

CAPITAL EQUIPMENT¹ NEWS

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FEBRUARY 2022

KEEPING THE MOBILE MACHINES
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GRADERS: Grader innovation helps to achieve new levels of productivity and efficiency on worksites

MATERIALS HANDLING: Forklifts: workhorses of efficient warehouses

FINANCING: Poor choices place crushing contractors at risk

ADTs

Alfieri holdings 'supports
local' with a dozen Bell
ADTs

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RENTAL

36T, 50T, 80T, EXCAVATORS AND LOADERS AVAILABLE

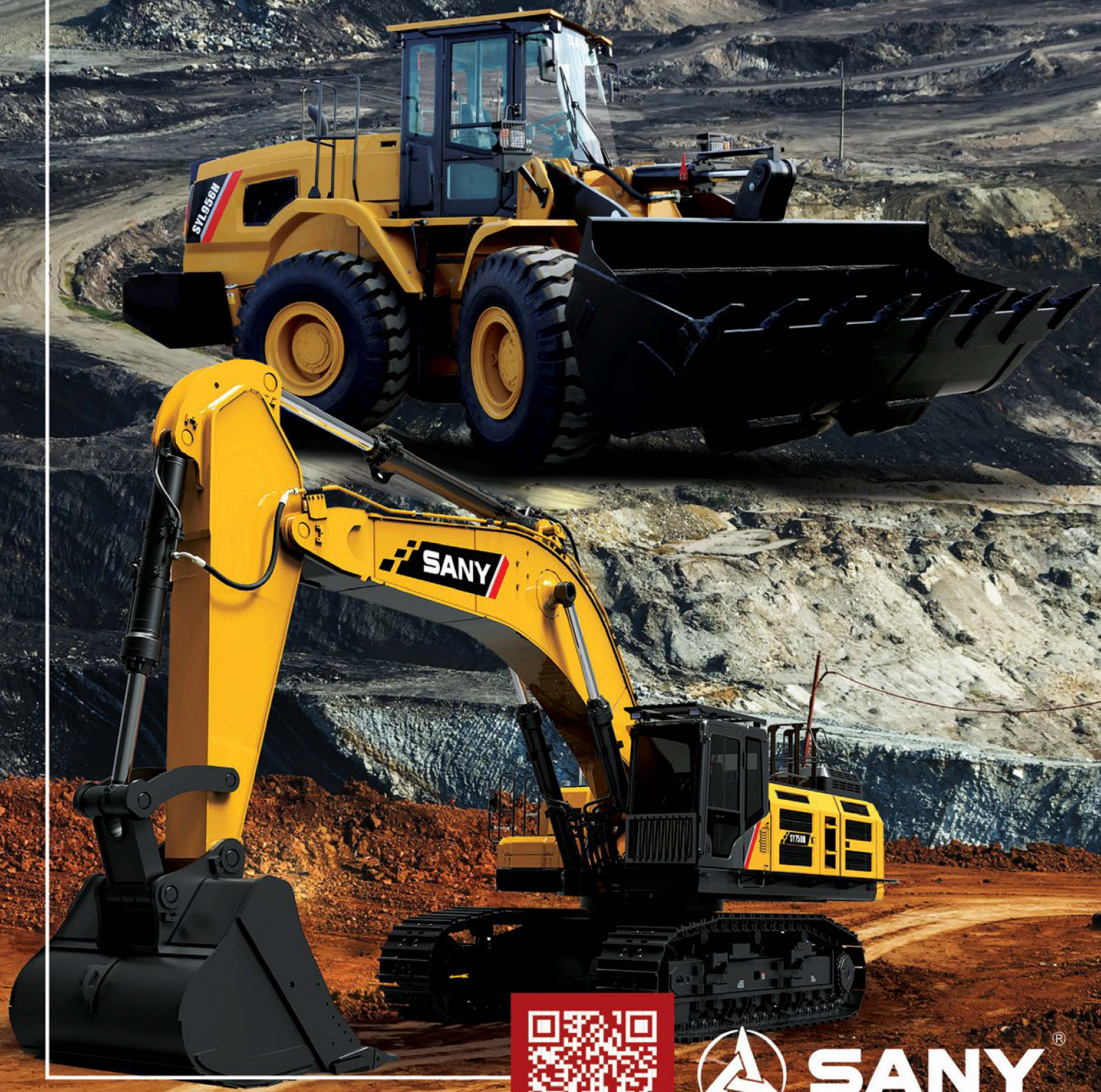
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4 COVID-19-DRIVEN TRENDS SHAPING THE FUTURE

By Yushanta Rungasammy, Partner and Co-Head of Corporate & Commercial and Ildiko Gyarmati, Senior Associate at CMS South Africa

The past two years have spelt a tumultuous time for the global industry as a result of high levels of disruption and uncertainty introduced by the COVID-19 pandemic. Efforts to overcome these challenges and become more agile have ushered in a new era of accelerated transformation within both the global and South African mining sectors, leading to a number of shifts in the way the industry operates.

The pandemic has had a major impact on South Africa's economy, leading to a contraction of 6,4% in 2020 with experts projecting it would take at least five years for the country's GDP to return to 2019 levels. The mining industry's quick response and resilience has led to an 18,1% growth rate for the industry in the first quarter of 2021, contributing 1.2% to the overall 4.6% seasonally adjusted and annualised GDP.

As the mining industry continues to adapt to a constantly changing socio-economic environment, the transformation taking place is set to redefine the sector for years to come. Here we take a look at some of the trends that have emerged, or been fast-tracked by the pandemic, that are here to stay. We also take a look at how these will impact the future of mining.

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Increased integration and collaboration

Uncertainty has become a major catalyst in spurring greater collaboration between departments within an organisation, other mining companies, and industry bodies as the industry has come together to tackle the challenges brought on by the pandemic and find new solutions to common issues.

We can expect to see ongoing growth in collaborative efforts within the mining sector, particularly as the industry continues to adapt and integrate new technologies that will change the shape of the industry in future. This could result in increased innovation and both short- and long-term returns for individual companies and the sector as a whole.

Shifts in workplace culture

Increased digitalisation in the mining industry, along with a shift towards working remotely, has had the unexpected effect of changing the culture in organisations. The industry, and those within it, have been compelled to do things differently while employee needs have shifted, prompting leaders to step into a new role of leadership. Leaders are now expected to adopt a culture of transparency and empathy and will need to continue to strike a balance between recovery and growth and employee health and wellness.

Although the mining industry has always significantly prioritised and enforced stringent safety measures, we are now seeing improvements in not just internal safety processes but in training employees in health and safety in order to build a culture of safety throughout mining companies in an effort to ensure a zero harm environment.

Intensified focus on sustainability

During the period in which Covid-19 measures were most stringent, with high-level lockdowns and restrictions, many factories and mining plants were required to shut down or drastically decrease their workforce. During this time, we could see a marked improvement in pollution and emissions - which did not go unnoticed. This, along with pressure from investors to become more environmentally, socially conscious and responsible, has pushed the mining industry to become cleaner and greener.

As a result, Environmental, Social and Governance (ESG) factors are playing a greater role in how companies in the mining industry are measuring their success beyond revenue and production. We have seen big players in the mining industry prioritise the reduction of carbon emissions and promotion of diversity, human rights, governance and social justice.

Prioritised mitigation of supply chain risk

The disruptive impact of the pandemic could be seen most in its effect on supply chains which resulted in delays, cancellations, and even sometimes shortages. This certainly put a spotlight on the vulnerability of many mining companies' supply chains and just how exposed they are to the risk of any future disruptions.

As such, the mining sector will have to continue to re-evaluate its supply chain processes, identify gaps, and incorporate new processes to ensure continuity, efficiency, resilience and adaptability to any future restrictions that may have an impact on the supply chain.



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QUICK TAKE



Bonfiglioli South Africa is synonymous with its industrial range of geared motors

BONFIGLIOLI: KEEPING THE MOBILE MACHINES OF THE WORLD WORKING

Bonfiglioli South Africa's operations director, Tony dos Santos, introduces some of Bonfiglioli's Mobility solutions and the comprehensive range of electric and hydraulic planetary drives it can now offer directly to equipment OEMs with operations in sub-Saharan Africa.



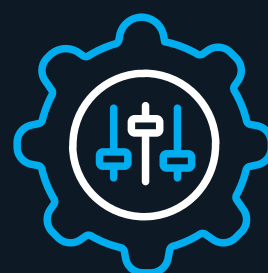
Bonfiglioli can now offer OEMs engineered solutions to suit custom vehicle designs such as specialised planters, harvesters and forestry vehicles.



We have been tasked with supporting the OEM aftermarkets, fulfilling their warranty requirements and delivering the support needed to overcome specific technical challenges



Bonfiglioli has long been partnering with the largest global producers of machinery for the earth-moving, building, construction and agricultural sectors



With our long history and accumulated experience, we have a vast range of customised solutions and extensive expertise in the construction and mining industries

// Bonfiglioli Trasmital has been designing and producing planetary gearboxes for earth moving, road surfacing, agricultural and construction machinery since 1975. With the further acquisition of O&K in 2016, the benchmark planetary drive for heavy-duty machines, our global Mobility and Wind Business Unit (BU) has become a key partner to leading mobile equipment OEMs and machine manufacturers around the world," says Tony dos Santos, Bonfiglioli's local operations director.

In addition, one in four of the world's wind turbines, from mini turbines to enormous 7.0 MW wind power units are equipped

with Bonfiglioli planetary drives for both the pitch and yaw control, making the company the leading provider of these drive solutions for wind turbines in the world.

"Our team of experts creates, designs and produces advanced technology solutions for a wide range of OEM equipment and customised machines," he continues.

"Planetary slew drives such as Bonfiglioli's 700T Series and the higher torque S Series drives provide the safest, most effective solution for building robust and reliable cranes, while for earth-moving machines, Bonfiglioli 700C Series and F Series track drives are purpose designed to meet the needs of virtually any excavator," he adds.

"With the combination of Bonfiglioli Trasmital and O&K in our mobility range, we supply drives for off-road, construction, mining, agricultural and heavy duty mobile vehicles to almost all mobile vehicle OEMs, including: John Deere, Komatsu, Caterpillar, Hitachi, JCB, Doosan, Toyota, Volvo and many others," Dos Santos points out.

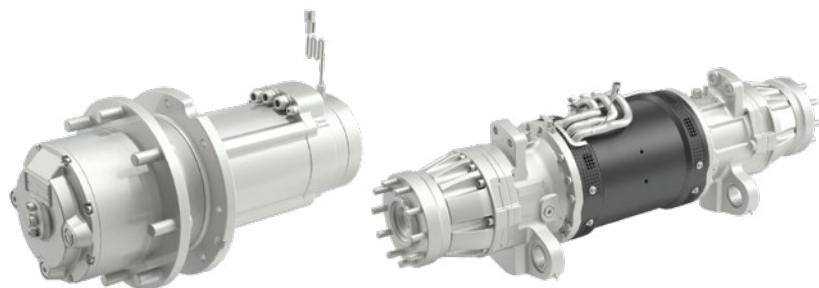
"Bonfiglioli South Africa is synonymous with its industrial range of geared motors. However it has now been mandated by its headquarters in Italy to also prioritise services to the mobility and wind sectors of the market," he continues

"We can now offer OEMs engineered solutions to suit their new designs, most



"We can now offer OEMs engineered solutions to suit their new designs, most notably for new or custom vehicle designs such as specialised planters, harvesters and forestry vehicles or for underground mining vehicles. In addition, we have been tasked with supporting the OEM aftermarkets, fulfilling their warranty requirements and delivering the support needed to overcome specific technical challenges."

Tony dos Santos, Bonfiglioli's local operations director



Bonfiglioli Trasmital 600 Series drives are the best solution when designing wheeled off-road machinery. Left 600WE Series; Right: 600F Series.



The 700T is on the left and the 700C series (above) units are unsurpassed by any crawler or milling machines, while the Bonfiglioli 700T series provide the safest, most effective solution for cranes, excavators and forestry machines.

notably for new or custom vehicle designs such as specialised planters, harvesters and forestry vehicles or for underground mining vehicles. In addition, we have been tasked with supporting the OEM aftermarkets, fulfilling their warranty requirements and delivering the support needed to overcome specific technical challenges," he says.

