aggregate materials or decks with mixed media. Hybrid screens are an option that combines woven wire with polyurethane to achieve an open area closer to wire cloth but with four to six times longer wear life while weighing less than woven wire. Other polyurethane screens achieve additional durability with thicker wire to hold up to deep bed depths, large top sizes and wide bar rail spacing. There are misconceptions that polyurethane is strictly for dry applications, whereas others believe it is only for wet applications; in fact, it works well in both.

Look for rubber screen media when screening material with a top size larger than 30.48 centimetres, or when an application requires an opening bigger than 10.16 centimetres. Manufacturers can create rubber screens that are thicker than polyurethane for improved durability. The screens also dramatically reduce noise, handle high-impact applications and resist abrasion.

Consider perforated steel plates for heavy-duty operations that require a large amount of open area. Some manufacturers customise each plate's thickness to a customer's application and can create almost any size opening. The screens should be manufactured with tapered openings to resist pegging. Many perforated plates come in different abrasion-resistance levels, so choose a plate appropriate for the application. \*



# SUSTAINABLE MINE CLOSURE SOLUTIONS REQUIRE A FULL LIFECYCLE VIEW

**It is well acknowledged that the mining industry has a pivotal role to play in the green transition. The sector delivers the metals and minerals required for a greener future yet faces some significant challenges if it is to do so sustainably and responsibly.**

By Rochelle Bloemhof, Mine Closure Specialist, and Iphendule Ndzipho, Sustainability Consultant, Built Environment, at WSP in Africa.

**M**ining relies on non-renewable resources and, in its raw state, is inherently impactful on the Earth. Thus, those who practice geology and mining must be the stewards of the earth's resources. Finding sustainable solutions across the mining lifecycle and delivering valuable ESG outcomes are crucial to safeguarding our future. This is the opinion of Rochelle Bloemhof, Mine Closure Specialist.

Mining is ubiquitous across Southern Africa, with South Africa, Zambia, Botswana, Zimbabwe, and DRC major contributors. As such, mining organisations can make significant inroads in transforming their operations and setting the tone for how ESG can be approached across the board.

"Achieving successful and responsible mining operations through to closure, however, requires a future-focused approach," adds Bloemhof.

## The first step is the most important

The keys to shifting the paradigm of mining in Africa – from exploration through design and construction to operations and, finally, closure and post-closure – lie in understanding the inherent value of the mining operation beyond the commercial value of the minerals that can be extracted. It lies in understanding the operation's potential as a catalyst for human development and societal progress, embracing sustainability practices from multiple disciplines and thoroughly planning for closure.

Design, construction and operations must also take a future-focused approach, embracing ESG principles at every opportunity. WSP leverages the full spectrum of its combined services and multidisciplinary teams to help clients plan and develop their ESG strategy across the entire mine lifecycle and implement the engineering and non-engineering solutions that will support the achievement of their goals.

## Embracing circular economy principles

Bloemhof indicates that a circular approach is vital to supporting the mining sector as it transitions from developing sound plans and strategies to implementing them and making meaningful headway in ESG pursuits. "There are three principles that underpin circularity, and these same principles also play a key role in a more sustainable mining sector."

"The lifespan and usage of the mining operation must be maximised to extract the highest possible value, including responsible retirement of assets during mine closure. Furthermore, by-products and 'waste' in a circular economy must be recovered and reused as far as possible. The most common application of this last principle in mining involves reprocessing tailings materials to extract leftover minerals and construction materials. The responsible management of water resources is critical here, too," says Bloemhof.

Other increasingly common trends in the pursuit of zero carbon footprint mining include:

- Using electric mobile fleets for reduced fuel consumption and improved air quality.
- Using variable speed ventilation fans to reduce energy consumption.
- Using 'Smart Tracking' to optimise ventilation and fleet management and optimise extraction methods to reduce the amount of waste material.

One more way that WSP aids mining operations in meeting their ESG requirements is through designing an ESG scorecard. It captures and quantifies ESG metrics with the ability to customise according to mining clients' commitments. It has been incorporated into several projects the company consulted, unlocking opportunities for other ESG-related improvements.

According to Ndzipho, in addition to examining the mining operation itself for opportunities to implement ESG practices, one of the easiest things a mining company



Iphendule Ndzipho, Sustainability Consultant, Built Environment, at WSP in Africa.



Rochelle Bloemhof, Mine Closure Specialist.

can do is address its building efficiency, especially if constructing a new building.

"Applying green building principles - considered best practice in the commercial property space for some time - to on-site construction can enable a company to leapfrog its sustainability ambitions from the outset. For example, the construction of buildings can be done in a way that minimises wastage; buildings can be designed with water-efficient fittings in mind, and they can integrate renewable energy sources such as Photovoltaic Solar system (PV) tied to the grid or as part of on-site hybrid power solutions." 🌟



The Astec Telestack HF 520 unit is proving to be a significant asset where it operates.

# HIGH-SPEC HOPPER FEEDERS ARE A MUST IN SOUTH AFRICA

**Astec Industries South Africa has been awarded a significant order for Astec Telestack tracked hopper feeders, reflecting the growing demand in South Africa for this safe, heavy-duty, cost-effective, fuel-efficient, and highly mobile range of hopper feeders.**

Ireland-based Astec Telestack has been part of the Astec Industries portfolio since it was acquired by the group in 2014. Astec Telestack equipment is improving the productivity in South African operations ranging from warehouses, rail yards and ports to mines and quarries and quarries, and the Astec Telestack HF 520 unit is proving to be a significant asset where it operates.

Astec regional product and sales manager Andre Kruger explains that a customer in the Northern Cape will use an Astec Telestack HF 520 unit in a load-out application.

The HF 520 is a track-mounted, fully mobile conveyor. Like all of the stacking equipment in Astec's tracked hopper feeder range, it is designed to be loaded directly from wheel loaders, grab cranes, and excavators.

This means that the same piece of equipment can be used to stockpile material, feed auxiliary equipment or fixed equipment, reclaim onto overland conveyors, load barges, vessels and rail wagons directly from wheel loaders, or grab cranes.

Since the hopper feeder is track mounted, the unit has

excellent mobility on site and will eliminate the need for Astec South Africa's customer to double handle material, Kruger explains. This translates into reduced overall costs, he states.

"Our customer recognised this outstanding machine's potential to lower operating and fuel costs by up to 50%. In today's tough economic climate, these are substantial savings. But while offering cost savings, the HF 520 does not compromise on safety, quality, and performance. It is a high-spec machine designed for easy maintenance and maximum production," says Kruger about the Telestack tracked hopper feeder.

## Low operating costs

Kruger explains that the HF 520's reduced loading and tramming improve safety and lower operating costs.

"Eliminating the need to stockpile with a wheel loader enhances safety and increases production," says Kruger.

The HF 520's hydraulic folding head section allows for compact road transportation, and it can be packed into 12m containers for easy, cost-effective transport around the globe.

"Astec Telestack is an exceptional brand with a well-earned global reputation for safety, quality, and productivity, and we at Astec South Africa are excited to continue growing its footprint and enhancing aftermarket support for Astec's Telestack range of products in South Africa."

According to Kruger, understanding each sector's differing needs and designing the unit to suit the application is fundamental to the Astec Telestack design.

"Whether in a quarry, port, recycling, reclaiming, or mining application, Astec Telestack has a hopper feeder range easily

"Astec Telestack is an exceptional brand with a well-earned global reputation for safety, quality, and productivity, and we at Astec South Africa are excited to continue growing its footprint and enhancing aftermarket support for Astec's Telestack range of products in South Africa."

Andre Kruger, Astec regional product and sales manager Andre Kruger





QUICK TAKE



Astec Industries South Africa received a significant order for Astec Telestack tracked hopper feeders, reflecting increasing demand for safe, mobile, and cost-effective solutions.

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Astec Telestack's HF 520, a track-mounted mobile conveyor, allows stockpiling, feeding auxiliary equipment, reclaiming, or loading various materials directly, ensuring versatility.

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The HF 520 reduces loading and tramming, improving safety and lowering operating costs by eliminating the need for wheel loader stockpiling.

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Astec Telestack's product lineup, including the Revolution series, tracked conveyors, and radial telescopic stackers, offers solutions for various applications, enhancing safety and efficiency.

customised to suit most applications and the required target throughput," he says.

#### Astec Telestack innovation

Kruger reveals that other Astec Telestack products making their mark in South Africa are the Revolution series, tracked conveyors, and radial telescopic stackers.

"The Revolution series is the latest innovation from Astec Telestack. This is a range of hopper feeders with a centre-mounted slew bearing that enables 360-degree rotation and movement of the hopper to maximise its mobility on site. The Revolution series' ultimate flexibility makes it the ideal hopper feeder for barge and rail

wagon loading, unloading, and stockpiling, as the equipment can travel parallel to the vessel, improving safety, loading rates and operational efficiency."

#### Tracked conveyors


Kruger outlines the unique features and benefits of Astec Telestack tracked conveyors and radial telescopic stackers.