Many hydraulic and mechanical functions can be incorporated into these units – the hydraulic or electric motor; the operating and travel speed controls; hydraulic and mechanical emergency braking; and overload protection – assuring high reliability, excellent performance and smoothness in operation. Also, due to their compact dimensions, the units are easy and economical to install onto mobile machines.

"Mobile drives typically have to be compact because they directly drive either the wheels, tracks or slewing rings of the machine. Although predominantly powered by hydraulic motors, the shift to electric vehicles and eMobility requires companies such as Bonfiglioli with its Trasmital and O&K centres of excellence to engineer these emerging modern systems.

"Current emission regulations applied to the automotive industry have been extended to warehouse and material handling vehicles, while the concepts and technologies involved

are likely to be scaled up to heavy duty applications over the medium term. Heavy duty vehicle manufacturers are also eagerly seeking improvements in efficiency, productivity and reduced total cost of ownership for the end-user. Bonfiglioli is the right partner to support the development and design of electric drive solutions thanks to years of experience in powertrain design for light and medium duty vehicles," says Dos Santos.

Bonfiglioli Trasmital drive solutions

Bonfiglioli has long been partnering with the largest global producers of machinery for the earth-moving, building, construction and agricultural sectors. "Our wide range of planetary gearboxes complete with hydraulic and electric motors for excavators, roadwork equipment and many other applications are manufactured in a production process that is firmly focused on the specific needs of our customers.

"These solutions are developed with the highest levels of customisation, which require, right from the initial design phases, an in-depth interaction between the customer and the Bonfiglioli team. This ensures that all of the required specifications and variants are known so that the end product perfectly meets expectations. This is why our pre-sales and after-sales teams, spread strategically over all continents, play such a crucial role, and why ensuring complete support is at the heart of our global success," he says

Bonfiglioli 600 Series

Bonfiglioli Trasmital 600 Series drives are the best solution when designing wheeled off-road machinery. With a compact design, high torque and load capacities, a negative multi-disk parking brake and an optional disengagement device to tow the vehicle in an emergency, these solutions precisely match application requirements. 600 Series planetary wheel drives can also be coupled to high-power density electric motors instead of conventional hydraulic motors. This complete mechatronic solution is designed for a high voltage hybrid powertrain system and was originally conceived for self-propelled crop sprayers.

Bonfiglioli 600F planetary high-efficiency, low-noise planetary axles and drives with integrated high performance electric motors and low maintenance braking systems are ideal for Class 1 materials handling vehicles. Typical applications include 3- and 4-wheel counterbalance lift trucks and ground support equipment. Bonfiglioli electric powertrains are fully tested in the factory and guarantee reduced energy consumption. This, in turn, means longer battery operating



Bonfiglioli's new Forlì plant is the key facility for servicing the construction, agriculture, forestry, logistics, intralogistics, mining, wind, marine and offshore sectors.



Bonfiglioli Trasmital 600 Series drives in the Electromobility range were originally conceived for self-propelled crop sprayers.

times, extended service intervals and lower costs of ownership.

600 Series Wheel drives

Bonfiglioli 600WE planetary drives incorporate an integrated, maintenance-free electric motor and offer significant benefits, including compact dimensions, low noise and high efficiency. This advanced powertrain solution uses a two- or three-stage gearbox, offering reduction ratios of up to 1:145 to satisfy the widest possible range of needs. The gearbox is coupled with a low-voltage induction motor (BT Series), specially developed for traction power and control applications.

700 Series Travel drives

Bonfiglioli 700C series units are unsurpassed by any crawler or milling machines. Thanks to compact, rugged design, high torque and load capabilities, and optional mechanical lifetime seals, these solutions are the best possible option for these machine. All units are available with a fail-safe parking brake and most have the option of cartridge type fixed or variable systems.

Bonfiglioli 700CK series units are extremely compact, lightweight, efficient and smooth to operate, 700CK Series track drives are powered by integrated axial piston hydraulic motors, developed in

cooperation with Kayaba.

Bonfiglioli 700T series provides the safest, most effective solution for cranes, excavators and forestry machines. Highly appreciated by all major manufacturers, the 700T Series has long been established in the crane, excavator and special equipment sectors.

500 Series Electric solutions for concrete mixers

This solution is designed for use with medium to large mixer trucks that have medium to long delivery distances to travel with concrete capacity of between 6 and 14 m³. Bonfiglioli's innovative solution comprises a gearbox of Bonfiglioli's historical 500 Series coupled to an ac electric motor that provides normal power and a dc electric motor for emergency use. "This solution not only guarantees greater energy efficiency and reduced fuel consumption, but also helps cut cement mixer truck operating costs by extending service intervals and making servicing simpler than on hydraulic drive solutions," Dos Santos suggests.

"Performance is improved too: rotation speed control is more accurate and operating noise levels are significantly lower – thanks to the electric motor and the helical tooth profile of the high speed gearbox stage.

O&K hydraulic drive solutions

From its origins in the Ruhr valley of Germany developing railway systems for foundries and mines at the end of the 19th century, O&K has become the benchmark for driving heavy-duty machines, and the best-known planetary drive brand in the world for excavators and mining shovels. Today, O&K is recognised for its solid expertise; its capacity to adapt the design of its products based on customer requirements; and its very high technological standards of development.

The O&K range of hydraulic drive solutions includes:

- F-Series small, medium, large and extra-large travel drives, which are ideal for crawler and milling machines. Thanks to a compact and rugged design with high torque and load capabilities, these solutions are available with a fail-safe parking brake, fixed or variable hydraulic drive systems and different disengagement systems.
- FR Series wheel drives, which are designed for use in large-wheeled off-road machinery. These include a negative multi-disk parking brake and an optional disengagement device to enable the vehicle to be towed in emergencies.
- Bonfiglioli S Series slew drives, which provide the safest and most effective solution for cranes, excavators and forestry machines.
- The FTU Series of robust, powerful and durable hydraulically driven planetary drives are designed for use for tunnel boring and in large mining equipment. This series can deliver torque of between 260 and 3 000 kNm and reduction ratios from 19.8 to 1 500.

Standard features for Bonfiglioli's O&K drive solutions include: their compact structure; very high performance; 3-7 planetary wheels per stage; notchless ground tooth roots; a wide range of speed ratios; and integrated disc-brakes. Units are available to deliver drive torque from 13 kNm (F-Series small) to 2 196 kNm (F-Series XLarge) and up to 3 000 kNm (FTU Series).

"With our long history and accumulated experience, our vast range of customised solutions and extensive expertise in the construction and mining industries, we believe Bonfiglioli has much to offer local manufacturers of construction and mining machinery. Our global market leading position, particularly for large and integrated planetary-based drives makes us the ideal partner to support equipment OEMs from or operating in Africa and South Africa," Dos Santos concludes. 🌟

The Tier 3 FTP engine on the 885B grader by CASE Construction is a 6,7 ℓ workhorse



GRADER INNOVATION HELPS TO ACHIEVE NEW LEVELS OF PRODUCTIVITY AND EFFICIENCY ON WORKSITES

The functional advantages of motor graders or “graders” are accelerating the global growth in demand for these items of equipment. This market is anticipated to achieve a healthy annual compound growth rate through to 2027. Motor graders also remain vital items of equipment for many different South African industries, including mining, civil-engineering construction and building, as well as agriculture. *Mark Botha* speaks to leading South African grader suppliers about ongoing innovation in the field.

Graham Forte, MD of CASE Construction, says that market drivers for the company’s graders include price point, return on investment, versatility and total cost of ownership (TCO).

John Deere Construction & Forestry sales manager Griffiths Makgate says that major markets for the company’s grader offering include mining, government-driven civil-engineering infrastructure projects, general building and the agricultural sector where graders are being used to grade gravel access roads.

He says that improvements in grader technology that have helped address the dire shortage of skilled operators are also behind the tremendous growth in this market over the years. Lack of skilled grader operators, including final-level specialists, was previously a major hurdle, especially for road-construction contractors in the country.

In southern Africa, a significant number of Caterpillar graders are also being sold to municipal teams for general road construction and maintenance. Jean Baptiste Chaffardon, Caterpillar’s motor grader product application specialist, says that construction companies choose to directly own or rent these machines. This depends largely on the state of construction activity.

Durable machines with low operating costs

Chaffardon says that, following Caterpillar’s introduction in southern Africa of the well-received Cat 140 GC grader two years ago, the company has recently

announced the 120 GC, a new and smaller model, as an addition to the comprehensive range of Cat motor graders.

“We expect the 120 GC to become the grader of choice for contractors who require a simple, safe, comfortable, reliable and durable machine with low operating costs.” He says the 120 GC and 140 GC graders are easier to operate and excel in light to medium applications while Caterpillar’s performance K-series graders will remain the machines of choice for contractors working in demanding applications and for whom productivity is key, as the K-series offers technology options that allow for ease of use and enable the operator to increase efficiency.

Servicing the CAT 120 GC is simplified with grouped filter locations



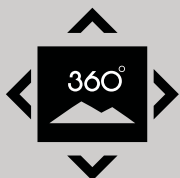
Some key drivers for the motor grader include price point, return on investment, versatility and total cost of ownership



Caterpillar's 120 GC provides a simple, safe, comfortable, reliable and durable machine with low operating costs. SANY's SMG200 grader features circle drive with an overload protection function. CASE Construction's 885B model motor grader features a multi-radius moldboard design



The features on John Deere's graders include dual joystick controls; armrest mounted, fingertip controls including lever steer; automated cross-slope and auto-articulation



CASE Construction's 885B model motor grader features a multi-radius moldboard design which improves blade life as it offers different radius settings.

TAKE

QUICK

Efficient and responsive power for heavy load conditions

SANY Rental's SMG200 grader is powered by a Cummins engine with variable power function (VPF). The direct-drive power-shift transmission on this machine has eight forward and six reverse gears, delivering efficient and responsive power to handle heavy load conditions.

Jock Wei of SANY Rental says the hydraulically controlled differential

lock provides sufficient traction in poor underfoot conditions and that the SMG200's hydraulically controlled multi-disc brake is applied on both service and parking brake to provide excellent brake performance and low maintenance.

"The circle drive with an overload protection function can prevent the machine from sudden impacts when the moldboard encounters large obstacles during operation," he says.

Multi-radius moldboard improves blade life

CASE Construction's 885B model motor grader features a multi-radius moldboard design which improves blade life as it offers different radius settings.

"The CASE radius design consists of three different radii, allowing for more efficient and continuous cutting, mixing and rolling," he says. "This improves road surface consistency and extends longevity."

The 885B also features an A-frame drawbar and high-strength circle to provide stability.

"The A-frame drawbar has a heavy-duty boxed frame design supporting the circle with a wide stance. It has increased the life of the circle and the drawbar components," says Forte.

He says CASE motor graders are designed with external circle teeth, which are easier to clean and provide a larger contact area to avoid component wear. This also allows for greater leverage when turning the blade under load.

"This means there is no need for slip clutches or shear pins, which normally require repositioning or repair," says Forte.

The rear-mounted cab of the B Series motor graders, combined with floor-to-ceiling glazed windows, gives the operator superior visibility of the breakaway side mirrors, moldboard, circle, saddle and tyres. The sloping hood provides excellent visibility, even when backing up.

He says the CASE B Series motor graders offer a one-piece, flip-up hood and a reversible fan option that blows out cooler debris to ground-level site gauges and service points, allowing daily maintenance to be done in a matter of minutes and without the need for any specific tools.

"All the hoods can be removed easily or lifted without any effort, making the vital components of the machine visible and accessible."

He says CASE also offers a variety of grader attachments and accessories including front counterweight; ripper; scarifier; front push plates of 492 and 800 kg respectively; front dozer blade; lift cylinder accumulators and float control.

Sophisticated features for demanding projects

John Deere has focused on developing onboard technology: "This is how we are changing the game in the market," says Makgate.

The advanced features on John Deere graders include dual joystick controls; armrest mounted, fingertip controls including lever steer; automated cross-slope and auto-articulation.



The SANY SMG200 is equipped with adjustable suspension seat, air-conditioning with heater, LED work lights and a rear camera

Although John Deere has not introduced new models recently the company has focused on developing onboard technology



"Market drivers for graders include price point, return on investment, versatility and total cost of ownership."