"As mobile crushers and screens constantly increase throughputs, a challenge is the transport restrictions on their size and length to cope with higher tonnages. Track conveyors fulfil this need by providing a much larger stockpile capacity. At the same time, they improve plant mobility by removing material from the processing plant. The Astec Telestack TC 624R is a track-mounted fully mobile radial conveyor designed to work at production rates of up to 600tph," says Kruger.

#### Radial Telescopic Stacker

"Astec Telestack's TS 36 140 AggStack Radial Telescopic Stacker offers a unique material handling solution for the quarrying, mining and rail industries.

It is also used in ports and inland terminals to load and unload ships, barges and stockyard management. The radial, telescopic and luffing features allow the operator to have complete control when stockpiling a range of materials, thereby eliminating the material's segregation, degradation, contamination, and compaction. The unit's innovative design provides a stockpile capacity up to 30% larger than conventional fixed-length conveyor systems," concludes Kruger.

Astec Industries South Africa offers the full range of Astec Telestack products. 





Some of the Sunward South Africa machines were displayed during the company's launch ceremony in Jet Park, Johannesburg.

# SUNWARD SOUTH AFRICA EYES MINING AND CONSTRUCTION SECTORS

**Sunward South Africa's expansion into the South African market has been a significant milestone for the company. The expansion has provided new opportunities for growth, product innovation, and technological advancements – and now its branded equipment is ready to dot mines and construction sites across the continent.**

**A** launch ceremony held at the company's Jet Park premises in Johannesburg in December last year marked the culmination of its efforts to establish direct operations in South Africa.

Sunward Group is one of the top 50 construction equipment manufacturers globally, ranking 37th in the KHL Yellow Table 2023.

The company offers world-class piling machines, drilling rigs, aerial work

platforms, skid-steer loaders, crawler and wheeled cranes, mobile crushing stations, and a complete range of excavators.

## A strategic move

The strategic move to establish direct operations in South Africa aims to enhance the company's support and provide better service to local dealers and customers through a specialist team and spare parts stock.

Sunward South Africa was registered

as a subsidiary in January 2020.

Despite the challenges posed by the pandemic, the company is now poised to enhance its brand image in the South African market.

## Mining equipment

Sunward's range of machines that are accessible to Africa's mining sector include a full range of down-the-hole, top hammer, and rotary-type drill rigs, excavators, loaders, dozers, and dump trucks. The company will keep 120-165 diameter drill rigs, 21t, 36t and 60t excavators, and 5t loaders in stock in South Africa, with stock replenishment three times a year.

The expansion also gives local customers access to Sunward's expansive range of mobile jaw, cone and impact crushers, heavy-duty screens and standard screening plants.

A quality range of aerial equipment, such as boom working platforms, hydraulic and electric scissor lifts, and telehandlers, are also available from Sunward.



This year will see us further expanding our dealer network with the appointment of ten new dealerships across the African continent, including one in South Africa as well as in Zambia, Mozambique, Guinea, Congo, Namibia and Angola.

Ferry Meng, General Manager for Sunward South Africa and African Region



customers through our specialist team as well as through spare parts stock," says Ferry Meng, General Manager for Sunward South Africa and African Region.

### Expect new dealers

Sunward provides dealer training on all new machines, technologies, and modifications. Sunward professional engineers also conduct five-day free customer training of operators and technicians post-delivery to provide unsurpassed customer service and support across the region. The company also offers free seasonal assessments for customers, providing advice on machine maintenance and spare parts.

"We currently have twelve dealers in Africa, three of whom are based in South Africa (Gauteng, Free State and Mpumalanga Province)," says Meng.

The expansion of Sunward's presence in South Africa galvanises the company's steadfast commitment to dealers and customers across the region.

"With the tremendous untapped potential that we have identified in the South African mining and construction sectors, we are confident of Sunward's future growth and success," concludes Meng. 🌐

QUICK TAKE



Sunward holds a competitive edge with many patents for its drill rigs, excavators, and pile rigs.



Local customers will also have access to Sunward's expansive range of mobile jaw, cone, impact crushers, heavy-duty screens, and standard screening plants.



5G intelligent control equipment enables operators to monitor and control excavators, dump trucks, and drill rigs via a 5G (wireless) network.



Founded in 1999, Sunward Group is one of the world's Top 50 construction equipment manufacturers.

### Advanced technology

Sunward machines incorporate several new and advanced technologies, including fully electric excavators with lithium batteries, hybrid drill rigs and mobile crushers, hydrogen-driven dump trucks, and 5G intelligent control equipment that enables operators to monitor and control excavators, dump trucks, drill rigs, etc. via a 5G (wireless) network and the Sunward-Cloud platform technology.

The company's in-house developed software and controllers for the hydraulic systems on its excavators and drill rigs improve machine performance and reduce fuel consumption. Sunward also holds a competitive edge with many patents for its drill rigs, excavators, and pile rigs.

### South African expansion

Sunward's route to market in Africa is via dealerships, and the company will support customers in South Africa through close collaboration with its dealer partners across the region. The company currently has twelve African dealers, three based in South Africa. The remaining dealerships are in countries including Nigeria, Burkina Faso, Algeria, Uganda, Kenya, and Tanzania. This year will see Sunward expanding its dealer network with the appointment of ten new dealerships across the African continent, including one in South Africa, Zambia, Mozambique, Guinea, Congo, Namibia and Angola.

"The objective of our strategic move to establish direct operations in South Africa is to enhance our support of and to provide better service to local dealers and

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The OBTAIN™ software has been developed for TOMRA's XRT sorters. It will be available on new models, but an upgrade package will also be available for existing machines, providing a significant opportunity for customers already operating TOMRA XRT sorters to substantially enhance the sorting performance where it proves to be a suitable solution.

## TOMRA MINING SETS SIGHTS ON SENSOR-BASED SORTING WITH DEEP LEARNING TECHNOLOGY

**TOMRA Mining unveiled its latest innovation, OBTAIN™, at the Mining Indaba exhibition in Cape Town this month. This ground-breaking software leverages Deep Learning to bring single-particle precision to high-throughput particle sorting, taking capacity, quality and recovery to a new level and unlocking value through a wealth of highly detailed and accurate data for better-informed decision-making.**

**"M**ining Indaba, one of the most important events in the mining industry, is the perfect platform for us to unveil our revo-

lutionary OBTAIN™. This exciting innovation marks the beginning of a new era in sensor-based sorting and will enable mining operations to unlock untapped value and extend the life of their mine," says Albert du Preez, Head of TOMRA Mining.



This is an exciting innovation that marks the beginning of a new era in sensor-based sorting and will enable mining operations to unlock untapped value and extend the life of their mine.

Albert du Preez, Head of TOMRA Mining

### Leveraging AI

Artificial Intelligence has been grabbing the headlines since ChatGPT burst onto the scene, giving rise to sensational news stories. However, AI has been around for a long time, working quietly behind the scenes. The ability of computer systems to mimic human thought and decision-making to perform tasks that traditionally required human intelligence has played an essential role in TOMRA's sensor-based sorting solutions for decades, automating the process and improving the accuracy and efficiency of the sorters, unlocking value for mining operations.

TOMRA Mining's experience with AI dates back to 1993 when its predecessor, CommoDaS, developed sensor-based sorters using AI in their image processing systems to identify particle properties. Over the years, sensor-based sorting technology has developed, and TOMRA has been using Machine Learning in its X-Ray Transmission (XRT) and Near-Infrared (NIR) sorters for the last ten years.

### Cost-effective and sustainable

AI encompasses two sub-fields that have considerably progressed in recent years: Machine Learning, which recognises patterns, learns from data and improves without being programmed, and Deep Learning, which is a type of Machine Learning that uses artificial neural networks to analyse data and solve complex problems. These technologies quickly process vast amounts of data and use it to make decisions without human intervention.

Machine Learning and Deep Learning can further improve the sorting process for mining operations already using sensor-based sorting but also open new opportunities by enabling the processing of very low-grade materials that previously would have been discarded. A further advantage of AI is the vast amount of data it generates and processes, which provides mining operations with valuable insights into the sorter's performance and for predictive maintenance.

It is important to note that Machine Learning and Deep Learning are not one-size-fits-all solutions. With its long-standing expertise and extensive R&D in AI, TOMRA will always select the most suitable technology for each case.

### How to OBTAIN works

TOMRA is now breaking new ground with its latest innovation, which leverages Deep Learning to introduce an industry-first: single-particle precision in high-throughput ore sorting. This revolutionary software uses a Neuronal Network to



identify the properties of each particle accurately and independently of the sorter's capacity, achieving unparalleled precision and reliability in detection and ejection. Based on their specific requirements, the mining operation has the flexibility to either enhance the throughput of the sorter while maintaining consistent sorting efficiency or improve sorting precision without compromising the existing throughput. It is a true game-changer.