Graham Forte, MD of CASE Construction



"Following Caterpillar's introduction in southern Africa of the Cat 140 GC grader, the company has announced the 120 GC model."

Jean-Baptiste Chaffardon, Caterpillar motor grader product application specialist



"Key drivers for the motor grader industry are mining, government projects, the construction industry and agriculture."

Griffiths Makgate, John Deere Construction & Forestry sales manager

spin with no input from the operator and the on-demand fan further help drive down fuel consumption."

The easy to maintain and service 120 GC grader offers extended maintenance cycles with longer filter replacement intervals. Filters are grouped centrally for easier access and faster service.

Fuel consumption and machine location can be viewed through Product Link and its web interface, Visionlink. Cat Remote Flash sends an alert from the dealer to prompt users to update the software on their machines. Cat Remote Trouble Shoot reduces the need for technicians to travel to job sites to fix issues.

"Users receive maintenance alerts and diagnostic codes to schedule maintenance and avoid unplanned downtime," says Chaffardon. "Contractors in Africa really appreciate this service, especially when working in remote locations."

Saving diesel and reducing TCO

John Deere's graders feature auto shutdown to turn off the engine after an operator-determined idle period, so saving fuel and reducing wear on the engine, transmission and hydraulic components.

"Our machines also have variable-speed, hydraulically driven fans that run only as fast or as often as necessary to keep things cool and to clean out any dirt that may accumulate in the cooling pack. This helps to conserve power and fuel while reducing noise," says Makgate. "Eco mode reduces engine revolutions in gears 1 – 5 when engaged, optimising fuel usage and decreasing operating costs by up to 10%."

Fuel efficiency and extended maintenance cycles

Chaffardon says Caterpillar's 120 GC is powered by the fuel-efficient Cat C4.4 engine.

"The standard Eco mode further reduces fuel consumption without impacting operation," he says. "Several features such as the drive system no-spin differential which prevents wheel

Lower power consumption

The SANY SMG series' load sensing hydraulic



Caterpillar's motor graders feature an optional air suspension seat

The 885B model motor grader from CASE Construction features a multi-radius moldboard design which improves blade life



pump adjusts the displacement based on the cylinder load to reduce power consumption. On the SMG200, the unique enclosed circle is maintenance-free and delivers an ultra-long service life of 10 000 hours.

"The radiator fan on this machine is hydraulically controlled and can adjust its revolutions automatically according to the actual temperature, so reducing energy consumption and noise," says Wei. He says the fan can also reverse rotate automatically at intervals to achieve improved cooling.

Superior fuel economy and streamlined maintenance

Forte says the Tier 3 Fiat Power Train Technologies' engine on the Case Construction 885B grader is a 6,7 l workhorse offering superior fuel economy coupled with a variable power curve innovation allowing for better fuel consumption.

"A key selling point is the streamlined maintenance with easy access panels and ground level serviceability."

Managing operator fatigue for improved productivity and safety on sites

He says the new models by CASE feature ergonomically designed operator stations with eight variable settings on the operator seat allowing for comfort and a wider cab view with 360° visibility from the seat. Optional cameras can be installed to further enhance operator visibility. The front articulation on CASE's graders allows the operator to view the blade section from the seat without having to stand in the cab.

"These features, along with the massive rear-mounted cab design, allow operators to minimise muscle and neck fatigue as they do not have to constantly look over their shoulders or back and forth."

Easier operation helps keep contracts on track

Chaffardon says Caterpillar's motor graders feature an optional air suspension seat and heating and cooling system to improve operator comfort. A rear-view camera option is also available.

"The optional Digital Blade Slope Meter on our graders displays the grade on the screen without relying on manual grade checkers and the torque converter eliminates the need for an inching pedal, making the machine easier to operate with no risk of stalling," he says.

Ergonomics for efficient and productive sites

Graders by John Deere feature dual-joystick controls to help reduce operator fatigue by eliminating twisting wrist motion.

The new-generation cab, says Makgate, provides optimal view of the blade.

Meanwhile, the SANY SMG200 is equipped with adjustable suspension seat, air-conditioning with heater, LED work lights and a rear camera.

"The Sany SMG200 is a powerful and reliable grader, but without all the extraneous equipment that adds unnecessary complexity and cost. Its super-friendly price tag renders it the best value for money," he says.

It is evident that South African civil-engineering contractors and builders, mines and farms are spoilt for choice when it comes to motor grader technology. Suppliers of this equipment are responding to the demands of high-performance worksites where efficiency and productivity are key through to less onerous applications where durability and price are more important considerations when purchasing graders. 🌐



The Crown ESR 1000 reach truck from Goscor

FORKLIFTS: WORKHORSES OF EFFICIENT WAREHOUSES

The forklift is an entrenched and essential part of any sophisticated warehouse, the heart of the transport logistics value chain. It is therefore essential to select the correct forklift type for the job at hand and to be aware of the latest innovations in the field. This feature explores forklift selection, takes a look at the current forklift market and its drivers, and highlights the emergence and advantages of the electric forklift. By Mark Botha

The crucial factors to consider when choosing the right forklift for the job at hand, says Criterion Equipment divisional MD Brenton Kemp, include the application – whether special attachments or other measures of customisation such as additional valves, filtration systems or forklift management systems will be required, as well as the environment in which the forklift will be operated. The latter, he says, would depend on the nature of the floor surface and the height of openings, among others.

Other factors include the width of warehousing aisles, and the height of the racking and angulation (gradient) at which the forklift will be used. He also notes factors such as loadable mass and lift height which determine the required machine capacity to get the job done, and the load centre of the goods being lifted, which impacts duration and the height to which loads can be lifted.

Other aspects for consideration include environmental factors or legislation governing propellant type, as is the case in the food industry where the use of electric forklifts is prescribed, and operating hours. These greatly impact residual values in the case of leases, and maintenance costs on the machine. Premium-tier models are therefore suggested for high-hour applications.

In the case of electric forklifts, and when deciding on whether to invest in traditional lead-acid or Lithium-ion batteries, shift patterns, hours usage and availability to charge should all be considered.

Kemp says it is “extremely important” to specify the correct machine for the application as using the incorrect propellant type, model or mast configuration, for instance, can impact the efficiency of the machine’s operation.

Commodity prices

With the demand for forklift units on the rise during 2021, Manitou SA engineering/solutions manager Mishen Naidoo says the rising price of commodities impacted the cost of raw components to manufacture units. In response to this, he says, Manitou adopted a customer-centric approach and embarked on extensive supplier negotiations to ensure that the impact to the customer was minimised.

“This,” he says, “allowed sustainable growth in this market segment, and minimum impact on the customer.”

To Goscor Lift Truck Company (GLTC)



The Doosan NX series from Goscor offers outstanding power, durability and operator comfort

QUICK TAKE	
It is extremely important to spec the correct machine for the job as using the incorrect propellant type, model or mast configuration, for instance, can impact the machine's efficiency	
The rising price of commodities impacted the cost of raw components to production units	
The rise in demand is not necessarily due to higher commodity prices, but to unspent capital during the heavy COVID-19 lockdown period of 2020	
The growth in electric forklifts and the uptick in the economy are drivers of the forklift market	
The current market is driven by the increasing demand for warehouse equipment due to a global spike in warehousing activities	

sales director Patrick Barber, the forklift market seems only to have grown "on paper". He says that, as a result of the ongoing semiconductor (chip) crisis, the figures may be skewed due to materials

handling equipment suppliers stocking up. "We try to rationalise pricing to remain relevant and market-related. Our only constraint currently is the exchange rate." Shumani Industrial Equipment MD

Victor Nemukula ascribes the rise in demand not necessarily to higher commodity prices, but to unspent capital during the heavy COVID-19 lockdown period of 2020.

Drivers of electric forklift growth

He describes transport logistics as "the backbone of the economy" and as an integral part of the logistics industry.

"The growth in electric forklifts as well as the uptick in the economy are drivers of the forklift market," says Nemukula.

Naidoo says the current market is driven by the increasing demand for warehouse equipment due to a global spike in warehousing activities.

"In essence," he says, "customers are looking for efficient, better ways to handle goods, and many start with forklifts."

GLTC's Barber adds the productivity of the equipment, price, maintainability, cost of ownership and improvements in battery technology as current drivers for the forklift market.

Innovations for maximised uptime, equipment life

In terms of new innovations in forklift technology, Naidoo says Manitou has introduced the Easy Manager fleet telematics system with its forklifts to enable customers to plan their services and monitor driver behaviour and routes, which eventually leads to maximised uptime and equipment life.

"Along with this, we have adapted forklifts to utilise several bespoke handling attachments for repeat specialist handling activities.

"We also offer an array of options to enhance operator safety such as proximity detection, load detection systems to prevent overloading, and 360-degree camera systems."

Communication between technicians and back-office staff

Shumani's focus, says Nemukula, is on improving customer satisfaction using technology available in the market.

"Communication between technicians on site and back-office staff is integrated to ensure seamless response to customers' queries," he says.

Electric forklifts for sustainable warehouses

In terms of the future of the electric forklift, Naidoo says that, with sustainability and carbon reduction in the warehousing logistics industry being pressing topics, electrifying equipment has become a major trend in the warehousing logistics sector.



The ME 315 forklift truck from Manitou



Shumani is the largest black-owned industrial equipment supplier in South Africa



"The forklift market seems only to have grown on paper."

Patrick Barber, Goscor Lift Truck Company (GLTC) sales director



"The current forklift market is driven by the increasing demand for warehouse equipment due to a global spike in warehousing activities."

Mishen Naidoo engineering/solutions manager at Manitou SA



TCM's iNOMA forklift range from Criterion boasts an improved stability ratio to ensure stable and consistent cargo handling

"However, this has the requirement of ensuring a stable electrical energy source during planned charging times, which is lacking in most African countries. This can be mitigated with solar energy and other back-up sources of supply. With improved battery technology and regenerative drivetrains, electrical forklifts seem cemented into our future," he says.

Nemukula agrees: "The future in the forklift industry is electric," he says. "We're already seeing a gradual move away from the internal combustion engine to electric machines. Over time, we will only have electric forklifts operating across industry."

Barber says GLTC views the future as bright because the market is showing growth in all classes of forklift.

He says GLTC was one of the first to market with tailor-made electric solutions in the local market and has, over the years, exhibited great understanding of the lithium-ion electric forklift market.

"GLTC's experience in this field is unparalleled, with the key differentiator being our ability to offer customer- and application-specific lithium-ion solutions," says Barber.

"Our only concern is the volatile availability of power, but we will continue to offer more energy-efficient solutions such as batteries, chargers and other energy related equipment. We expect the internal combustion engine to be replaced on forklifts in certain applications."

Electric forklifts: advantages

Naidoo says a major advantage of the electric forklift is the removal of harmful emissions. He says electrical forklifts are safer in closed environments such as warehouses, food handling environments



"Over time, we will only have electric forklifts operating across the breadth of the economy."

Victor Nemukula, MD of Shumani Industrial Equipment



"It is extremely important to spec the correct machine for the job as using the incorrect propellant type, model or mast configuration can impact the machine's efficiency."

Brenton Kemp, Criterion Equipment divisional MD

compared to fuel alternatives. The total cost of ownership of an electric forklift is a fraction of that of the diesel or LPG alternative."

He says there are major savings to be realised in the form of reduced maintenance and fuel costs.

"Finally," says Naidoo, "there are benefits to the operator, such as reduced vibration and improved torque availability, making it easier to move loads."

Shumani Industrial Equipment's Nemukula agrees, saying electric forklifts offer a cleaner and safer technology.

"The electric forklift offers savings over its lifetime as well as a positive impact on the economy."

South Africa remains the most advanced and sophisticated warehouse logistics industry across the continent. This is despite the worrying state of the economy. We have a world-class third-party logistics provider industry that continues to excel in warehousing operations to provide state-of-the-art services to companies ranging from just-in-time deliveries through to cross-docking solutions that reduce costs and improve efficiencies in the supply chain. Forklifts are a vital component of these functions. 🌐

and storage enclosures.