OBTAIN™ proves advantageous for a fully operational mine by enhancing recovery rates and elevating product quality within the existing throughput. Conversely, mines with additional capacity facilitate increased throughput without compromising product quality. Furthermore, this innovative technology can unlock untapped value from low-grade ore, waste dumps, or materials previously deemed uneconomical for processing.

OBTAIN™ will also add value to a mining operation with highly detailed and accurate data, such as precise online particle-size distribution of the feed. When combined with TOMRA Insight, it can provide the customer with detailed reporting on the performance of the sorter and its components to help them optimise the process and enable them to plan for predictive maintenance.

The OBTAIN™ software has been developed for TOMRA's XRT sorters. It will be available on new models, but an upgrade package will also be available for existing machines, providing a significant opportunity for customers already operating TOMRA XRT sorters to substantially enhance the sorting performance where it proves to be a suitable solution.


TOMRA has partnered with two customers to test the new OBTAIN™ in working conditions. The software has been operating for nearly 18 months at the Wolfram Bergbau & Hütten tungsten mine in Mittersill, Austria, delivering consistent and reliable performance. The vicinity of the mine to TOMRA's development team has made it a perfect testing ground for the first phase, as they have been able to monitor it closely. A second phase of testing to quantify the improvements has been carried out with a trusted, long-standing customer in a Magnetise application. The successful tests have shown that OBTAIN™ is ready to transform sensor-based XRT sorting in numerous applications.

Mining operators interested in finding out if OBTAIN™ can power up their sorting results can book a demonstration with samples from their mine at the TOMRA Test Center in Wedel, Germany.

### What the future holds

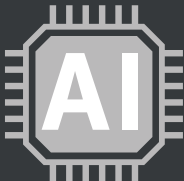
Both Machine Learning and Deep Learning have great potential to enhance further the benefits of TOMRA Mining's sorting technologies for mining operations. The company is constantly exploring the possibility of these technologies and pushing the boundaries to offer technical solutions for sorting previously impossible applications for sensor-based sorters. At the same time, it can use Machine Learning and Deep Learning to improve the existing sorting technology, applying them to more areas of its activity, such as better customer support, deeper analysis of the sorted material for improved control of customers' processing plants, and predictive maintenance and monitoring of the sorter's components. 🌐

QUICK TAKE




TOMRA Mining introduced OBTAIN™ at Mining Indaba. It uses Deep Learning for high-throughput ore sorting, revolutionising precision and unlocking value.

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TOMRA's experience with AI dates back to 1993 when it employed Machine Learning and Deep Learning in X-ray transmission (XRT) and Near-Infrared (NIR) sorters.

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OBTAIN™, leveraging Deep Learning, achieves single-particle precision, enhancing recovery rates, elevating product quality, and unlocking value from low-grade ore.

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OBTAIN™ underWENT successful testing consistent and reliable performance, ready for transformative applications.

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# SPOTLIGHT ON SME RECRUITMENT IN WAREHOUSING AND LOGISTICS

**SMEs account for most businesses worldwide and contribute to job creation and global economic development.**

**According to the World Bank Group, they represent about 90% of companies and over 50% of employment worldwide.**

**F**ormal SMEs contribute up to 40% of emerging economies' national income (GDP), and the number is significantly higher when informal SMEs are included. The World Bank Group estimates that 600 million SMEs will be needed by 2030 to absorb the growing global workforce, which makes SME development a high priority for many governments. In emerging markets, most formal jobs are generated by SMEs, which create 7 out of 10 jobs.

## The local figures

SMEs are an integral part of South Africa's economy. According to a report by the International Finance Corporation, approximately 50% to 60% of South Africa's workforce finds employment within SMEs. As such, these enterprises bring many advantages that contribute to economic development:

**Job creation:** SMEs significantly contribute to job creation, especially in labour-intensive sectors. Their ability

to adapt quickly to changing market demands allows them to absorb labour, thereby reducing unemployment rates and providing livelihoods to many.

**Economic growth:** SMEs foster a dynamic business environment that fuels economic growth. They encourage competition, innovation, and diversity, increasing productivity and economic progress.

**Poverty alleviation:** As SMEs expand and succeed, they contribute to poverty reduction by empowering local communities through employment and income generation.

SMEs often face various challenges, however, particularly in recruitment. Issues such as time-to-hire and recruitment costs can hinder their ability to attract quality talent. To address these challenges, specialised online recruitment platforms like Pnet have emerged as powerful tools to help SMEs find suitable candidates for their vacant roles, thereby boosting their competitiveness in the market.



Diverse SMEs contribute 90% to global businesses and over 50% to worldwide employment, driving economic development.

## Recruitment activity

"Jobs in warehousing and logistics have remained stable through 2023, with a 2% growth in demand between 2022 and 2023. There has been slow yet consistent growth in hiring activity since 2021 to the point that, in 2023, we can report talent demand levels close to pre-covid times. Hiring activity in 2023 was 13% higher than in 2021,"





SMEs comprise 90% of global businesses, contributing over 50% to worldwide employment and 40% to emerging economies' GDP.



50-60% of South Africa's workforce is employed by SMEs, fostering job creation, economic growth, and poverty alleviation.



Warehousing and logistics jobs show 2% growth, with 13% higher hiring activity in 2023, remaining a top-10 sector.



SMEs face time-to-hire, high recruitment costs, and personnel challenges; online platforms like Pnet offer streamlined, cost-effective solutions.

100 million Job Alerts Pnet sends directly to jobseekers' monthly inboxes.

High recruitment costs: Due to the need for specialised skills, companies tend to lean on recruitment agencies or headhunters, inflating the price of talent because of retainer or placement fees. By going directly to Pnet to source suitable candidates, SMEs can save up to 60% on recruitment costs. Pnet uses advanced algorithms and analytics to target job advertisements to the most relevant candidates. This enables recruiters to find quality candidates using locally relevant filters and create talent pools to access when they need to hire for similar roles in the future.

Inadequate personnel to focus on the recruitment process: SMEs often don't have the luxury of a dedicated resource to handle their hiring activity, so sifting through CVs, shortlisting candidates and conducting interviews can feel overwhelming. Pnet's expert "Response Handling" Team can help source quality matches for your vacancies - they know how to input your job description to attract candidates to your job ad. They can create suitable shortlists on your behalf so that you can get on with your core business activities.

### Navigating change

As businesses navigate the ever-evolving landscape of talent acquisition, the role of data in SME recruitment emerges as a crucial factor in staying competitive and relevant.

By understanding the challenges unique to each sector, particularly in industries like Warehousing & Logistics, where speed and skill are paramount, businesses can leverage data-driven recruitment to mitigate downtime and streamline the hiring process.

The key takeaway is clear – a data-driven approach is not just about identifying skills in demand. Still, it is a strategic tool for sculpting a workforce that meets current needs while future-proofing businesses against talent gaps. In embracing this approach, companies can transform recruitment from a reactive process into a proactive strategy, ensuring a steady pipeline of qualified candidates and reinforcing their position in a competitive market.

Built-for-purpose online recruitment platforms are emerging as powerful tools for helping SMEs find suitable candidates for their vacant roles, thereby boosting their competitiveness in the market.

These platforms have become a game-changer for companies of all sizes, allowing them to flourish by attracting and retaining their most important asset – people. 🌟



"There has been slow yet consistent growth in hiring activity since 2021 to the point that in 2023, we can report talent demand levels close to pre-covid times. Hiring activity in 2023 was 13% higher than in 2021."

**Paul Byrne, Head of Data Insights and Customer Success at Pnet**

says Paul Byrne, Head of Data Insights and Customer Success at Pnet.

"Since 2019, Warehousing & Logistics has remained in the top 10 in-demand job sectors. On average, people stay in Warehousing & Logistics jobs for three years. This is higher than the average tenure in South Africa across all sectors (2 years and four months). 33.1% of candidates in this sector have a tertiary qualification; 53.8% are willing to relocate, with 60.3% currently residing in Gauteng; and 60.3% are employment equity candidates," says Byrne.

### Recruitment challenges

Despite needing to attract and retain skilled talent, SMEs often face three significant recruitment challenges:

**Time-to-hire:** Time is critical for all SMEs during the recruitment process, particularly for those within the Warehousing & Logistics sector. Due to the nature of the industry, it's vital to fill roles as quickly as possible to mitigate downtime in procurement and supply. Sourcing candidates directly using job-matching technology streamlines the hiring process so that SMEs can promptly reach more job seekers. SMEs can advertise their vacancies directly to active job seekers or tap into a database of professional candidates. Sophisticated platforms like Pnet's online recruitment portal offer easy-to-use tools and features to filter and shortlist suitable candidates from its over 6 million job seekers database. Moreover, recruiter job ads get further reach from the



# UD TRUCKS SHOWCASES NEW VENTURES AND TECHNOLOGIES

The mining and quarrying industries in South Africa have experienced a surge in demand for heavy-duty trucks in recent years. With unreliable rail transport, many companies have turned to trucks to move their commodities. As a result, UD Trucks South Africa saw exponential growth in its sales in 2023, writes *Adriaan Roets*.