"Another advantage pertains to the cost advantage offered by electric machines

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A trend observed by Volvo is investigation into lighter weight tipper body design, without sacrificing the robustness of the vehicle



TIPPER TRUCK EFFICIENCIES, THE QUEST FOR PAYLOAD SIZE AND FUTURE INNOVATIONS

Tipper trucks have a crucial role to play on almost every construction site and mining operation where aggregate, soil, crushed rock and other bulk materials are transported. Manufactured in a variety of sizes and configurations, most modern models strive to reduce body weight and increase payload. This feature looks at the tipper truck market, efficiencies, payload size and future developments in this sector. By Mark Botha.

UD Trucks Southern Africa MD Filip van den Heede says that, despite taking a knock in 2020 due to the pandemic that forced multiple lockdowns and logistics and supply chain challenges, tipper sales recovered to normal levels in 2021.

"The market has registered significant growth of close to 10% in 2021 compared with 2020 sales and was slightly up compared with sales for 2019," he says. "We look forward to additional growth for the tipper segment in 2022 and anticipate a positive recovery in global supply chains."

Isuzu Motors South Africa senior vice president, Sales and Marketing, Craig

Uren says sales are very much driven by activities in the construction industry and infrastructure spend by government entities, both of which have been slow.

"We therefore monitor trends we have in our data and use these in our forecasting of the Isuzu Ready to Work tipper range." He says that, based on these trends, the company builds Ready to Work stock of the NPR400 SWB 4x2 – 3 m³ and FSR800 SWB 4x2 – 5 m³ dropside tippers, as well of the FTR850 SWB 4x2 – 6 m³; FVZ1400 SWB 6x4 – 10 m³, FXZ26-360 SWB 6x4 – 12 m³ and

FYH33-360 SWB 8x4 – 15 m³ tippers.

Volvo Trucks SA senior manager Sustainability Eric Parry says a current trend in the tipper truck market are investigations into lighter-weight tipper body design without sacrificing the robustness of the vehicle.

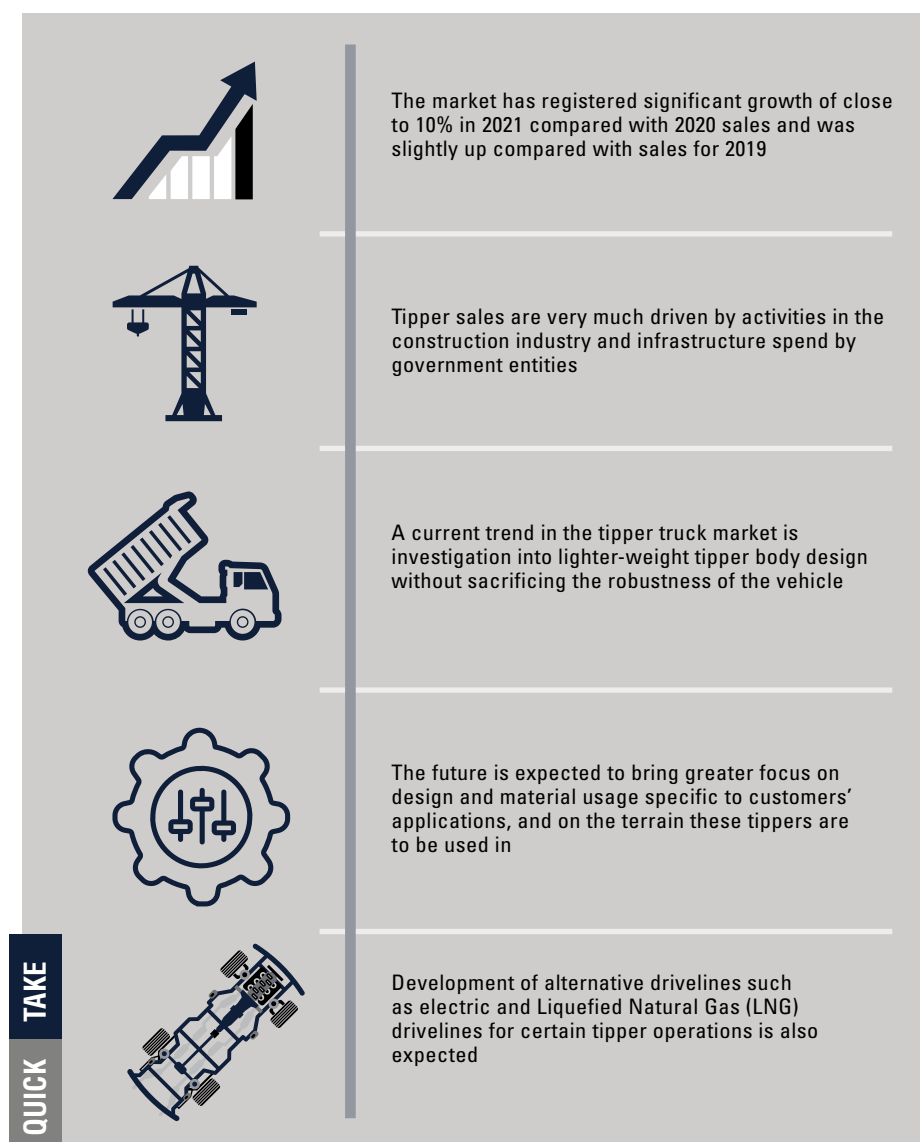
Tipper efficiency

"From a mining tipper perspective," says Parry, "we have introduced the new 38 t bogie, which allows Volvo trucks to offer an 8x4 tipper with a GVM of 58 t."

Uren says Isuzu has introduced overall



The Croner model tipper by UD Trucks



QUICK TAKE

vehicle improvement from fully automatic transmission which allows for improved startability in difficult terrain. The company has also increased payload with a lighter body design.

"We continuously look at the design of the tipper body and use of materials to reduce weight, increase payload and improve durability," he says.

Van den Heede says the introduction of

Allison automatic transmissions for UD Trucks' Croner and Quester platforms is a huge advantage in terms of improved driver comfort and fuel consumption, as well as overall cost of ownership.

Tipper weight and payload size

According to Parry, tipper weight is fundamental to payload size as, the lower the weight of the tipper, the greater the payload can be.

Van den Heede agrees, saying that in today's tough market, making simple changes to increase payload can lift your business to another level.

"Lowered tare weight will always increase the payload and productivity of operations," he says.

According to Uren, payload is key on any truck but critical on a tipper.

"We look at the cubic metre capacity of each unit and, based on the intended application, determine the optimum capacity to ensure payload productivity of the unit."

He says it is also important to look at tipper weight in conjunction with payload size as the specific gravity of products varies and has a direct impact on the payload and axle loading.

He says Isuzu has been focusing on reducing weight with respect to tipper body design and using high-wear, lightweight material. The company has also studied the tipper mechanism to introduce a lower-weight mechanism.

Van den Heede says both UD Trucks' Croner and Quester models deliver huge payload possibilities.

"Optimised tare weight and driveline on the Croner and Quester have reduced the trucks' weight significantly," he says. The Croner and Quester were developed with as low as possible tare weight while



Isuzu has been focusing on reducing weight with respect to tipper body design and using high-wear, lightweight material



maintaining a high priority on durability and dependability.

Future innovations

Uren expects the future to bring greater focus on design and material usage specific to customers' applications, and terrain the tippers are to be used in, for example, using high-strength, lightweight steel for heavy construction applications operating in quarries versus applications for lighter-weight but larger material volumes, where the use of lightweight material is more appropriate.

"As an OEM," says Van den Heede, "UD Trucks strives for cleaner emission technology with reduced impact on the environment. Our customers also have the ambition to reduce their carbon footprint or require reduced emissions in their business relations with their clients."

The company's product line-up in the tipper segment therefore follows recent innovations to comply with emission standards in order to ensure better air quality and a sustainable environment.

"This is why we have added different Euro 5 models to our total line-up, so that customers have the ability to choose more sustainable solutions."

"From the perspective of the truck," says Parry, "we expect the development internationally of alternative drivelines including electric and Liquefied Natural Gas (LNG) drivelines for certain tipper operations."

On the truck body side, he expects new tipper body designs that make use of the newest steel and manufacturing techniques. 🌱



"We continuously look at the design of the tipper body and use of materials to reduce weight, increase payload and improve durability."

Craig Uren, Isuzu Motors South Africa
senior vice president, Sales and
Marketing



"The market has registered significant growth of close to 10% in 2021 compared with 2020 sales."

Filip van den Heede, MD of UD Trucks
Southern Africa



"We expect the development of alternative drivelines including electric and LNG drivelines for certain tipper operations."

Eric Parry, Volvo Trucks SA senior
manager Sustainability

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POOR CHOICES PLACE CRUSHING CONTRACTORS AT RISK

As the economic pinch continues in sectors like construction and mining, there has been an alarming increase in the number of companies let down by underperforming crushing and screening equipment, spares support and technical aftermarket support, according to Pilot Crushtec director of sales and marketing, *Francois Marais*.



"Our approach at Pilot Crushtec has always been clear: we provide the assurance of performance, so customers do not put themselves at unmanageable risk by purchasing our equipment."

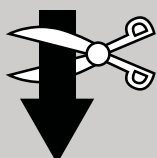
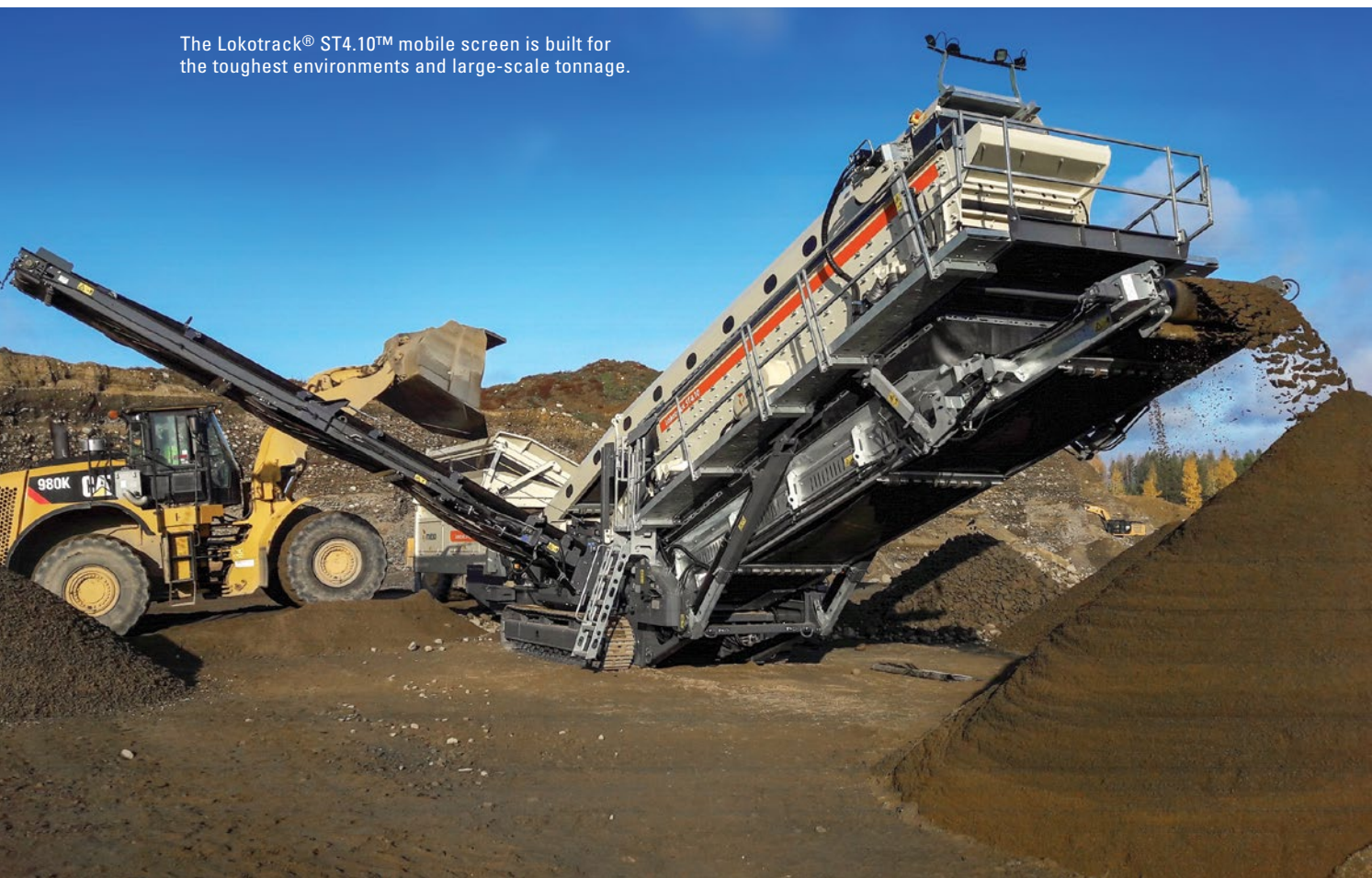
Francois Marais, director of sales and marketing at Pilot Crushtec.