**U**D Trucks Southern Africa (UDTSA) held its annual press conference at the end of January, the perfect time to reflect on a successful 2023 – but also an opportunity to showcase why UDTSA has become such a trusted and laud-

ed OEM locally.

Despite the headwinds in the commercial vehicle industry, presented by unpredictable regional and international operating conditions, UDTSA recorded impressive figures.

Overall, the new vehicle market

registered a sound performance of 9.2%, with aggregate industry sales at 32,169 compared to 29,455 in 2022. UDTSA also concluded that 2023 reached over 40% in service agreements. This significant progress is a substantial step toward ensuring peace of mind, predictability, and maximising overall uptime for UD Trucks customers.

“What has grown on the heavy-duty side is the pressure to move commodities quickly. The truck industry has taken on some of that responsibility,” says Rory Schulz, Sales Director for UD Trucks Southern Africa.

Triggered by the collapse of rail locally, last year UD Trucks sold a whopping 18,458 Heavy-Duty Trucks. UD Trucks also ended the previous year selling 5460 Medium-Duty



We have accomplished various objectives, including achieving retail excellence, introducing innovative transport solutions, enhancing our aftersales offerings to reduce total cost of ownership, and improving parts availability at dealers.

Filip van den Heede, Managing Director of UD Trucks Southern Africa





The new Quon, a legacy truck with exceptional sales, that is proving highly successful in the heavy-duty market in South Africa.

of UD Trucks Southern Africa, comments that 2023 was not always an easy year but that the company strengthened its holistic proposition, focusing on delivering transport and service solutions that South Africa needs today.

"In pursuit of this goal, we have accomplished various objectives, including achieving retail excellence, introducing innovative transport solutions, enhancing our aftersales offerings to reduce total cost of ownership, and improving parts availability at dealers, leading to further improved uptime and resale value for our customers, among other accomplishments. With improved cost of ownership and uptime ultimately driving customer satisfaction," he says.

According to Van den Heede, some of the success is attributed to UD's commitment to after-sales services and the brand's continued investment in South Africa, where brand recognition is strong and growing – and where UD is offering transport solutions.

Total Cost of Ownership and service and maintenance contracts are part of UDTSA's offering, and they aim to offer the best, cost-effective solutions.

"In the past, a part of our consumer base had their workshops for maintenance. We're seeing a shift where that is fading away because running an in-house workshop is becoming unsustainable and even unaffordable," says Van den Heede.

"It becomes complicated when fleet owners have trucks from four or five OEMs, and a personal workshop needs to service these vehicles. For instance, getting all the right parts plays a role in owners opting for service and maintenance contracts. At UDTSA, we take these pain points away," explains Van den Heede.

Last year, the UDTSA brand was renewed in confidence when it officially opened its doors to a more prominent, more prominently located dealership in Cape Town. The new dealership in Cape Town, together with many other investments in the network, continues to be proof of the ongoing investments in customer satisfaction.

### New partnerships

One of the newest announcements from UD Trucks to kick off 2024 is the SVI Armoured UD Kruzer.

This follows a venture between UDTSA and SVI Engineering, a leading specialist manufacturer of armoured products in South Africa. The SVI-converted UD Kruzer truck offers its driver and front passengers comprehensive B6 protection



Trucks and 8251 Light Duty Trucks.

He adds that since the country is now relying on the movement of goods by load, the strong performance of Heavy-Duty Trucks is expected to keep its momentum.

But moving commodities plays just a part in UD Trucks SA's meteoric

rise in sales. After-sales service and maintenance contracts are also making UDTSA a strong competitor in the South African truck market.

### Building trust

Filip Van den Heede, Managing Director



Filip Van den Heede, Managing Director UD Trucks Southern Africa with Sanjay Naipal, Aftermarket Director for UD Trucks Southern Africa and Rory Schulz, Sales Director for UD Trucks Southern Africa at the press conference.



The new Quon, a legacy truck that is proving highly successful in the heavy-duty market in South Africa with exceptional sales.

without compromising either comfort or performance. Further, the conversion is fully approved by UDTSA, and the new armouring solution can be ordered through any UDTSA dealer local network, with the standard manufacturer warranty remaining in place.

Marketed for security companies and protection agencies, UD Trucks also sees value in the vehicle in delete in the mining industry where valuable items are in transit.

"We see that there's a need for these vehicles," says Van den Heede.

The truck also has the UD DNA firmly entrenched and feels holistically part

of the UD Family of trucks offered in South Africa.

"It's noteworthy that on first look, it doesn't look like a standard armoured vehicle," adds Van den Heede.

On the other hand, Schulz is excited that specialised vehicles are made available through the UDTSA dealer network.

The SVI-armoured UD Kuzer RKE 150 is available in three armoured cab options: a cash-in-transit cab, a personnel or prisoner transport bus, and a valuables-in-transit cab.

Van den Heede notes that the truck is modest, so it doesn't seem like a threat

when someone passes it on the highway.

That doesn't mean the truck isn't highly secure.

The B6 Cap replacement allows protection against assault rifles up to 7.62x51mm and uses 40mm glass and armoured steel for peace of mind.

It also has a gross vehicle mass of 8999kg, making it heavy-duty but quick on its feet.

"We see customers transporting gold and valuable goods in this," explains Van den Heede.

### Quon does well

The UD Quon commemorates two decades since its global launch in 2004. Built upon a heritage of overcoming challenges, the UD Quon has consistently introduced groundbreaking innovations, including the Traffic Eye Brake and the revolutionary ESCOT gearbox. These advancements further solidify UD's market positioning.

Marking the significance of this milestone, UDTSA has taken strides towards its commitment to ensuring access to sustainable transport solutions for the South African market and is set to introduce enhanced Quon safety features, equipping it with innovative safety features that put people first.

The enhanced Quon has diverse features onboard, elevating drivability and comfort, reducing risks and giving drivers a safe working environment. This includes a streamlined interior and dashboard designed for driver comfort and an easy-to-understand instrument panel layout with driving information and LED indicators smartly arranged in order of warning priority, providing excellent visibility to drivers.

Owners can also expect peace of mind with maintenance with UD Trust Service Agreements, which include maintenance plans based on vehicle usage, covering optimal preventive maintenance and reliable inspections. Quon trucks are also supported with UD Extra Mile Support solutions that tap into the whole UD network to access vehicle support which benefits owners throughout their vehicle application and lifespan – spanning across vehicle handover training programme, manufacturer's warranty, UD Road Support, on top of reliable servicing by qualified technicians with genuine parts and UD Connected Services.

"The upgraded Quon contributes to heightened sustainability and mobility, thereby reducing the overall carbon footprint in alignment with UD Trucks' overarching purpose of creating a better life for people and the planet," says Schulz. 🌱



# THE FATE OF FLEETS

Over 2,500 truck hi-jackings were reported in the first three months of 2023 - approximately 27 vehicles per month - according to figures recently published in a well-known South African freight magazine. Additionally, the number of reported truck hijackings has increased by nearly 25% year on year since 2020 and shows no signs of slowing down. But this year there's reason to be proactive, according to Strata Logistics.

**T**ruck hi-jackings are not opportunistic criminal events, these are well-organised syndicates that plan with military precision, sophisticated equipment and supported by insider information believes Deon de Villiers, Managing Member of Strata Logistics, one of South Africa's leading logistics service providers.

"The sophistication with which these hi-jackings are implemented means that Strata Logistics needs to continually assess smarter technologies and conduct regular procedural reviews to safeguard its freighting operations. The logistics sector does not stand still, and I believe that Strata Logistics does more than the average operator to keep abreast of and implement new smart security and safety upgrades to our vehicles when required as an absolute necessity" de Villiers said.

"It is an expensive CAPEX outlay, but to protect our fleet of vehicles, give staff and our customers peace of mind, there is no other option. Our cargo is a critical element in the lifecycle of logistics handling and needs the fullest of protections available," he says.

According to him they seek assistance from the best tactical risk assessment units available, and together they formalise updated strategies that embrace our smart, high-tech solutions so that their operations can work in tandem.

"We believe that our continued investment into these smart upgrades reflects the seriousness with which we hold our customers and their cargo that we transport," adds De Villiers.



To protect the 75-vehicle Strata Logistics fleet the company has invested in sophisticated security systems such as 24/7 live monitoring, Drivecams, driver alert alarms and GPS Live satellite tracking and online alerts software.

## In an emergency

"In the event of an incident, it is important that we analyse all the circumstances and processes so that we can revise and improve our operations accordingly. Every element of the incident is inspected for where we can implement improvements. That is the only way we can ensure that our security procedures in and out of the cab are as flawless and seamless as possible," says De Villiers.

According to him their whole fleet of 75 vehicles has sophisticated security systems installed such as 24/7 live monitoring, Drivecams, driver alert alarms and GPS Live satellite tracking and online alerts software.