“We have fielded a growing number of calls recently from companies using other manufacturers’ equipment, requesting urgent assistance in providing alternatives or support to help them meet their contract obligations,” says Marais. “It appears to us as if many companies have selected equipment based purely on price, rather than its suitability for their application.”

He highlights the devastating impact which these constant – and sometimes catastrophic – technical failures and lack of spare supply have on the performance and reputation of these crushing service providers. With crushing contracts being invariably linked to strict time and output requirements, any downtime can place delivery and fulfilment at risk.

“Even if the equipment can be kept

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The economic environment certainly makes many firms risk-averse, and this tempts them to trim their capex budgets to unsustainable levels



What is happening in these cases is that any saving from the capital expenditure on the equipment is being eaten up by fast-rising operating expenditure



One bad purchasing decision can push these players over the edge



Successful crushing contractors recognise the vital importance of mission-critical equipment in their enterprises and contracts

functional, these unexpected repair and maintenance costs can end up rendering a project unprofitable," he says. "What is happening in these cases is that any savings from the capital expenditure on the equipment is being eaten up by fast-rising operating expenditure."

Operating risk

The irony is that it is often the companies whose profitability is already marginal, who try to survive by purchasing low-priced equipment upfront. He points out that this exposes the business to dangerously high levels of operating risk, as any unexpected downtime quickly wipes out the narrow profit margin.

"One bad purchasing decision can push these players over the edge," says Marais. "There is a mistaken belief that they can 'save their way' to profitability – which simply does not make financial sense in this competitive sector."

He emphasises that successful crushing contractors recognise the vital importance of mission-critical equipment in their enterprises and contracts. They earn their success and reputation by top-class performance, ensuring the production levels that customers demand – and thereby

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winning the return business necessary for sustainability and growth.

Incentivised by the wrong metrics

"The economic environment certainly makes many firms risk-averse, and this tempts them to trim their capex budgets to unsustainable levels," he says. "This suggests they are incentivised by the wrong metrics, and may not have a proper alignment between their procurement mandate and their strategic business objectives."

He notes that this challenge is also reflected in a prevailing business culture in which buyers feel they are only justified in purchasing after the price is substantially reduced.

"Our approach at Pilot Crushtec has always been clear: we provide the assurance of performance, so that customers do not put themselves at unmanageable risk by purchasing our equipment," he says. "With this approach, we try to set them up for success, and support them in meeting their own customers' expectations in turn."

Marais argues that Pilot Crushtec can achieve this because of its 30 years of experience, and the proven quality

of its equipment, service, spares stock holding and backup support. The company invests heavily, for instance, in its on-site stockholding, so that customers do not usually have to wait for parts. It also configures its equipment with everything that customers need, so they are not left stranded in the middle of a project without mission critical features.

"Our decades of experience in the field means that we know what our customers use to improve performance, and we supply these features as standard on our equipment," he says. "When you consider all the added features that our machines come with as standard, it is easy to be impressed by the value for money we provide."

By way of example, he points to the Metso Lokotrack LT120 mobile jaw crushing plant, which comes standard with a hydraulic rock-breaker, a very expensive item to include as standard. The unit also boasts the innovative Metso lifting tools system for changing the liners on the jaw crusher, saving more than half the time to replace liners. It also has 30% less hydraulic oil, making for considerable savings that the average customer would not expect. Pilot Crushtec has been the local distributor for

"Our approach at Pilot Crushtec has always been clear: we provide the assurance of performance, so customers do not put themselves at unmanageable risk by purchasing our equipment."

Metso for the past six years.

"By saving on downtime and enhancing safety, we help customers remove excessive risk from their projects, so they can build sustainable brands and successful businesses," he says. "It is no coincidence that the top five contractors in the crushing space rely predominantly on equipment from Pilot Crushtec." 🌟

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ALFIERI HOLDINGS ‘SUPPORTS LOCAL’ WITH A DOZEN BELL ADTs

An emerging coal mining group’s decision to invest in Bell Articulated Dump Trucks (ADTs) has a direct downstream benefit for three thousand five hundred employees at Bell Equipment as well as for the more than one thousand suppliers to the manufacturer, who supply a vast variety of components that go into each Bell ADT.



From left: Dirk Coetzee (Ikoti Coal Mine Manager), Mzwakhe Mbatha (Department of Trade, Industry and Competition: Automotive & Truck Industry), Enock Mabaso (Bell Equipment Sales Representative), Lehlohonolo Molloyi (MEMSA), Aubrey Potgieter (Bell Equipment Middelburg Branch Manager), Bruce Ndlela (Bell Equipment Director of Business and Public Sector Development), Branden Moodley (Director: Alfieri Holdings), Gary Bell (Bell Equipment Group Chairman), Zabilon Inama (Director: Alfieri Holdings), Advocate TS Mokoena (DMRE) and Coen Bezuidenhout (Mining Engineer: Ikoti Coal Mine).

So said Bell Equipment Group Chairman, Gary Bell, at the official handover of 12 Bell B45E ADTs to the Alfieri Group at its Ikoti coal mine near Breyten in Mpumalanga recently. The ADTs, locally manufactured at Bell Equipment’s factory in Richards Bay, will be used in the coal sector around Breyten, providing meaningful jobs in the area.

Bell acknowledged that while the Alfieri Group had a choice of eight or more different manufacturers of haulage vehicles to choose from, its decision to acquire a wholly owned South African product proved yet again that ADTs manufactured and supported by Bell Equipment could compete on the global market and do so with confidence.

“Despite current economic and social challenges within the country, Team South Africa has proven yet again that it can



create a world-class product, and this is further borne out by the fact that only about 15% of our ADT production is sold in South Africa with the balance eagerly snapped up by wider world markets,” he said.

Alfieri Director, Branden Moodley said the company had been “influenced by the consen-



sus in the market that Bell ADTs were the haulage machines of choice and that Bell had shown us that they understood our business and the challenges we face. We thank Bell for taking us seriously and ensuring that we bought the correct trucks for the job”.

The Mining Equipment Manufacturers of South Africa (MEMSA), of which Bell is a member, played a significant role in inviting key stakeholders to attend the event. Although numbers were restricted due to Covid-19 regulations and protocols, the Department of Mineral Resources and Energy’s Director General, Advocate Thabo Mokoena, the Department of Trade, Industry and Competition’s Shawn Moses (Regional Industrial Development Division) and Mzwakhe Mbatha (Automotive Sector Desk) were all in attendance, clearly demonstrating government’s support for the sector.

MEMSA CEO, Lehlohonolo Molloyi highlighted MEMSA’s commitment to supporting member initiatives. He went on to say that “the more we support local innovation, the more we can create local jobs”.

MEMSA is a champion of proudly South African mining equipment manufacturing companies working hard to positively impact on the national economy through manufacturing, job creation and skills development, which is in line with government policy and its drive to support local content. In addition, on behalf of MEMSA, he thanked stakeholders for supporting local mining equipment manufacturing companies saying that their support of the mining supply chain was greatly valued. ✱



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Daimler Trucks & Buses Southern Africa retains Top Employer title for 2022

Daimler Trucks & Buses Southern Africa (DTBSA), one of the leading commercial vehicle manufacturers across the region, is honoured to have been bestowed Top Employer certification for 2022 by the Top Employer Institution.

This accolade was announced at the Top Employers 2022 certification celebration held virtually, and DTBSA was one of 114 pre-eminent organisations to receive this prestigious recognition. DTBSA is no stranger to the award. For the past six consecutive years the company has been

recognised under the Mercedes-Benz group of companies. For the first time this year, following the global split, DTBSA walked away with the highly sought-after award as a completely independent company.

Michael Dietz, President and CEO Daimler Trucks & Buses Southern Africa comments on this notable achievement: "It is an honour and a privilege to have achieved this significant recognition, and to be listed amongst companies in South Africa that offer superior working conditions for their employees. Receiving an award of this calibre sends a strong message about our steadfast commitment to our people

and their well-being. I can confidently say that our people remain at the centre of everything we do and we strive for a culture that promotes collaboration, engagement, and motivation to ensure they feel valued and appreciated. As we continue to invest tremendously in training programmes to develop and upskill our people, our purpose for all who keep Africa moving continues to ring true and we would like to continue in this direction for the success of the company and a favourable working environment".

Top Employers Institute CEO David

Plink says: "Reflecting on the demanding year that has, like the year before it, impacted organisations across the world, Daimler Trucks & Buses Southern Africa has continued to show that it prioritises maintaining excellent people practices in the workplace. The company continues to meet the challenges of the changing world of work while working tirelessly to make a positive impact on the lives of its workforce. We are pleased to celebrate and applaud the organisations that have been certified as Top Employers in their respective countries this year." 🌟



Marcia Noxolo Mayaba joins Isuzu

Marcia Noxolo Mayaba has joined the Isuzu Motors South Africa (IMSAf) senior executive team as the newly appointed department executive for Dealer and Business Development.

She joins IMSAf with impressive experience within the automotive industry, which spans over two decades. She has worked across various fields, including truck rental, car rental, leasing and fleet management and has extensive retail experience – holding positions of general manager, dealer principal and franchise executive. Mayaba was the first female in the South African motor industry to head a motor group listed on the Johannesburg Stock Exchange when she was appointed chief executive of Barloworld Motor Retail. During her tenure with Barloworld, Mayaba also held the role of vice president of the National Automobile Dealers Association. In 2021, she was voted one of the Top 100 most influential women in Africa – Automotive Supply Chain.

"We are excited to have Marcia join the IMSAf team, especially with her wealth of experience, where she will be instrumental in bringing to life the IMSAf vision of transformation, high performance and results," says Mongezi Hermans, senior VP Human Capital and Corporate Affairs at Isuzu.

Looking forward to the challenge, Mayaba says, "The role is both exciting and challenging at the same time. It aims at bringing about transformation, not only from a diversity and inclusion perspective, but also from the way we conduct business with our business partners and the dealer network into the future".



Marcia Noxolo Mayaba.

Mayaba completed a Gordon Institute of Business Science programme for Management Development, a diploma in Public Relations from Lesley Cannelley Business College and an Advanced Certificate in Road Transport obtained from the Rand Afrikaans University, now the University of Johannesburg. She has also completed dealer principal management training programmes both at OEM and retail level, and holds a Sewell's Dealership Management qualification. 🌟

Mercedes-Benz Trucks cements its partnership with Cargo Carriers

Cargo Carriers is a leading provider of supply chain and transport logistics solutions across Southern Africa. Its exponential growth and success over the years is a reflection of grit and determination, firmly entrenched in its long-standing partnership with one of the leading truck brands in Southern Africa — Mercedes-Benz Trucks. To further strengthen this well-established relationship, towards the end of October 2021, Mercedes-Benz Trucks together with its dealership New Vaal Motors Vereeniging successfully handed over 13 Mercedes-Benz Actros 2645 LS33 Pure models to Cargo Carriers.

Cargo Carriers, whose fleet primarily consists of Mercedes-Benz truck models, began its journey with Mercedes-Benz Trucks

in 1956 following a purchase of the first Mercedes-Benz LS 315 truck, and since then the company has been a part of the Mercedes-Benz Trucks family. In total, including the recent purchase, Cargo Carriers proudly boasts approximately 200 safe, reliable, and fuel-efficient Mercedes-Benz truck tractors in its fleet.