## Driver training

"Our driver training is detailed, intensive and our drivers are all pre-screened. Our drivers are trained to make split-second decisions in order to prevent loss of

life and cargo wherever possible but to remain realistic and practical about any situation they may unfortunately find themselves in," adds De Villiers

For him, their drivers are part of the family and their integrity is essential to the continued success of the company.

## Experience is important

Strata Logistics has over 30 years' experience in the industry in the provision of quality primary and secondary logistics services with a differentiation factor of being able to offer a one-stop-shop bouquet of services which include linehaul, same day express, direct loads, special cargo, contract vehicle solutions and maintenance solutions.

Strata operates 12 trips to Cape Town per day, as well as servicing KwaZulu-Natal, Nelspruit, Rustenburg, East London and Gqeberha. They have 65 highly trained and dedicated drivers keeping their vehicles moving, with their cargo being fully insured against any eventuality.

## Being proactive

"Unfortunately, as we improve our smart security systems, so do hi-jackers. Their criminal activities are now underpinned by advanced technologies, bold operatives and involve numerous highly coordinated armed personnel. We can't solve crime, but we can keep our fleets the most secure they can be at all times, and that is the promise we give to our customer base, concluded de Villiers. 🌐



"In the event of an incident, it is important that we analyse all the circumstances and processes so that we can revise and improve our operations accordingly. Every element of the incident is inspected for where we can implement improvements."

Deon de Villiers, Managing Member of Strata Logistics

## Online truck parts portal from DTSA

Daimler Truck Southern Africa (DTSA) has spearheaded the move to online truck parts purchases.

The newly-launched Daimler Truck Parts Portal boosts the convenience level for Mercedes-Benz Truck and FUSO Truck customers with the introduction of a simplified online parts purchase portal.

Over 400 hundred parts can be purchased for Mercedes-Benz Truck and FUSO Truck on the Daimler Truck Parts Portal.

DTSA made history by being the first Daimler Truck market in the world, to launch the Daimler Truck Parts Portal, an online eCommerce platform.

The platform works on a click and collect basis where customers can buy parts online and collect it within 24 hours at their selected dealership. As an initial start over four hundred parts including oil, batteries, service and select wear and tear parts are available on the portal, with

plans already underway to expand the product catalogue to include maintenance and collision parts, in addition to delivery of parts to customers.

"The Daimler Truck Parts Portal is a game changer in the commercial vehicle market, and we are thrilled to be part of the development team, and to be the very first Daimler Truck market in the world to

launch the portal to our customers," says Ziyad Gaba, Vice President for customer service, parts, and value chain.

"Our customers are central to everything that we do and the digitalization of our processes to increase customer convenience has been a key driver in the development of the Daimler Truck Parts Portal." 🌟



Ziyad Gaba, VP customer service, parts, and value chain.

## Innovation is the light at the end of the tunnel for Serco

Truck and trailer manufacturer, Serco, forecasts another challenging year ahead for South Africa with negative factors such as load shedding and congestion at the country's ports taking their toll.

However, CEO Clinton Holcroft is optimistic about prospects for Serco, citing innovation and resilience as the company's beacons of hope and confidence.

Looking back on a tough 2023, Holcroft said while trailer orders had decreased and truck demand stagnated, there had been an encouraging surge in the company's repair business.

Serco's commitment to innovation and customer service were yielding positive results, which included being recipients of the SPAR Group's Award for the most Improved Supplier in 2023. "We're really excited about that as giving excellent service to our customers is what we aim for constantly."

Holcroft said the impact of load shedding on retailers and the perishable food industry had been significant. However, amid all the chaos and drama, Serco was proud to announce that its Cape Town branch had joined the ranks of the solar powered, in line with its Durban and Johannesburg branches.

"Exciting developments continue with the introduction of E-tag axle charging systems on our new trailers. This innovative technology, piloted in collaboration with clients, harnesses power to fuel the fridge



Clinton Holcroft, CEO of Serco (Pty) Ltd

and tail lift, reducing reliance on diesel and eliminating cumbersome electrical cables."

Holcroft is optimistic about 2024, seeing an improvement in Serco's trailer and truck body sales. Recent product enhancements, including a high-volume dry freight interlink trailer and the lightweight Protec Lite refrigerated trailer, had attracted positive client feedback.

"Serco is meeting challenges, committed to delivering exceptional service, while

helping steer the truck and trailer building industry towards a brighter future," he added. Serco is also staying strong. The company invested in a state-of-the-art 150kW hybrid solar system at the factory in Boksburg.

This development follows the installation of solar power at Serco's Durban factory in the Phoenix Industrial Park in 2019, which has saved more than 618 tons in carbon emissions to date. 🌟



## DHL Express banks on electric ID.Buzz Cargo vans

Volkswagen Commercial Vehicles has partnered with DHL Express for the pilot test of the ID.Buzz Cargo fleet in South Africa. Four ID.Buzz Cargo units will be placed at the DHL Express Service Centres in Johannesburg, Cape Town and Durban for six months. The units will be utilised for specialised last-mile delivery service as part of DHL's local pilot test of its global zero emissions logistics target.

The introduction of the ID.Buzz Cargo test fleet is an effort towards the realisation of Volkswagen Group South Africa's electric vehicles strategy for the Volkswagen brand in South Africa. The test fleet will assist Volkswagen to build awareness of its electric vehicles in South Africa and to obtain learnings that are key for the brand's electric vehicles strategy.

Thomas Milz, Director of Sales and Marketing at VWSA, said: "Our partnership with DHL Express on the ID.Buzz Cargo test fleet marks the beginning of Volkswagen's long-term plan to gradually introduce its electric vehicles in the local market. At the end of the pilot test, we hope to have gathered sufficient information and insights on the readi-



Thomas Milz, Director of Sales and Marketing, VWSA and Jed Michaletos, Managing Director, DHL Express South Africa.

ness of the local market for the introduction of a commercial electric vehicle such as the ID.Buzz Cargo. We are very excited to partner with DHL who shares a similar commitment of zero emissions by 2050 in accordance with the Paris Climate Agreement."

"As the world's leading logistics company, we have a responsibility to set an example in our industry and be a sustain-

ability leader. DHL Express has committed to achieving zero emission by 2050 through a number of initiatives, one of which is ensuring that we have at least 60% electric vehicles for last-mile deliveries by 2030. We are excited to partner with VWSA to pilot their ID. Buzz in our South African operations, said Jed Michaletos – MD, DHL Express South Africa. 🌱

## JC Auditors strengthens team with national road traffic expert

JC Auditors (JCA), a leading SANAS-accredited certification body, is delighted to announce the addition of Reon du Plessis to its dynamic team. With over 40 years of distinguished experience in road traffic implementation, Du Plessis brings a wealth of knowledge and expertise to the organisation.

During his career, the expert held several key positions, including Chief Provincial Inspector, Deputy Director, and Head of the KZN Traffic Training College. Under his leadership, the KZN Traffic Training College achieved recognition as the best traffic training college in South Africa, a testament to his dedication and commitment to excellence.

Du Plessis has various qualifications in the field, including that of a professional vehicle examiner since 1980. This extensive experience equips him with solid insight into vehicle inspection and safety standards, further strengthening JC Auditors' capabilities in this crucial area.

The JCA team conducts around 1 000 RTMS audits annually, which evaluates a transporter's capability to manage its fleet



in a safe and compliant manner, ultimately to mitigate and minimise road crashes. With Du Plessis' expertise, JCA will now initiate random vehicle inspections as a further aide to identify and communicate key risks to the transporter.

"The aim of these value-added inspections is provide transporters with key information in order to promote continual improvement", says Gift Nhlabathi, Senior RTMS auditor with JCA.

Of particular significance is the new team member's involvement in the progressive development of the Administrative Adjudication of Road Traffic Offences (AARTO) Act since 1998. As an expert in this field, he is uniquely positioned to provide invaluable guidance and interpre-

tation for the upcoming implementation of AARTO. His deep understanding of the Act and its implications will be instrumental in helping the road transport sector navigate the changing landscape of road traffic regulations.

Du Plessis has been instrumental in developing the AARTO training knowledge base, which has already been rolled out and well received by the sector.

JC Auditors has a long-standing commitment to promoting safety, compliance, and efficiency within the South African Supply Chain. With Du Plessis on board, the organisation aims to enhance its ability to support clients in achieving these critical objectives in the collective efforts to mitigate South Africa's poor road safety record. 🌱

## Hino SA aims for further growth in 2024

Hino South Africa has set an ambitious target to grow its sales volume by 15% to 3 800 units in 2024, compared to the 3 300 units it retailed in 2023. This is in pursuit of a market share of 10% in the overall South African truck market forecast of 34 800 units in 2024.

Anton Falck, Vice President of Hino South Africa, announced this at a media briefing at the Toyota Africa Parts Centre, Ekurhuleni, on 24 January.

"The overall truck market in South Africa grew by 9% in 2023 over 2022, going from sales of 30 149 units in 2022 to 32 907 last year. Medium and heavy truck volume remained almost the same, while the big growth was in the extra-heavy segment, which rose by 21,5 % from 15 191 units sold in 2022 to 18 458 units retailed in 2023. This meant that 56% of total truck sales in South Africa in 2023 were in this premium category," said Falck.

"We were not a serious competitor in that market for much of 2023, but now we are pinning our sales increase on the new 700 range to boost our overall market share. The new model has been well received in the market, and what is interesting is that many of the buyers are purchasing a Hino for the first time. We are forecasting to more than double our extra-heavy truck sales from the 377



The Hino SA team at the 2024 media briefing last month.

units sold this year to 750 in 2024," he added.

Hino sales in South Africa, including the Hino 200 trucks, which are reported as sales in the light commercial vehicle

segment, totalled 3,329 units in 2023. This placed Hino South Africa in eighth place among Hino distributors worldwide, with Hino selling 135,203 trucks and buses globally last year. 🌱

## Mercedes-Benz attains market leader position in 2023 with its Actros and Arocs range

The Automotive Business Council, NAAMSA, recently released the 2023 new vehicle statistics, and for the fourth consecutive year, Mercedes-Benz Trucks claimed the market leader position for heavy commercial vehicles, reaffirming why the Mercedes-Benz Actros won the NAAMSA Extra-Heavy Commercial Vehicle of the Year award in 2023.

The Arocs range for construction and distribution significantly grew its unit sales in 2023 compared to the previous year. This again indicates that the construction industry is regaining momentum and that the Arocs, focusing on reduced maintenance costs for customers, is a force to be reckoned with.

"In a market where customers are spoiled with choice, we are beyond grateful for our customers who trust



Mercedes-Benz Trucks to support their business. We thank you for your business. In addition, I would like to commend our dealers and general distributors for their ongoing efforts to support our customers across our entire value chain. We are optimistic that the heavy commercial vehicle market will remain strong.

"We look forward to continuing to serve our customers in 2024," says Maretha Ger-

ber, Vice President of Sales and Marketing at Daimler Truck Southern Africa.

In addition, Daimler Truck Southern Africa (DTSA) and its brands Mercedes-Benz Trucks, FUSO Trucks and Mercedes-Benz Buses remains the largest Commercial Vehicle seller in South Africa, ranking number 1 in the Top 15, according to NAAMSA's Industry New Vehicle Sales Report, December 2023. 🌱



## Challenging environments offer new opportunities

Amid tight economic constraints and water scarcity challenges, maintenance teams increasingly seek innovative solutions that can work more efficiently and save time, money, water, and resources. This includes the approach to unblocking and cleaning sewer lines, stormwater drains, and sewer pump stations, among other things.

These challenges might seem monumental, but with the right fleet of jetting trucks, the work can get done—or at least that is what the team at Werner Pumps believes.

Werner Pumps, a South African manufacturer of high-pressure jetting equipment and industrial vacuum solutions, has designed a remarkable truck-mounted recycling jetting and vacuuming unit that recycles water from the vacuum component for high-pressure jetting.

"This is an 'all-in-one' piece of equipment," says Sebastian Werner, MD of Werner Pumps. "The units save time, money, and water usage, offering multiple benefits to maintenance teams. They are also a

great solution for remote or water-scarce locations where water recycling through the system becomes especially valuable," he adds.

These trucks are particularly appealing for municipality maintenance teams as they allow teams to solve blockage and drainage issues using a single piece of equipment, from the simple to the complex. For cash-strapped municipalities, it offers a one-piece equipment solution.

"Our water recycling unit can save up to 168,000 litres of clean water in each 8-hour shift," explains Werner. Werner Pumps recently handed over a truck-mounted recycling unit to the Rand West Municipality in Gauteng. This is the municipality's first purchase of this type of equipment, making it one of the first municipalities in South Africa to invest in this type of equipment.

"We have since received an order from the municipality for a second recycling truck," says Werner.

Werner Pumps designed the water recycling units for rugged African conditions and manufactured them locally at its premises in Springs, Gauteng.

Using high-quality components and artistry during construction makes each



Werner Pumps MD, Sebastian Werner, hands over truck mounted recycling unit to Rand West municipality.

recycling unit highly effective for cleaning sewer and stormwater lines. The units can be customised to meet customers' specifications, and the 12,500-litre stainless steel tank is mounted on the client's preferred chassis make and model. This means that Werner Pumps can incorporate specific requests like working with particular vehicle brands and fitting a broad range of accessories. 🌱

## A bus built for African conditions

Eicher Trucks and Buses unveiled the next-generation Eicher bus at the Eicher Dealership Conference in November last year. The unveiling marked the entrance of Eicher-branded buses into the South African market and also showed that the group's commercial vehicles, engineered for South Africa, are ready to dominate locally.

Backed by Volvo Group's advanced technology and processes, Eicher's superior performance and uptime are things to look forward to as the Eicher brand hopes to gain a market share.

Built for superior performance and unmatched comfort, the Eicher Skyline Pro 3009 bus is a symbol of comfort, reliability, and safety.

The SABS-compliant Euro 3 emission standards bus is designed with breakthrough technology to redefine passengers' daily commutes.

The Eicher Skyline Pro 3009 has wide, comfortable, and cushioned HHR seats with a longer wheelbase for more leg room, a spacious gangway, a tubular hat rack for smaller luggage, front waveler suspension and rear parabolic spring suspension.

In line with the company's commitment to innovation and excellence, the newly launched bus is highly reliable and equipped

with new generation E494 engine, Volvo Group's engine management system (EMS), advanced APDA, larger clutch diameter with a clutch booster and intelligent driver information system.

The vehicle has a robust DOMEX chassis and safety features like an anti-lock braking system, emergency exits, fire extinguishers, a 3-point ELR seat belt for the driver, and a 2-point lap seat belt for passengers.

This latest addition to the existing range reflects the company's expansion plan. Currently, VECV South Africa offers the Eicher Pro6000 and Eicher Pro 2000 series of trucks, ranging from 8-ton to 25-ton GVM and including the Eicher Pro 2080, Pro6016, Pro6016T, Pro6018TT tractor, and Pro6025T tipper. The Pro 6000 series is driven by a VEDX5 engine based on Volvo Group's global platform, and the Pro 2000 series comes with advanced features like Mbooster+, fuel coaching, cruise control, a tiltable cabin, and a high-performance Eicher engine. These trucks are available in multiple configurations suited for various applications, and more such models and variants will be introduced in the coming months.

Eicher's service network has grown to



The Eicher Skyline Pro 3009 is a new bus option for South Africa.

27 touchpoints in South Africa, Botswana, Namibia and Mozambique in Southern Africa. It plans to add more to Potchefstroom, Springbok, Gaborone in Botswana, Katu, Malelane, and Johannesburg Linbro Park in the coming months.

"We are pleased to introduce the Eicher Skyline Pro bus series in South Africa. In line with our brand promise of partnering prosperity, this 36-seater bus delivers excellent performance with best-in-class fuel efficiency, superior uptime and new generation features such as Volvo Group's EMS, larger clutch diameter and features for safety and comfort of passengers," says Anirvan Banerjee, Vice President & Head Africa International Business and VECV South Africa. 🌱

## The HG400 horizontal grinder built for emerging markets

Vermeer has announced the launch of the HG400 horizontal grinder for customers in emerging international markets. Designed as an entry-level, small horizontal grinder, it aims to redefine industry standards for simplicity, efficiency, and reliability. The HG400 efficiently handles a variety of materials, including compost, pallets, construction debris, logs and green waste, making it suitable for industries such as mulching and recycling.

"At Vermeer, we consistently strive for innovation, and our latest product, the HG400, exemplifies this commitment," stated Colm Rafferty, Vice President of Developing Markets at Vermeer.

"This compact yet powerful machine embodies our longstanding tradition of producing machines and providing practical solutions that empower our customers. We've received extremely positive feedback from our pilot customers. An early adopter from the mulch production industry reported that the HG400 has transformed their operations."

The HG400 is powered by a 97 kW



The Vermeer HG400 horizontal grinder will launch in Africa

(130 hp) Cummins Tier 3 engine and is available in trailer and stationary configurations. The unit has a 2.1 m (7 ft) manually folding discharge conveyor for efficient transportability. Furthermore, the HG400's convenient dual-screen side-load design allows quick and efficient product sizing adjustments. The HG400 has wide flared walls and a lowerable infeed tailgate to accommodate bulky and lengthy materials. Its steel conveyor, equipped with two drive rollers, effectively guides materials into the grinder. This unique design enhances the

machine's versatility, allowing it to handle challenging materials easily.

The HG400 also features the Vermeer Plus+1 control system, with four-speed options for more precise feed control. An optional wireless remote control enhances operating efficiency.

The HG400 will be available in select countries across Latin America, the Middle East and Africa, Asia Pacific, and certain European nations. The extensive network of Vermeer dealers supports the introduction of the HG400. 🌐

## The RogueX2 loader concept in a nutshell

The RogueX2 loader has been developed from the RogueX concept presented at the Conexpo show in Las Vegas nearly a year ago.