Commenting on this long-standing partnership, Marketing Director: Cargo Carriers, Andre Jansen van Vuuren says: "It is a privilege for Cargo Carriers to be associated with Mercedes-Benz Trucks and I am particularly proud to say that this handover further reaffirms our commitment and faith to the brand. We constantly review and upgrade our fleet when a business need arises to take advantage of the new technology that Mercedes-Benz Trucks has to offer to better

serve our customer's business needs. With every truck purchase, we are guaranteed the best dealer support and favourable Total Cost of Ownership, which allows us to be more competitive in the market. In addition, this revolutionary brand also offers us better Uptime and Utilization, which enhances service delivery to our end customers."

Maretha Gerber, Vice President: Sales and Marketing weighs in on this strong relationship: "As Mercedes-Benz Trucks we are delighted to be a part of this amazing success story and to be associated with Cargo Carriers, which is at the forefront of the supply chain and transport logistics business. We have witnessed its tremendous growth over the years, and I am thrilled that today the company plays a crucial role in the trucking industry". 🌟

Volvo Group Southern Africa welcomes new Vice President

Volvo Group Southern Africa has announced the appointment of Waldemar André Christensen as the company's new Vice President and Managing Director with effect from 1 February 2022. He is replacing Marcus Hörberg, who will be joining the Volvo Trucks team in France.

Christensen started his Volvo career in 2011 in his native Norway. He has vast experience in commercial product management, government, and fleet sales, as well as dealer and retail operations.

Christensen was the MD of Volvo Trucks in Norway from 2016 to 2019. Most recently, he was head of Truck Sales Operations for the Volvo European regional

value chain, located at Volvo headquarters in Gothenburg, Sweden. Christensen has an MBA, and his qualifications are centred on business, administration, law, and entrepreneurship.

"I am excited to be given this opportunity and look forward to supporting our South African customers in building sustainable businesses for the future," he said.

"The Volvo Group Southern Africa team has extensive experience in the local transport environment, and I greatly value their insights and knowledge, especially now as the global logistics industry is facing some challenging business conditions.



Volvo Group Southern Africa Vice President Waldemar Christensen.

We look forward to taking Volvo Trucks to new heights, to the benefit of our customers, our staff and society at large." 🌟

A golden era for logistics: positive growth outlook with a high focus on sustainability

The local transport industry is showing steady signs of recovery from the ongoing global impact of COVID-19. A total of 27 075 trucks and buses were sold during 2021 in South Africa, an increase of 19% compared to previous years.

"Despite all the unforeseen setbacks over the past two years, the local transport industry is showing steady growth. It will be a bumpy road ahead of full economic recovery, requiring interventions such as building smarter logistics with lower environmental impact and taking a value-based approach to managing supply chains," said Filip Van den Heede, Managing Director of UD Trucks Southern Africa.

"As the saying goes, 'in every crisis lies great opportunity'. The post pandemic era presents the logistics industry with an opportunity to be part of working towards a greener planet. Logistics providers have been part of the environmental degradation problem that our planet faces, and it is now time to go the extra mile and be an active part of the solution as well.

"Our long-standing commitment to providing trucks and services the world needs has led UD Trucks to introduce Euro 5 trucks ahead of regulations in South Africa. Our Euro 5 model range will expand with the addition of two new models later this year. A Euro 5



Filip Van den Heede, Managing Director of UD Trucks Southern Africa.

system with SCR (selective catalytic reduction) technology has long been a globally proven technology in reducing carbon footprint, lowering NOx (Nitrogen Oxide) levels, and ensuring cleaner emissions for a 'Better Life' for all." 🌟

Full stainless steel pump set from local specialist

Pump specialist and local Sykes distributor Integrated Pump Rental is breaking new ground for customers in corrosive environments, offering a pump solution that is built entirely from stainless steel.

Steve du Toit, rental development manager at Integrated Pump Rental, says that while the pumps themselves or pump components are commonly available in stainless steel, the market has not yet made something like this readily available.

"Our focus on specific customer requirements, built to order in our modern workshop, has led us to develop a fully stainless steel solution – from the tank and skid to the lifting frame and other components," says du Toit. "We have seen a definite interest in the market for this build design, as customers see the value in having this corrosion resistant material in all aspects of the pump set."

He notes that the initial interest has come from the mining sector, where mine water being pumped is often acidic.

"The design is based on our 'total solution' approach, where we consider the complete application and its challenges," he says. "While the upfront cost of stainless steel is obviously higher, the value gained by the customer in terms of longevity and reliability far outweigh this."

Among the applications is open pit dewatering where there are low pH levels in the water, as well as coastal applications where salt water and air cause rapid rusting of mild steel. Integrated Pump Rental has already successfully placed a stainless steel unit in a coastal application, where it is performing well.

"Different grades of stainless steel are used in the design, depending on which components have the most contact with the acidic medium," he says. "A range of materials is therefore employed to suit each



Customers see the value in having this corrosion resistant material in all aspects of the pump set.

application, and to achieve optimal performance at the most competitive cost."

This custom engineering is made possible by the company's range of technical skills and specialist experience that resides in its people. This in-house expertise includes draughting, fabrication and pump assembly, making use of coded welders and qualified boilermakers. Depending on the application, the stainless steel build can be supplied on a road trailer or with a site trolley.☘

Atlas Copco Power Technique offers low total cost of ownership

Atlas Copco Power Technique's professional and comprehensive after-market service solutions help to optimise machine and equipment performance, boosting productivity and production for ultimate business profitability.

"Our service solutions incorporate general maintenance and repairs to all Atlas Copco mobile equipment including pumps, compressors and light towers," confirms business line manager for Power Technique's Service Division, Douw van Schalkwyk. "Alongside complete and/or partial rebuilding of portable equipment components, our portfolio also extends to operator training focusing on general maintenance procedures."

"We understand how important low total cost of ownership (TCO) is for our customers, irrespective of their application in sectors such as water well and exploration drilling, mining, quarrying and construction," continues Van Schalkwyk. "There really is only one way for customers to achieve low TCO and that is by adopting regular service and maintenance plans carried out by qualified Original Equipment Manufacturer (OEM) technicians using OE parts."

Van Schalkwyk stresses that service quality is just as important as regular maintenance, such as who is performing the service and how it is being carried out. Atlas Copco strongly advises customers to appoint only OEMs to service their machines. As an OEM, Atlas Copco must follow global requirements and adhere to international



Adopting regular service and maintenance plans carried out by qualified Original Equipment Manufacturer (OEM) technicians using OE parts lowers TCO.

rules and standards. "This compels us to create a pool of highly trained and skilled product specialists who know the Atlas Copco products inside out. Using the correct tooling, our technicians take care of service, maintenance and repair work in the shortest possible time, helping to keep customers' downtime to an absolute minimum."

Van Schalkwyk also highlights the importance of following the OEM's recommended service intervals and using only OE parts. "A preventative maintenance culture will help to reduce the risk of component failure and resultant unplanned, costly stoppages, subsequently increasing machine availability and extending life cycles." Citing high pressure compressors

as a good example of why OE parts are so important, Van Schalkwyk explains that sub-standard parts are known to fail under high pressure and, in most cases, result in an internal fire.

Moreover, in the event of a warranty issue, the customer, having followed the OEM's recommended service intervals, can depend on the OEM for an immediate response. "We, as the OEM, will carry the consequential damages resulting from the failed part. On the contrary, failure to follow OEM requirements will result in claims being declined, leaving the customer with down time and repair-related costs." He adds that fully serviced units also fetch a better selling price.☘

Apply PDS with planning and engagement for a successful outcome

Implementing a proximity detection system (PDS) or collision prevention system (CPS) in place in a mining operation is a process that cannot be rushed, says Anton Lourens, CEO of leading PDS and CPS developer, Booyco Electronics.

Rather, it needs solid risk assessment, planning, broad engagement and an integrated approach that considers the myriad details involved. Lourens emphasises that for PDS and CPS systems to effectively reduce risk as they are designed to do, everyone must buy into the project and support its outcomes.

"In Booyco Electronics' many years in this sector, we generally find that haste is counter-productive," he says. "Where a safety incident has occurred on a mine, for instance, there may be an understandable impatience to get a PDS and CPS solution up and running quickly. The result, however, is seldom what the customer was hoping for, and the process often just takes longer than it should."

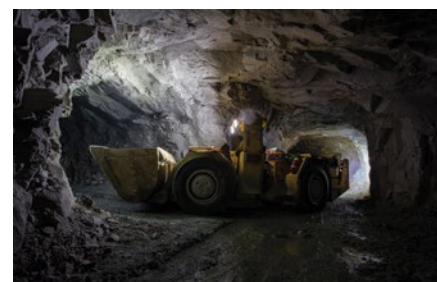
The key, he highlights, is to conduct a detailed risk assessment upfront to establish

exactly what problems the PDS and CPS are expected to resolve. A successful application of this technology will be one in which the mine is proactive about defining the requirement for PDS and CPS to ensure they meet the specifications identified in the risk assessment.

The next vital task is to involve all stakeholders, including miners at the coal face, various levels of management, the mine training centre, original equipment manufacturers and other relevant suppliers.

"This engagement – and the acceptance of PDS and CPS by these stakeholders – is vital to a successful roll-out," Lourens says. "Ultimately, all these parties need to understand why they are installing the PDS and CPS equipment, and what the implications and benefits are for each player in the value chain."

Machine operators are among the key participants in the process, he notes. They need to engage one-on-one with the teams who conduct the equipment installation and must receive several rounds of training to understand what the equipment will do and how best to look after it.



It is critical to conduct a detailed risk assessment upfront to establish exactly what problems the PDS and CPS are expected to resolve.

"A PDS solution is a potentially game-changing safety device that will reduce the risk of collisions and improve workers' wellbeing in their daily working environment," he says. "Over the past decade or more, we have seen industry embrace this technology and put it to good use."

Nonetheless, he points out that the choice of the right PDS or CPS technology to address the identified risk is still a complex and technical process that needs considerable collaboration between suppliers and mines. 🌐

Rosond achieves major health and safety milestones at Sishen and Kolomelo mines

Drilling technology solutions provider Rosond of Midrand has achieved major health and safety milestones at the Sishen and Kolomela Mines of Anglo American's Kumba Iron Ore operation in the Northern Cape.

"We are very proud of our safety culture and keeping our employees safe," comments Rosond, managing director, Ricardo Ribeiro. Rosond has established an excellent Safety, Health and Environmental (SHE) record by implementing stringent SHE policies and complying with all legislation in pursuit of Zero Harm. "We are committed to continually improving our safety performance. We pay close attention to the design of our equipment and the application of simple, easily-understood safety management systems to ensure employees can implement safety procedures at all times," highlights Ribeiro.

Hazard Identification and Risk Assessment (HIRA) forms the basis for all safety procedures. In addition, management investigates any unsafe practices and incidents to determine necessary steps to prevent a reoccurrence. "We are committed to prevent unplanned interruptions to all operations and processes as the result of such incidents," comments Rosond safety manager, Andre Kleynhans.

Based in the exploration and production geology section at Sishen, Rosond is

drilling boreholes for exploration and mine grade-control sampling purposes, says senior site manager, Clayton Coetzee. There have been no Lost Time Injuries (LTI) since the start of Rosond's operations at the mine, with 582 LTI-free days to date.

At Kolomela, the major milestone has been maintaining a Zero Harm record for over a year, even though the recruitment and onboarding process of new employees and equipment had commenced earlier. "We are currently still at Zero Harm, with 501 days worked to date," site manager, James Faure, says.

Rosond has two drilling departments at Kolomela, namely Exploration Drilling and Production Geology, each with their senior foreman, supervisors and drilling crews, and the Engineering and Logistics Department, with their foreman and mechanical teams. These are complemented by the Safety Department with its Chief Safety Officer and team of Safety Officers and safety representatives.

Rosond has had great success in training all-female crews deployed at Kumba Iron Ore, facilitated personally by head of training and development, Carlo



Rosond has had great success in training all-female crews deployed at Kumba Iron.

Claassens. He ensures employees are trained in all relevant health and safety aspects, including client-related mandatory training, as well as operational training pertaining to the fleet deployed at Sishen and Kolomela respectively.

"We have enjoyed great benefits in reducing our LTI rate by incorporating feedback from the safety department into the training department. To provide the highest-quality work for our client, we make use of technologically advanced drill rigs to always ensure safe work. Drilling is remote controlled, with almost no human interaction required during the process to promote a safe working environment at all times," Kleynhans says. 🌐

V O L V O

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Training supervisors for a mechanised, automated future



Smart mining is a key focal point of leading underground mining contractor Murray & Roberts Cementation, and its digitisation strategy is strongly supported by its approach to supervisor training.