RogueX2 is an all-electric, autonomous concept machine that produces zero emissions. It features a lithium-ion battery, electric drive system, and electric-actuated lift and tilt kinematics without hydraulics.

Specifically designed and built without a cab, the RogueX2 and RogueX concept machines address the challenges of workforce shortages by eliminating the need for an operator. They also provide the blueprint for how work machines of the future can be designed and optimised for new technologies and enable an entirely new work experience.

In RogueX2, the internal combustion engine (ICE) is replaced with an electric powertrain for power and drive. This machine also eliminates 100% of the hydraulics, including all connectors, hoses, tube lines and fittings that are common failure points. The absence of hydraulics and fluids in its design reduces ICE emissions and minimises noise pollution and the risk of all environmental pollution.

The original RogueX was designed with tracks, and it uses advanced workgroup



RogueX2 is an all-electric and autonomous concept machine that produces zero emissions.

kinematics to offer unique functionality that combines vertical-path, radial-path and variable-path lift capabilities in one machine. In contrast, RogueX2 is designed with wheels instead of tracks to optimise the electric battery run time. It also features axial flux motors, which give the machine incredible tractive effort. The machine delivers greater power output for demanding applications like grading,

digging or powering attachments for heavy-duty work.

The RogueX and RogueX2 concept loaders have garnered many pending new patents. "These patents represent more than new features on a machine - they signify how we are breaking the rules to define a new work experience," said Joel Honeyman, Doosan Bobcat Vice President of Global Innovation. 🌐



## MB Crusher attachments lead the way for desert construction

The ambitious Vision 2030 outlined by the Egyptian government is taking shape in the heart of the desert with the marvel of the New Administrative Capital. This colossal project, spanning 700 square kilometres, marks the desert as Egypt's new frontier, replete with captivating features such as the Army octagon, residential and business districts, a towering skyscraper, and more.

In the face of logistical challenges inherent in desert construction, innovative solutions have emerged centred around MB Crusher attachments. These attachments have become a game-changer in the monumental construction project, offering cost-efficient strategies that redefine traditional practices.

Egypt is building the New Capital in a quest to create a new metropolis and address the challenges of overcrowded Cairo. The project aims to provide housing and employment opportunities and demands new infrastructure, including transportation and water facilities. Integrating MB Crusher attachments signifies Egypt's determination to overcome challenges, maximise resources, reduce costs, and promote sustainability in large-scale projects.

The cost-efficiency achieved through MB Crusher attachments becomes apparent in constructing Egypt's New Administrative Capital. Equipping a Doosan DX340 with an MB Crusher BF120.4 jaw crusher bucket proved transformative, saving an impressive 67,000 Egyptian pounds daily. Recycling materials on-site with the BF120.4 reduced costs and showcased the potential of innovative technology to revolutionise construction practices.

Water infrastructure, exemplified by the New Delta Project, the world's largest water treatment plant, faced the formidable challenge of meeting strict schedules and high-quality standards. The MB Crusher BF135.8 bucket emerged as the perfect tool for the job, surpassing larger fixed crushers in load capacity and achieving a nearly 40% cost reduction. This attachment streamlined operations, minimising labour requirements, transportation needs, and waste while optimising time and resources.

Constructing a 2000-kilometre high-speed rail network through the desert poses logistical challenges in terms of connectivity. MB Crusher's BF80.3, mounted on a Doosan 300, aligns seamlessly with the project's commitment to sustainability. Recycling materials on-site reduces environmental impact, minimises transportation needs, and upholds eco-conscious construction practices.



MB Crushers attachments at work in the desert.

The story of Egypt's new infrastructures, empowered by MB Crusher attachments, is a testament to human innovation. This visionary approach solved the immediate cost and logistics challenges and propelled Egypt into a new era. It showcases how thinking outside conventional norms and leveraging innovative solutions can pave the way for a more efficient, cost-effective, and sustainable future in construction. 🌱

## Building Sustainable Battery Giga Factories

As the global shift towards net-zero targets and renewable energy accelerates, the role of battery giga factories becomes increasingly pivotal. Peter Hodgkinson, Director for Strategic Growth and Major Projects at WSP in Africa, sheds light on these factories' crucial role in meeting sustainability goals.

Battery giga factories are at the forefront of addressing the rising demand for efficient, scalable, and environmentally sustainable battery manufacturing capabilities. Hodgkinson emphasises their significance in supporting countries and industries aiming for net-zero targets and transitioning to renewable energy sources.

The growth of battery manufacturing is primarily driven by three key markets: battery energy storage solutions (BESS), electric vehicles (EVs), and consumer electronics. With 369 giga factories in the pipeline globally by 2030, compared to 115 not long ago, the urgency to acquire manufacturing capabilities is evident.

The global demand for batteries is expected to surge from 185 GWh in 2020 to over 2,000 GWh in 2030, with the lithi-

um-ion battery market projected to surpass \$193 billion by 2028. Hodgkinson notes the substantial investments in battery giga factories, reaching \$131 billion in 2022, a 24% increase over the previous year, primarily led by China.

In response to this demand, retrofitting existing facilities into battery giga factories becomes a viable strategy. Hodgkinson explains that while technically complex, an integrated approach can transform these facilities, reusing existing buildings, services, and equipment. Thorough risk management, including geotechnical assessments and environmental evaluations, is crucial.

Energy efficiency is a crucial consideration, and Hodgkinson addresses improving existing facility efficiency. Collaboration with local authorities, compliance with regulations, and understanding of environmental conditions are vital. He highlights that decision-makers must recognise that the building's construction cost is a fraction of the overall expenditure, with services and utilities constituting the majority.

Hodgkinson underscores the importance of applying circular economy principles to



Peter Hodgkinson, Director for Strategic Growth and Major Projects at WSP in Africa

battery manufacturing plants, emphasising the need to design out waste, reduce pollution, and regenerate natural systems. Whether through new builds or retrofitting, the goal is to eliminate value leakage across the resource lifecycle and achieve net-zero goals. In conclusion, Hodgkinson stresses that embracing innovation and preparing for the evolving landscape is essential for the battery giga factory industry. The emergence of these factories supports sustainability goals and addresses the escalating demand for these critical commodities, paving the way for a more sustainable future. 🌱

## Prioritising safety in construction

As last year ended the construction industry faced unique challenges, necessitating heightened attention to safety. Amidst the festive season, factors such as workforce considerations and weather conditions significantly impact workplace safety.

According to data from the Federated Employers Mutual Assurance company (FEM), an average of 368 claims were recorded in December over the last three years, highlighting the imperative for a comprehensive safety approach. Historically, December, March, and July witness increased incidents in the construction sector.

Despite GVK Siya-Zama's figures being below the industry average, Craig Laskey notes a spike in incidents during November and December, with "fall from height" and "struck by" incidents being predominant. Over the past two years, more than 80% of accidents were associated with

poor employee behaviour, prompting a focus on practical learning.

Laskey emphasises the importance of vigilance during this period, advocating for a skeleton crew on duty and third-party security to ensure closed sites' safety. Measures to discourage dangerous behavior among children, such as stowing machinery, dismantling infrastructure, and removing rubble, are crucial.

Communication regarding safety takes precedence, with Laskey underscoring the need for practical safety awareness drives instead of overly theoretical risk and safety training. GVK Siya-Zama has shifted towards visible leadership and in-person, demonstration-led learning to increase on-site risk awareness.

Management behaviour and employee motivation are intertwined, with acknowledgement and motivation proven to enhance safety.

Extreme weather conditions during the summer in South Africa poses additional risks. Laskey notes climate change's im-



Craig Laskey.

pact on higher temperatures and altered rainfall, increasing health and safety risks. Heat stress is a significant concern, with projections indicating potential increases in heat exposure. ☀

## Wirtgen Group's portfolio of innovative and market-driven solutions

A complete concrete paving train from Wirtgen, comprising a placer/spreader WPS 102i, a slipform paver SP 124i and a texture curing machine TCM 180i is one of the early highlights in roadmaking in 2024.

The machines are part of the Wirtgen Group's display at the World of Concrete in Las Vegas.

Extremely versatile offset slipform pavers are also highlighted by the OEM.

With the SP 15i and SP 25i, Wirtgen will be showcasing two extremely versatile pavers for offset concrete paving. Both machines enable flexible positioning of the slipform paving mould, which is an enormous advantage when producing monolithic profiles in the offset process.

The SP 15i features a telescoping extension for the operator's platform. This affords operators a better overview of the paving results, the concrete feeding system, the transfer hopper and the inside of the consolidation compartment of the mould. The multifunctional slipform paver SP 25i can pave a wide range of monolithic profiles up to a height of 2 m and concrete slabs with a width of up to 4 m. Furthermore, the machine can be controlled without a stringline using the specially developed AutoPilot 2.0 control system.



The Wirtgen AutoPilot 2.0 for stringless paving increases process efficiency and safety.