"The Fourth Industrial Revolution is having major impacts on how we mine, so it is to be expected that our training focus must adapt accordingly," says Tony Pretorius, education, training and development (ETD) executive at Murray & Roberts Cementation. "To underpin our digital strategy as a business, our training is evolving in terms of its outputs and its methodologies."

Pretorius highlights that technology is improving safety and productivity in mining by facilitating automation, through either line-of-sight or tele-remote operation of equipment.

This placing new demands on supervisors, in their task of influencing better team performance. The company is introducing a range of digitisation initiatives in its projects, including a condition monitoring system to track and monitor the health of trackless mining machines (TMMs).

"Supervisors today still need to manage processes, systems and schedules to meet their objectives," he says. "In addition, though, they need the capacity to interpret the wealth of data that digital technology produces."

The Murray & Roberts Cementation Training Academy (MRTA) at Bentley Park near Carletonville prepares supervisors with a series of e-learning modules including TTM appreciation, supervisory soft skills, legal liability, and mine-specific standards and procedures.

However, the programme becomes more innovative with the inclusion of its neuro-leadership component.

"This course teaches supervisors about various personality types, their respective strengths and weaknesses, and how the brain influences the behaviour of those personalities," he says. "This helps our learners to understand the different approaches inherent in personality types, and to take these into account in developing their leadership skills."

The training itself leverages the use of two-dimensional and three-dimensional animations in the class-

room, as well as interactive touchscreens. Supervisors are also exposed to the virtual reality space, where they are required to identify workplace hazards and risks and apply measures to manage these risks.

"Our virtual reality modules include waiting place procedures, entry examination and safe declaration, as well as emergency preparedness and survey," says Pretorius. "This is followed by learning in the mock-up environment, where they perform marking on the 3D blast wall with laser technology, and sequential firing and blast advances." 🌀

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Sandvik's Harare operation excited about prospects in Zimbabwe

With exciting prospects for new mines and brownfield projects in Zimbabwe, Sandvik Mining & Rock Solutions' Harare-based operation remains at full capacity and at the leading edge of industry innovation.

"We are looking forward to two new platinum operations taking shape. These could be producing within five years, as well as the expansion and digitalisation of existing operations," says Ian Bagshaw, territory manager for Sandvik Mining & Rock Solutions. "There will also be the rejuvenation of brownfield operations in surface and underground mines."

Strengthening capacity to serve its market – which includes customers in Botswana and Mozambique – the company has upgraded the skills, tooling and equipment of its service centre and completed a state-of-the-art technology centre.

The service centre in Harare remanufactures all current models of Sandvik mobile equipment and houses a repair and rebuild facility for all major components, as well as a dedicated drifter repair and test centre.

Its state-of-the-art Technology

Centre works with customers to fully utilise the range of Sandvik digital tools to increase safety and productivity in mining operations.

"We are proud of our strong technical foundation, with about 60% of our 420 plus workforce being engineers, artisans, auto-electricians and other technical specialists," says Bagshaw. "Investing in training our own people is a priority, and we are proud to note the considerable interest from women in Zimbabwe in pursuing technical careers with some 30% of our apprentices being female at any time."

Sandvik Mining & Rock Solutions' Zimbabwean operation supports the full range of Sandvik equipment in the country ranging from underground trucks and loaders to surface drills and crushing and screening equipment. Bagshaw says that service and support is tailored to suit customers' requirements and ranges from full maintenance contracts to field service callouts, both supported by a comprehensive parts stockholding, digital monitoring and ongoing training.

He highlights the value of the



The Zimbabwe-based operation is proud of its strong technical foundation, with about 60% of its 420 plus workforce being engineers, artisans, auto-electricians and other technical specialists.

company's dedicated training department – delivering operator and technical training in-house and for customers. Gap analysis is also provided by the training team, helping mines to assess their skills base and provide targeted training programmes for operators as well as technical and supervisory staff.

"We are also looking forward to mineral developments in Botswana, where activity on the Kalahari copper belt have created significant opportunities for the mining industry," he says. "In the near future, we will see copper and diamond operations going underground, which is an exciting prospect."

Bagshaw notes that Sandvik Mining and Rock Solutions' Harare facility has remained fully operational through the Covid-19 pandemic, ensuring that mines could continue producing optimally as essential services even during the 'lockdown' months. 🌐

HVAC systems for tough African conditions

Available from Booyco Engineering is a range of mobile HVAC systems specifically designed to meet the tough conditions typically encountered in African mining.

The systems, which are ideal for off-road equipment such as dump trucks, drill rigs, dozers and excavators, are able to cope with the vibration and dust associated with off-road environments and also the very high ambient temperatures that can often be encountered in Africa.

"There is a misconception that our mobile HVAC solutions are over-engineered, making them more expensive than they need to be, particularly in comparison to the mass-produced systems designed for use in typical heavy goods vehicles (HGVs). But these vehicles seldom run off motorways and they are typically designed for cooler climates," explains Grant Miller, executive director of Booyco Engineering.

Elaborating on Miller's point, Booyco Engineering's MD, Brenton Spies, notes that Booyco Engineering's systems are rated for use at ambient temperatures of 45°C to 50°C while mass-produced systems tend

to be designed for cooler climates where 35°C is seen as the maximum operating temperature. In order to eject this additional heat, larger components are needed, such as larger condenser coils and more powerful fans.

To cope with rugged off-road conditions, Booyco Engineering's systems utilise welded structures and use thicker gauge (2.0 mm) steel plate than competitor products which tend to rely on less-expensive pop-riveted structures and much thinner steel or aluminium sections. As a result, Booyco Engineering's solutions are far more durable and reliable.

To counter dust, Booyco Engineering often includes scavenger fans and HEPA filters to maintain the air quality inside cabins. In addition, the cooling fin spacing is larger than on conventional units to limit dust build-up, which – if unchecked – can quickly impair the cooling capacity of inadequately designed systems.

Summing up the case for choosing a Booyco HVAC solution, Miller says it is not sensible to pay money for a lower cost sys-



The systems are able to cope with the vibration and dust associated with off-road environments.

tem that will not work in demanding African conditions. "And if someone claims that a lower cost system is the same as ours, beware! If it costs much less, it is likely not to work – and it certainly won't work for long," he warns. 🌐

E-machines impress Leonhard Weiss

Leonhard Weiss tested the entire zero emission range from Wacker Neuson during the renovation of Stuttgart's market square in the heart of the city centre. The construction company is a long-standing partner of Wacker Neuson and has accompanied the zero emission journey from the very start from a customer perspective. Now the entire portfolio – from battery-powered rammers to electric excavators – has been put to use on the construction site. "We really like the fact that the electric machines and construction equipment have the same power as conventional ones," Simon Schall, head of central machine technology of Leonhard Weiss, says. "During daily operation, there are fewer maintenance points than with combustion-engine equipment, and drivers or operators can get to grips with the machine much more easily."

"Feedback from on-site users is hugely important to us," Kai Hieber, Southwest



The entire portfolio – from battery-powered rammers to electric excavators – has been put to use on the construction site.

region sales manager at Wacker Neuson, says. The battery-powered rammers that have been tried and tested on the market since 2015 as well as battery-powered plates from the new APS series for soil compaction were used at the construction site in Stuttgart. The DT10e track dumper, DW15e wheel dumper and WL20e wheel loader enabled efficient transport of material without direct exhaust emissions and with extremely low noise emissions. The EZ17e Zero Tail excavator was available for excavation and demolition work. With its high-quality lithium-ion technology, the machine meets the high demands for performance, durability and robustness. ⚙️

Cost-efficient and sustainable new class of compact milling machines

With the European market launch of the W 100 Fi, W 120 Fi and W 130 Fi, the cold milling machine specialist Wirtgen now presents a trio of high performance, next generation one-metre class compact milling machines. Unique in this industry segment, the innovative technologies of the proven F-series large milling machines have been integrated in the company's compact milling machines.

The three front loaders with working widths of 1 m, 1,2 m and 1,3 m feature environmentally friendly engine technology compliant with EU Stage 5 / US Tier 4 Final exhaust gas emission standards. All three machines are powered by a state-of-the-art John Deere diesel engine with a rated output of 265 kW. Wirtgen and John Deere have precisely tuned the torque characteristic of the engine to meet the specific needs of the cold milling process. As a result, the machines use significantly less fuel, even when delivering highest productivity and milling to a maximum depth of 330 mm.

Also onboard are the digital assistance systems Mill Assist machine control, Wirtgen Performance Tracker (WPT) and the Level Pro Active levelling system.

In automatic mode, Mill Assist selects the operating strategy with the most favourable balance between milling performance and operating costs. This increases milling performance and simultaneously reduces fuel, water and pick consumption and CO₂

emissions.

The operator can also pre-select one of three alternative operating strategies: 'ECO', 'Performance-optimised' or 'Milling pattern quality'. This makes it possible, for example, to pre-define the required milling pattern quality on a scale from 1 (coarse) to 10 (very fine) at the press of a button.

Mill Assist also automatically controls the drive system. In conjunction with the diesel engine, an enormously broad spectrum of applications can be realised by reducing or increasing the milling drum speed. The low-speed range enables significant reductions in fuel consumption and minimises pick wear. In the upper speed range, a high-quality milling pattern can be achieved, even in the case of higher area performance rates.

Wirtgen Performance Tracker automatically and precisely determines area performance rates, milling volumes and the fuel and water consumption of the machine – without any need for external surveyors on the construction site. The milling machine operator can view all important performance and consumption data in the operator's cabin in real time and send an automatically generated report to the machine owner by email immediately after completion of the milling job. WPT is an optional feature that can also be retrofitted to already operational compact milling machines at any time.



The innovative technologies of the proven F-series large milling machines have now been integrated in the company's compact milling machines.

Compact dimensions and optimised machine weight for easy transportation predestine this trio of machines for a multitude of construction site scenarios. The highly manoeuvrable cold milling machines are particularly suitable for milling work where space is limited, for example in city centres or on car parks. As a result of their high productivity, they are also ideal for surface layer rehabilitation and complete pavement removal on smaller or medium-sized construction sites. Thanks to the ability to quickly change the FCS milling drums with different pick spacings and working widths, the compact milling machines from Wirtgen can also be rapidly reconfigured on-site to adapt to changing applications. ⚙️

NC-B deployed to its first job

Liebherr Group has deployed its most powerful flat-top crane, NC-B series, on the Safiyyah Museum and Park construction project in Medina, Saudi Arabia. This is the crane's first project. The 12 t model is the latest addition to Liebherr's NC-B series, which is designed for price-sensitive markets. Thanks to its long reach, the NC-B 12-70 is suitable for both cast-in-place concrete construction and for the precise lifting of heavy prefabricated parts.

The biggest challenge presented by the construction site in Medina is that there is limited space. High-traffic roads and tall neighbouring buildings required crane operations to be planned with precision.

The crane has a maximum jib length of 70 m and a jib head load capacity of 2 000 kg at maximum jib. These technical features make the crane an optimal solution for high-performance lifts in densely built-up metropolitan areas.

The NC-B concept is optimised for transport and assembly. Five trucks delivered all elements of the slewing part to site quickly and easily. Once on site, assembly was straightforward. The central unit with slewing platform and connection element only requires one lift. A weight reduction of the central unit is also possible. If necessary, the slewing platform, control cabinet and cabin can be installed separately to meet the assembly crane's performance capacity.

Established technologies from Liebherr's existing Flat-Top series further accelerate assembly. The LiConnect quick connection system enables the jib to be assembled quickly and safely in 5 m sections.

Both 16 EC 240 and 21 HC 290 tower systems are compatible with the NC-B 12-70. The 16 EC tower system, measuring 1,6 m x 1,6 m, has been specifically designed for use with the NC-B series. Pin connections ensure easy and economical assembly. The tower sections have a standard length of 3,9 m. Longer tower sections of 11,7 m also be used to achieve a freestanding hook height of up to 50 m. Using the 21 HC 290 tower system, the freestanding hook height can



The NC-B 12-70 is suitable for both cast-in-place concrete construction and for the precise lifting of heavy prefabricated parts.

be increased up to 77,7 m.