The SP 124i is a fully modular, 12-metre class inset slipform paver that impresses with the enormous variety of tasks it can fulfil in the construction of wide roads and highways, airport aprons, taxiways and runways. The machine frame, which can be hydraulically telescoped lengthwise and mechanically telescoped sideways, enables ideal adaptation of the machine to the needs of each construction site. Four hydraulic swing legs enable easier transportation of the machine and ensure its outstanding ability to adapt to all conditions typically encountered on construction sites. In Las Vegas, the four-track paver will be shown in a paving train together with a placer/spreader WPS 102i and a texture curing machine TCM 180i.

When road surfaces and paths are

paved over preplaced reinforcing steel, the concrete can often only be supplied from the side. The placer/spreaders from Wirtgen are the perfect choice for this task. As the leading machine in a paving train, they travel over the preplaced steel rebar ahead of the slipform paver and the texture curing machine. The concrete supplied from the side by a truck is then evenly distributed across the entire working width by the placer/spreader. The concrete can be placed for working widths ranging from 4 to 12 m at thicknesses of up to 500 mm. Thanks to its fully modular construction concept and standard fitted quick-release hydraulic couplings, the WPS 102i can be just as easily reconfigured as its 'little brother', the WPS 62i. ☀



## Introducing a new trio of excavators

DEVELON, formerly Doosan Construction Equipment, will showcase three excavators at World of Concrete in Las Vegas. At the exhibition, the DX42-7 mini-excavator, DX225LC-7X crawler excavator and DX140W-7 wheeled excavator will be on display. DEVELON staff will be available to help visitors explore each machine's features.

"DEVELON is excited to exhibit at World of Concrete, especially as the event celebrates 50 years in 2024," says Jacob Sherman, Product and Dealer Marketing Manager at DEVELON.

"This trade show gives us a chance to promote our new brand and innovative products that help customers take on their biggest job site challenges."

Highlighting the show is the conventional tail swing Develon DX42-7 mini-excavator is ideally suited for navigating tight, congested job sites and urban areas. Part of the next-generation DX-7 Series mini-excavator line-up, the DX42-7 offers such impressive features as fast cycle times, efficient torque-limiting piston pumps that respond to load demands, and a larger counterweight for improved balance and durability. The machine comes equipped with a standard thumb-ready arm.



The Develon DX140W-7 wheeled excavator.

The DX225LC-7X, the other excavator on display, is the first electronically controlled crawler excavator from DEVELON. The system enables advanced machine guidance and machine control systems — including 2D grading for accurate earthmoving and grading work. The DX-225LC-7X offers superior hydraulics and a strong workgroup to deliver ample power and durability to the arm and bucket, maximizing lifting capability.

Designed for demanding tasks, the

DX140W-7 wheeled excavator delivers powerful digging and manoeuvrability when working on bridges and roadways or in urban areas. The wheeled excavator rounds out the excavators on display. The machine has a balance of power and fuel efficiency, along with best-in-class comfort features, intelligent controls and smart machine functionality. It can be configured with a front dozer blade and independent rear outriggers or four independent outriggers. ⚙️

## Social facilitation can lead the fight against construction site invasions

The Department of Public Works and Infrastructure (DPWI) Minister, Sihle Zikalala, says public facilitation is the key to fighting criminality of site invasions and extortion that has crippled projects in construction. This requires involving local communities in co-creating infrastructure combined with fair, meaningful subcontracting on construction projects to mobilise communities in protecting projects, securing infrastructure, and isolating criminal elements involved in project invasions.

The Minister was addressing members of the National Stakeholder Forum (NSF) at the Hilton Hotel in Sandton, Johannesburg on 12 December last year, where challenges limiting the construction industry's capacity to deliver infrastructure, stimulate economic growth, and create a better environment for the survival of businesses were discussed.

Infrastructure underpins the country's economic growth and development, the Minister said, and the industry therefore needs to address the blockages for accelerated infrastructure delivery and for

projects to hit the ground

Chief Executive Officer of the Construction Industry Development Board (cidb), Bongani Dladla says that this is an important. "A topic like this is quite important to us and moving it beyond discussions and seminars but getting it to designing solutions through our commitment to partnerships with all role players. We look forward under the leadership of DPWI to an NSF that is solution-driven and answers key solutions on how we can improve the delivery of infrastructure in a transformative manner that ensures inclusive growth of the industry."

The NSF was established to advise the Minister of Public Works and Infrastructure and the cidb on matters affecting the development of the construction industry, including policy and regulatory constraints.

Construction industry bodies, infrastructure clients, contractors, built environment professionals, academics, and people with skills, expertise, and experience in the industry are represented on the forum.

Poor practices, policy and regulatory



Chief Executive Officer of the Construction Industry Development Board (cidb), Bongani Dladla.

challenges in the construction procurement environment, enterprise development, and professionalisation of the construction industry are among key development blockages that will form the focus of the NSF during its two-year tenure which began in October 2023.

The cidb is a statutory body established under the executive authority of the DPWI. It was established by the Construction Industry Development Board Act 38 of 2000 to regulate and develop the construction industry through strategic interventions and partnerships. ⚙️

# THE EVOLUTION OF SUPPLY CHAINS

**In recent years, supply chains have had to change dramatically. Their metamorphosis has been accelerated by chaotic disruptions ranging from the pandemic, wars and climate catastrophes to the container shipping and energy crises. South African businesses have had to contend with riots and unrest, freight and port issues, the electricity crisis and, most recently, water outages.**

By MJ Schoemaker, president of SAPICS, The Professional Body for Supply Chain Management in Southern Africa

## **Is your organisation's supply chain a crawling caterpillar, or has it become a sprightly, soaring butterfly?**

Supply chains and supply chain management have garnered more interest and attention than ever. From a field that not many people understood or knew much about, supply chain management became a critical, in-demand profession when the Covid-19 crisis thrust it into the spotlight. More people started to realise that virtually everything we use or touch daily has reached us through supply chains and that they are about more than just moving goods from A to B. With subsequent disruptions, supply chain management has continued to make headlines, and it continues to evolve.

## **Where did it start?**

*The Independent* newspaper is credited with using the term "supply chain" for the first time in 1905. Between the 1900s and 1950s, global supply chains started to take shape. In the 20<sup>th</sup> century, we have witnessed a shift towards integrated supply chain systems, particularly during World War II when military logistics demanded precise coordination. Post-war, global trade expansion fuelled the need for efficient supply chain management, leading to the development of concepts like Just-In-Time (JIT) and Total Quality Management (TQM) in the latter half of the century.

"Supply chain management" was coined in 1982 by British logistician Keith Oliver. He used the term in an interview with the *Financial Times*. This was his definition: "Supply chain management is the process of planning, implementing and controlling the operations of the supply chain with the purpose to satisfy customer requirements as efficiently as possible. It spans all movement and storage of raw materials, work-in-process inventory and finished goods from point-of-origin to point-of-consumption."

While it is still a relatively young field compared to many other professions,

supply chain management has come a long way since Oliver explained it. Volatility and disruption are now the norm in supply chains. According to a report by the World Economic Forum, many chief executives now identify supply chain turmoil as the greatest threat to their companies' growth and their countries' economies.

## **The rise of the machines**

This turmoil has fuelled the rise of machines in the supply chain, but unlike those in the *Terminator* movie, the technology in today's supply chains is playing a critical, often life-saving role. Artificial intelligence, analytics, big data, machine learning and intelligent robotics are all part of the arsenal supply chain managers use to handle and even predict disruptions to ensure the uninterrupted movement of goods, including essential medicines. Technology enhances supply chain visibility and enables synchronised planning and execution, data-driven decision-making, predictability and supply chain agility.

Supply chain design now encompasses smart logistics solutions based on the Internet of Things and next-generation robotics. Mobile and stationary robots assist workers with warehousing, transportation, and last-mile delivery tasks.

While some of today's supply chain technology may sound like science fiction, other aspects of supply chain management are going back to basics and back to a time when transport and infrastructure limitations meant that supply chains were typically local and restricted to regions. Many organisations are moving their manufacturing closer to home to protect against supply chain disruptions. Supplier diversification, localisation, and nearshoring are key lessons delivered by the pandemic and other disruptions.

Unlike the transformation of a caterpillar to a butterfly, supply chain metamorphosis never ends. Supply chain disruptions are expected to continue in 2024 and beyond, with war, weather and inflation cited by



MJ Schoemaker, president of SAPICS.

many experts as some of the causes. Change is the only constant that supply chain managers should count on, and it is vital to stay connected, informed and up to date, to share knowledge, network and build new skills and expertise.

The annual SAPICS Conference, the leading event in Africa for supply chain professionals, is the ideal place to do this.

In 2024, the 46th SAPICS Conference will be held under the theme of Supply Chain Metamorphosis. It will explore the changes, challenges, best practices, and opportunities reshaping the world of supply chain management, and all supply chain role players are urged to attend this important event, which will take place in Cape Town from 9 to 12 June 2024. The Professional Body for Supply Chain Management (SAPICS) is hosting the conference with the South African Association of Freight Forwarders (SAAFF) for the second consecutive year. 🌟



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