The hydraulic climbing unit is designed with flexibility in mind. It is suitable for both internal and external climbing, completely detachable and compatible with other Liebherr tower cranes. As a result, the operator only needs one device, which can be used on various construction sites.

The hoist gear, slewing gear and trolley are controlled by a frequency converter. This makes stepless acceleration during lifting, lowering and slewing effortless and enables high-precision crane operation. Drive units with frequency converter not only provide excellent handling characteristics;

they also minimise the risk of damage to the crane and flatten occurring power spikes.

The Micromove smart assistance system, which ensures exact positioning of heavy loads, is included in the package as standard. Additional options include the ABB operating range limiting system and the EMS electronic monitoring system with sensors included. Assistance systems provide reliable support for crane operators during lifts and contribute to site safety. An optional slip ring unit supports safe operation; this allows infinite slewing of the crane on site without the risk of cable breaks. 🌀

Record-setting sales for Hy-Brid Lifts

Low-level access equipment specialist Hy-Brid Lifts closed 2021 with record-setting sales. The company attributes this strong performance to its portfolio of class-leading products and increasing demand for safer work-at-height options.

Compared to 2020, the scissor lift manufacturer's global sales rose an impressive 99%, driven by a 140% growth in Push-Around Series sales.

"We have seen a significant increase in demand for more efficient and manoeuvrable aerial work platforms," Jay Sugar, Hy-Brid Lifts chief-executive officer and president, says. "Not only does our product line meet these customer requirements, but our lifts are setting new industry standards."

The PS-1930, launched in early 2020, remains the world's lightest 19-foot scissor lift and one reason Pro Series sales grew

83%. Demand for the compact ZT-1230 and its less than zero degree turn radius pushed Zero-Turn Series sales 73% higher than prior year figures.

Sugar confirms that the company's aggressive growth strategy and unique ability to pivot shaped 2021 performance.

"Hy-Brid Lifts has its share of manufacturing challenges due to ongoing material sourcing and labour shortages," Sugar says. "Having American-made products gives us the flexibility to get creative with resources and overcome these obstacles. This enables us to maintain shorter lead times than our competitors and deliver the innovative solutions our customers need."

The new year promises to be even big-



Compared to 2020, the scissor lift manufacturer's global sales rose an impressive 99%, driven by a 140% growth in Push-Around Series sales.

ger for the global scissor lift leader. Much anticipated product releases, end user demand for compact machines, and the push towards electrifying fleets lead to a positive trend moving into 2022. 🌀

Yanmar Engine Manufacturing India revved up to supply demand

Yanmar Engine Manufacturing India (YEMI) has started producing at its new state-of-the-art industrial engine manufacturing plant located at the Origins Industrial Estate in the state of Tamil Nadu, India. The new plant will produce 80 000 units of 15 kW to 37 kW class industrial engines per year with production capacity planned to increase to 160 000 units. Engines will be supplied to India, a major agricultural country, as well as to Europe, the United States, Asia and other regions where demand is strong.

The plant will first produce engines for Yanmar brand tractors manufactured by International Tractors, a joint venture company of Yanmar, and for other agricultural and construction industry original equipment manufacturers.

"In emerging countries, such as India, which are experiencing rapid economic

growth, demand for industrial engines is expected to grow as mechanisation increases in the agricultural and construction sectors," Varun Khanna, Managing Director of YEMI, says.

"Since its establishment in 2018, Yanmar Engine Manufacturing India has worked towards commencement of operations," Hajime Hirai, Director of YEMI, says. "The new plant will be an important base for expanding Yanmar's global industrial engine sales in the future."

The new plant is equipped with the same production and quality control systems as those used in Japan to



The new plant will produce 80 000 units of 15 kW to 37 kW class industrial engines per year.



ensure high quality engine production. In addition, solar panels with a total annual output of approximately 1 380 000 kWh have been installed. The plant will use this clean energy together with rainwater and greenbelts operations to greatly reduce its environmental impact. 🌱

World's first all-electric compact track loader unveiled

Doosan Bobcat unveiled its new, all-electric Bobcat T7X compact track loader at CES® 2022, the world's most influential technology event, held in Las Vegas, US, in February 2022. The T7X is the first machine of its kind to be fully electric, offering the full benefits of eliminating hydraulic systems, components, emissions and vibrations, while also providing a cleaner, quieter machine.

The Bobcat T7X was honoured with two 2022 CES Innovation Awards in the categories of Vehicle Intelligence & Transportation and Smart Cities. The CES Innovation Awards programme recognises recipients in a multitude of technology product categories and distinguishes the highest rated in each.

The Bobcat T7X was developed for the North American market initially, but internal testing and the gathering of customer feedback is planned for the Europe, Middle East and Africa (EMEA) region to identify its commercial potential.

Scott Park, president and CEO of Doosan Bobcat, said: "Doosan Bobcat is at the forefront of innovation, and we are proud to debut the all-electric technology of the T7X to help customers maximise both sustainability and productivity. Our focus remains on providing solutions and products that empower people to accomplish more and build a better world."

The Bobcat T7X is the world's first all-electric compact track loader. This machine is fully battery-powered, built to be

more productive from the ground up with electric actuation and propulsion, quieter with high-performance torque and more powerful than any diesel-fuelled track loader that has ever come before it – all while eliminating any carbon emissions.

Commenting on future plans for EMEA, Vijay Nerva, Head of Innovation at Doosan Bobcat EMEA, said, "The T7X has been developed for the North American market for now, but it addresses a global need and challenge. We plan to undergo internal testing and gather customer feedback in various countries in the EMEA region this year to better understand customer needs in this market before taking commercial decisions."

In the T7X, the traditional hydraulic work group has been completely replaced with an electrical drive system consisting of electric cylinders and electric drive motors, which means virtually no fluids. The new, all-electric Bobcat T7X uses just under one litre of eco-friendly coolant compared to around 216 l of fluid in its diesel/hydraulic equivalent model.

This all-electric platform enables instantaneous power and peak torque available at every operating speed. The operator need no longer wait for the standard hydraulic system to build up power.

The T7X operates with zero emissions and reduced noise and vibration generated by the machine. It works quietly and



The T7X is the first machine of its kind to be fully electric.

efficiently in noise sensitive areas and indoors, which significantly lowers sound levels and improves the working environment. It can also significantly lower daily operating costs, when considering the reduction in annual maintenance costs and elimination of diesel, engine oil, diesel exhaust fluid and hydraulic parts.

At the heart of the T7X is a powerful 62 kW lithium-ion battery from technology partner, Green Machine Equipment. While applications vary, each charge can support common daily work operations and the use of intelligent work modes for up to four hours of continuous operation time, and a full day of operation during intermittent use. The intelligence of the power management system is programmed to sense when loads are increasing, automatically backing off power when not needed to preserve the total energy use and extend the machine's runtime. 🌱

FREIGHT AND CARGO INSURANCE – A NEGLECTED SAFETY NET

As logistics involves a network of different partners, goods may pass through multiple transfers, different service providers and various modes of transport *en route* to the end destination. Most of the time, freight is transported by air or sea without issues. However, all transport carries an element of risk – and it's important to know that your goods are not automatically covered against damage, theft or loss by liability insurance alone. By *Detlev Duve*, MD Dachser South Africa.

The additional combination of both freight and cargo insurance provides an essential safety net. Due to the complexity, this should be applied for by an experienced partner in logistics.

Liability coverage protects the carrier or freight forwarder, but does not generally cover damaged cargo. The carrier or freight forwarder can only be proven liable if damage or loss occurs through clear mistakes or negligence during transport. The extent of the carrier or freight forwarder's liability is however limited, and the maximum amount of compensation they are required to pay usually will not equate to the value of the shipper's goods or products.

Why you need insurance

With good freight insurance in place, you do not need to prove that the carrier or freight forwarder damaged your shipment, you simply submit a claim stating the damage, with your proof of value and loss. While liability coverage must always be in place, insurance for freight shipments is not a legal requirement. However, just as one wouldn't drive an uninsured car; going without freight insurance can simply be too risky. Unlike car insurance where policies are more standard, freight insurance is complex and specific contracts should be drawn up in each case by experienced brokers. Each policy is going to cover different types of damage, materials, claims, and deductibles.

Even if your forwarder is liable, compensation provided by freight insurance will still only cover a small percentage of the value of your goods. As freight insurance cover is calculated on the basis of the weight of the goods, the same amount would be paid out for one kilogram of platinum as it would for one kilogram of paper. Enter cargo insurance, which can be taken to cover the full value of a shipment while it is in transit, protecting the customer. Confusing freight insurance and cargo insurance and assuming that

shipments are covered by freight insurance for their full value in the event of loss or damage can be a costly error.

Where the responsibility lies for goods in transit depends on whether you are the shipper or the buyer, and on the sales agreement governing the terms of transportation. The International Commercial Terms of 2020, or Incoterms® are rules governing the sale of goods around the world, including shippers' liabilities and responsibilities. An international sales agreement should always include one of the Incoterms® clarifying where responsibility for cargo insurance lies between buyer and seller at the different stages of transit, and when the risk passes from one party to the other. Commonly used Incoterms include:

- **EXW (Ex Works):** The buyer bears the risk and insurance costs from the export customs clearance stage, through to receipt of goods.
- **FOB (Free On Board):** The seller is responsible for risk and cost until the goods are loaded onto the cargo vessel or aircraft. At that point, the risk and cost transfer to the buyer.
- **CIF (Cost, Insurance, and Freight):** The seller accepts risk up to the point the goods are loaded onto the cargo vessel or aircraft. The seller also pays the cost of insurance until the goods reach the port of discharge. The buyer shares the cost at the port of discharge and has sole responsibility for cost and risk from then onwards.

Reducing risk

Whether you are an importer who has paid for goods prior to receiving them, or a seller who has not been paid at the time of shipment, cargo insurance reduces your risk of financial impact if the goods are lost or damaged during transit. As with freight insurance, cargo insurance claims can be invalidated if not made within specified timeframes, and the submission of claims should be carefully managed.

Cargo insurance can also expedite the



Detlev Duve, MD Dachser South Africa.

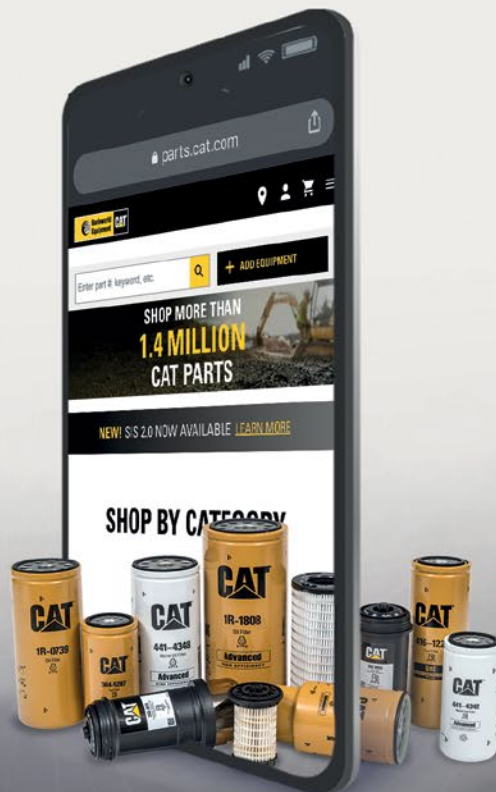
release of your cargo should an accident occur, although your goods may not be damaged. Should particular accidents occur to the vessel, all parties share in the loss equally, under the General Average principle. By purchasing insurance, your insurance company assumes this responsibility and expedites the release of your cargo.

As a logistics specialist in Africa, Dachser South Africa is responsible for co-ordinating almost every aspect of our customers' shipment. It makes sense for us to handle the cargo insurance too as a value-added service. Dachser South Africa has partnered with a specialist in freighting insurance as part of our commitment to our customers. We negotiate contracts, pay the premiums and submit claims on behalf of our customers, managing correspondence until a settlement is reached. Shipping to unfamiliar destinations that do not have well-organised infrastructure can add to the risk factor. While damage and loss is rare, it can be very expensive, making insurance costs money well spent. 🌐

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